
CHAPTER 1

A Pound of Prevention: Your Actions, Your Future

You can do much more than any doctor to maintain your health and well-being. But you have to get into the habit of health. You must have a plan. At the age of 50, individuals with good health habits can be physically 30 years younger than those with poor health habits. In other words, at age 50 you can feel as if you're 65 years old or 35 years old. It's up to you.

You'll feel better and accomplish more if you develop the habit of health. In this chapter we'll help you make the most important plan of your life, your plan for good health.

The major health problems in the United States are chronic, long-term illnesses in middle age and later, and trauma at young ages. These illnesses include heart disease, cancer, emphysema, and liver cirrhosis, and cause nearly 85% of all deaths. They also account for about 80% of all sickness in the United States. About two-thirds of cases of these illnesses can be prevented.

The illness and pain associated with disease, as well as the deaths, can be greatly reduced by a good plan for health. For example, only two years after your last cigarette you return to the normal risk level for heart attacks. After ten years you're back to nearly normal risk for lung cancer. In only a few weeks, exercise programs begin to contribute to your health and well-being. For most chronic diseases, not only can you slow the rate of progression, but you can also reverse part of the damage.

As a bonus, your plan for good health can prevent many nagging nonfatal health problems such as hernias, back pain, varicose veins, and osteoporosis. By developing the habit of health, you can reduce the amount of illness you'll have in your life. As an even bigger bonus, you'll feel much better and have more energy. Good health is its own reward.

An ounce of prevention is better than a pound of cure. Think of what a pound of prevention can do!

The Seven Keys to Health

Good news! There are only seven major ingredients in a plan for good health:

- Exercise
- Diet and nutrition
- Not smoking
- Alcohol moderation
- Weight control
- Avoiding injury
- Professional prevention

In fact, most individuals don't even need to worry about all seven areas. You're probably already a nonsmoker. Quite possibly your body weight isn't too far from where it needs to be. Probably your alcohol intake is already moderate. Probably you already do some exercise, and probably you already have some good dietary practices. Most likely you already take some measures, such as using your automobile seat belts, to reduce your chances of serious injury. And you probably work with your doctor to have some of the periodic screening tests that you need.

EXERCISE

Exercise is the central ingredient of good health. It tones the muscles, strengthens the bones, and makes the heart and lungs work better. It increases your physical reserve and your vitality. Exercise eases depression, assists the function of the bowels, leads to sound sleep, and aids in every activity of daily life. Exercise helps prevent heart disease, high blood pressure, stroke, and many other diseases.

The Three Types of Exercise

Exercise comes in several different flavors. There are strengthening exercises, stretching exercises, and aerobic (or endurance) exercises. You need to know the merits and limits of each type.

Aerobic (endurance) exercise is the key to fitness and vitality. This is the most important kind of exercise. The word "aerobic" means that during the exercise period, the oxygen (air) that you breathe in balances the oxygen that you use up. During aerobic exercise, a number of good things happen. Your heart speeds up to pump larger amounts of blood. You breathe more frequently and more deeply to increase the oxygen transfer from the lungs to the blood. Your body develops increased heat and compensates by sweating to keep your temperature normal. You build endurance.

As a result of endurance exercise, the cells of the body develop the ability to extract a larger amount of oxygen from the blood. This improves the function of all of the cells of the body. As you become more fit, these effects increase. The heart becomes larger and stronger and can pump more blood with each stroke. The cells can take up oxygen more readily. As a result, your heart rate when you're resting doesn't need to be as rapid. This allows more time for the heart to repair itself between beats.

Strengthening exercises are the traditional "body-building" exercises that build stronger muscles. Squeezing balls, lifting weights, and doing push-ups or pull-ups are examples. Strengthening exercises are only one part of a beneficial exercise program, however. These exercises can be very helpful in improving function in a particular body part after surgery (for example, knee surgery) where it's necessary to rebuild strength. They also help to strengthen your bones, since bones react to stress by becoming stronger; they can help strengthen bones even at advanced ages.

It should go without saying that you should never use anabolic steroids or any other drugs as part of a strengthening program. By so doing, you may damage your future health.

Stretching exercises are designed to help keep you loose. These are a bit more important; everyone should do some of them, but they don't have many direct effects on health. Be careful not to overdo these exercises. Toe-touching, for example, should be done gently, without bouncing. Stretch relatively slowly, to the point of discomfort and just a little bit beyond.

Stretching exercises can be of great benefit in these situations:

- If you have a joint that's stiff because of arthritis or injury
- If you've just had surgery on a joint
- If you have a disease condition that results in stiffness

There's nothing mysterious about the stretching process. Any body part that you can't completely straighten or completely bend needs to be frequently and repeatedly stretched; a good rule is twice daily. Over weeks or months, you can often regain motion of that body part.

For most people, however, stretching exercises are useful mainly as a warm-up for aerobic (endurance) exercise activity. Gently stretching before you begin aerobic exercise is important for three reasons:

- It warms up the muscles.
- It makes the muscles looser.
- It decreases the chances of injury.

Stretching again after the aerobic exercise can help prevent stiffness.

Your Aerobic Program

Aerobic exercise is important for all ages. It's never too soon to develop the habit of lifetime exercise. It's never too late to begin an aerobic exercise program and to experience the often dramatic benefits. There are, of course, a few difficulties in beginning a new exercise program. If you've been deconditioned by avoiding exercise for some time, start at a lower level of physical activity than a more active person would. You may have an underlying medical condition that limits your choice of exercises; if so, ask your doctor for advice about exactly how to proceed.

Some people worry that (1) exercise will increase their heart rates, (2) they have only so many heartbeats in a lifetime, so (3) they may be using them up. In fact, because of the decrease in their resting heart rates, fit individuals use 10 to 25% fewer heartbeats in the course of a day, even after allowing for the increase during exercise periods. Aerobic training also builds good muscle tone, improves reflexes, improves balance, burns fat, aids the bowels, and makes the bones stronger.

Other people worry about destroying their joints by too much exercise, or about sudden death while exercising. The truth is the opposite. Those who exercise have much less disability than those who don't, and the tissues around their joints become stronger. And while occasionally a person does have a heart attack during exercise, the overall chances of a heart attack are greatly decreased by aerobic exercise.

Heart Rate. Much has been made of reaching a particular heart rate during exercise, a rate that avoids too much stress on the heart and yet provides the desired training effect. Cardiologists (heart specialists) often suggest that a desirable exercise heart rate is 220 minus your age times 75%. For example, at age 40 your target exercise heart rate is $180 \times .75 = 135$ beats per minute. It can be difficult to count your pulse while you're exercising, but you can check it by counting the pulse in your wrist for 15 seconds immediately after you stop and then multiplying by 4.

As your training progresses, you may wish to count your resting pulse, perhaps in bed in the morning before you get up. The goal here (if you don't have an underlying heart problem and aren't taking a medication such as propranolol, which decreases the heart rate) is a resting heart rate of about 60 beats per minute. An individual who isn't fit will typically have a resting heart rate of 75 or so.

We generally find this whole heart rate business a bit of a bother and somewhat artificial. There really are no good medical data to justify particular target heart rates. You may wish to check your pulse rate a few times just to get a feel for what is happening, but it doesn't have to be something you watch extremely carefully. Aerobic exercise shouldn't be

"all out"; if you can't talk to a companion while you're exercising, you're probably working too hard.

Aerobic Choices. Your choice of a particular aerobic activity depends on your own desires and your present level of fitness. You should be able to grade the activity; that is, you should be able to easily and gradually increase both the effort and the duration of the exercise.

Walking gently isn't a true aerobic exercise, but it provides important health benefits. If you haven't been exercising at all, start by walking. A gradual increase in walking activity, up to a level of 100 to 200 minutes per week, usually should precede attempting a more aerobic program. First get in the habit of putting in the exercise time, then increase the effort. Walking briskly can be aerobic, but you need to push the pace quite a bit to break a sweat and get your heart rate up. Walking uphill can quite quickly become aerobic.

Jogging, swimming, and brisk walking are appropriate for all ages. At home, stationary bicycles or cross-country ski machines are good. We have seen people confined to bed using a specially designed stationary bicycle. Some individuals like to use radio earphones while they exercise; others exercise indoors while watching the evening news. Almost any activity from gardening to tennis can be aerobic, but remember that aerobic exercise can't be "start and stop." Aerobic activity can't come in bursts; it must be sustained for at least 10 to 12 minutes during each exercise period. The most recent recommendations are for 15- to 30-minute exercise periods three to seven days a week.

Cautions. If you have a serious underlying illness, particularly one involving the heart or the joints, or if you're over age 70, ask your doctor for specific advice. Advice from your doctor should always take precedence over recommendations in this book. For most people, however, a doctor's advice isn't required in order to start exercising. We recommend mentioning your exercise program to your doctor while on a visit for some other reason. A good doctor will encourage your exercise program and perhaps assist you in choosing goals and activities.

Some doctors recommend that you have an electrocardiogram (EKG) or an exercise electrocardiogram before you start exercising, particularly if you're over 50 years of age. It is difficult to see what this accomplishes because (1) gentle, graded exercise is a treatment for heart problems anyway, and (2) the test produces up to 80% "false-positive" results, suggesting that you have problems when you don't. Many doctors (including us) don't think these tests are necessary, regardless of age, unless you (the

patient) have specific, known problems. If a doctor recommends a coronary arteriogram (X-ray study of the arteries of the heart after injecting a dye into the arteries) before you begin an exercise program, you should seek a second opinion to see if this test is actually needed.

"Crash" exercise programs are always ill-advised. You have to start gently and go slowly. There's never a hurry, and there's a slight hazard in pushing yourself too far too fast. Age alone is not a deterrent to exercise. Many seniors who have achieved record levels of fitness, as indicated by world-class marathon times for their age, started exercising only in their 60s, 70s, or even 80s. Mount Fuji has been climbed by a man over 100 years of age.

Getting Started. Assess your present level of activity. This is where you start. Set goals for the level of fitness you want to achieve. Your final goal should be at least one year away, but you may want to develop in-between goals for one, three, and six months. Select the aerobic activity you want to pursue. Choose a time of day for your exercise. Develop exercise as a routine part of your day. We like to see exercise regularly performed for at least five out of seven days of the week; if you exercise all seven days, take it easy one or two days each week. Younger individuals can frequently condition with exercise periods three or four times a week. For seniors, more gentle activities performed daily are more beneficial and less likely to result in injury. You can make ordinary activities like walking or mowing the lawn aerobic by doing them at a faster and constant pace.

Start slowly and gently. Your total exercise activity shouldn't increase by more than about 10% each week. Each exercise period should be reasonably constant in effort. When you're walking, jogging, or whatever, you can use both distance and time to keep track of your progression. When starting out, it's a good idea to keep a brief diary of what you do each day to be sure you're on track. It's best to slowly increase your weekly exercise *time* to at least 90 to 100 minutes before you work to increase the *effort* level of the exercise. Get accustomed to the activity first and then begin to push it just a little bit. Again, progress slowly.

Be sure to loosen up with stretching exercises before and after exercise periods, and to wear clothing warm enough to keep your muscles from getting cold and cramping. The bottom line is patience and common sense.

Handling Setbacks. No exercise program ever progresses without any problems. After all, you're asking your body to do something it hasn't done for a while. It will complain every now and again. Even after you have a well-established exercise program, there will be interruptions. You

may be ill, take a vacation where it's difficult to exercise, or sustain an injury. There will be setbacks, but they shouldn't change your overall plan.

Common sense is the key to handling setbacks. Often you can substitute another activity for the one with which you're having trouble and thus maintain your fitness program. Sometimes you can't, and you just have to lay off for a while.

When you begin again, don't try to start immediately at your previous level of activity; deconditioning is a surprisingly rapid process. On the other hand, you don't have to start again at the beginning. The general rule is to take as long to get back to your previous level of activity as you were out. If you can't exercise for two weeks, gradually increase your activity over a two-week period to get back to your previous level.

Topping Out. After your exercise program is well established, you need to make sure that it becomes a habit you want to continue for a long time. Two hundred minutes of aerobic exercise a week (about half an hour a day) seems to give the best results. There is no medical evidence that more than 200 minutes a week is of additional value. Many people won't want to exercise this much, and that's perfectly fine. You can get most of the benefits with less activity. At 100 minutes a week, you get almost 90% of the gain that comes with 200 minutes. At 60 minutes a week, a total of one hour, you get about 75% of the benefits that you get with 200 minutes.

Exercise should be fun. Often it doesn't seem so at first, but after your exercise habits are well developed, you'll wonder how you ever got along without them. Once you're fit, you can take advantage of your body's increased reserve to vary your activity more than you did during the early months. You can change exercise activities or alternate hard exercise and easy exercise days. At that point, we hope you're a convert to exercise programs. You then can work to introduce others to the same benefits.

DIET AND NUTRITION

Diet is the second major factor for a healthy life. In general, you should move slowly in making changes from your present diet. Most people can't easily make sudden, radical changes in diet, so they may not maintain such changes. Instead, develop good dietary habits slowly over a long time span. The more changes you make, the greater the benefits. Table 1 provides guidelines for a healthy diet.

Fat Intake

Excessive total fat and saturated fat intake is the worst food habit in the typical American diet. Excessive fat intake is the major cause of atherosclerosis (hardening of the arteries' inner lining), which leads to heart

TABLE 1*Your Diet for Health*

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|----------------------------|---|
| Protein | Reduce protein intake from red meat; increase protein from whole-grain foods, vegetables, poultry, and fish. |
| Fat and Cholesterol | Decrease total fat intake to less than 30% of total calories. Greatly decrease the saturated fats found in whole milk, most cheeses, and red meat. Switch to vegetable oils, canola oil, soybean oil, corn oil, peanut oil, or olive oil. |
| Carbohydrate | Increase total carbohydrates, emphasizing whole-grain foods, vegetables, cereals, fruit, pasta, and rice; these contain "complex" carbohydrates. |
| Alcohol | Moderate use or less; "moderate" is approximately two drinks daily. |
| Fiber | Increase fiber intake, with emphasis on fresh fruits and vegetables and whole-grain foods. |
| Salt | Decrease to about 4 grams per day (average intake in the United States is 12 grams per day). Avoid added salt in cooking or at the table and avoid heavily salted foods, such as most snack foods. Further decrease salt intake if medically recommended. |
| Calcium | Standard recommendations are for at least 1,000 mg per day for men after age 65 and 1,500 mg per day for women after menopause. For reference, nonfat milk has 250 mg per glass. Use powdered nonfat milk in foods such as soup. If necessary, use calcium supplements. |

attacks and strokes. The U.S. government's *Healthy People 2010* goals call for people to reduce their total fat intake to less than 30% of the total calories they consume and their saturated fat intake to less than 10%. The current U.S. average is 37% of calories as total fat and nearly 20% as saturated fat.

We think that you should try for 30% of calories as total fat but only 7% as saturated fat. Stricter diets have been shown to actually *reverse* some early artery hardening. In some cases patches on the artery walls nearly disappear. Such improvements have been seen both in monkeys given high-fat diets and then normal diets and exercise, and in X-ray studies of human hearts.

Cholesterol

An elevated serum cholesterol level is one sign warning you to reduce dietary fat. A good level is "200 or less"—that's 200 milligrams (mg) of cholesterol per deciliter (dl) of blood. Measurement of cholesterol is only a very rough guide to your dietary needs, however, and *everyone* will benefit from decreasing fat intake. The actual chemistry of fats in the body is very

complicated. The waxy white cholesterol not only comes from your diet but is also manufactured in your liver. This cholesterol production in turn is related to the various other fats in your diet. Attached to the cholesterol itself are high-density lipoproteins (HDL), which actually help prevent atherosclerosis, and low-density lipoproteins (LDL), which make heart problems much more likely. The LDL (bad cholesterol) travels "outbound" from the liver and can deposit on the inside walls of blood vessels. The HDL (good cholesterol) takes cholesterol "inbound" back to the liver for removal and can help remove plaque from arterial walls. Many laboratories measure serum cholesterol quite inaccurately. Hence, we're not enthusiastic about using serum cholesterol levels as the sole measure of your dietary needs.

You can simplify this whole complicated business by simply cutting down on the largest sources of saturated fat in your diet. Fortunately, there are easy approaches to changing saturated fat intake.

- Instead of butter, use soft or liquid **margarine**. Some evidence suggests that solid margarines are no better for you than butter.
- Use **low-fat** or **nonfat milk** instead of whole milk. The calcium and other nutrients in milk are very good for you, but the saturated fat is bad.
- With **eggs**, you just have to cut down the number per week; four eggs a week or fewer is a good ration.
- To reduce fat intake from **meats**, don't eat these foods often. A good rule for many people is to avoid having red meat two days in a row. This is easy, and it gets variety into your diet. Remember, it's really the white fat in the red meat that is the problem. Pork, bacon, hot dogs, and sausage are not colored "red" but usually contain a great deal of saturated animal fat. When you do have meat, trim the fat extensively before cooking, broil so that some fat burns or runs off, and cook the meat a little more well-done. For meat lovers, a good (and economical) practice is to buy smaller cuts of meat; surround a smaller four- or five-ounce steak with larger portions of vegetables.
- **Don't fry foods;** this usually adds saturated fat. If you do fry, avoid saturated fats such as palm oil and coconut oil; although these are vegetable oils, they're also saturated fats and bad for your arteries. Monounsaturated fats—such as olive oil, peanut oil, and canola oil—may actually be good for you.

What about other ways to lower your serum cholesterol and other fats (lipids) in the bloodstream? As we discuss later, fiber (as in vegetables, celery, apples, beans, and whole-grain breads and cereals) actually acts to

lower serum cholesterol by binding some cholesterol in the bowel before the cholesterol can be absorbed. Adequate calcium intake, needed for strong bones, also lowers blood pressure and probably the blood lipids. Your exercise program lowers your total cholesterol and also increases the good HDL in your blood. When you stop smoking, your HDL cholesterol goes up. Good health habits all seem to fit together.

Protein

What's the best protein for your diet? Probably that from whole-grain foods. Fish is excellent; you should plan at least two fish meals a week. Interestingly, the best fish for you are the high-fat fishes that live in cold water, such as salmon or mackerel. These contain a kind of fish oil that is good for your heart and actually lowers your serum cholesterol level.

Chicken and other poultry are good neutral foods. They contain less fat than red meat, though still some cholesterol; they have much less fat if you remove the skin.

The official national nutritional guidelines recommend that you substitute complex carbohydrates (such as whole-grain foods and cereals) for some of the fat and some of the protein in your diet. The complex carbohydrates are more slowly digested and provide a more even source of energy.

Salt Intake

Too much sodium (salt) in your system tends to retain fluid in your body, increasing your blood pressure and predisposing you to such problems as swollen legs. Your heart has to work harder with the increased amount of fluid volume. Thus, it's good to decrease your salt intake.

The average person in the United States takes in about 12 grams of sodium each day, one of the highest intakes in the world. Our convenience foods and fast foods are usually loaded with salt. Salt is in ketchup, in most sauces, and in hidden form in many foods. You need to read the labels to find it: look for "sodium," not "salt." The recommended amount of salt intake is 4 grams a day. You'll get plenty of salt in your food without adding more. People with problems of high blood pressure, heart failure, or some other difficulties may need to reduce salt much more radically and should discuss desirable intake levels with their doctor.

Do you have a craving for junk foods? Don't despair—there are healthy snacks! One of our favorites: popcorn, air-cooked, sprayed with butter-flavored PAM instead of butter, and sprinkled with a little Parmesan cheese. Even better, try popcorn with olive oil instead of butter, unsalted peanuts in the shell, or French bread basted with olive oil and toasted with oregano or garlic. Try low-salt whole-grain pretzels. To add flavor to foods, use lemon juice, pepper, or herbs rather than salt. There are even hot dogs without any fat or cholesterol; check the labels.

Fiber

Adequate fiber intake is important to your future health. Fiber is the indigestible residue of food that passes through the entire bowel and is then eliminated in the stool. It's found in unrefined grains, cereals, vegetables (particularly celery), and most fruits.

The beneficial effects of fiber come from its actions as it passes through the bowel. Fiber attracts water and provides consistency to the stool so that it may pass easily. The increased regularity of bowel action that results turns out to be very important; it decreases the chances of diverticulitis, an inflammation of the colon wall. Fiber also acts to decrease problems with constipation, hemorrhoids, tears in the rectal wall, and other minor problems. Finally, fiber binds cholesterol and helps eliminate it from the body.

We must emphasize that the natural-fiber approach to maintaining regular bowel movements is much better than using laxatives and bowel stimulants, which have none of the advantages of fiber. You need to get the fiber habit and to avoid the stimulant and laxative habit.

Calcium

Everybody needs enough calcium. Sufficient calcium intake is particularly important for senior men and even more important for senior women. Our national trend toward better health habits has decreased our intake of calcium-containing milk and cheese. Hence, calcium intake for many people has dropped below what is desirable, and calcium supplements are often needed.

Women over age 50 should have at least 1,500 milligrams (mg) of calcium each day, and men over age 65 at least 1,000 mg. A glass of nonfat milk contains about 250 mg of calcium. Add in the odds and ends of calcium in various foods and a typical daily intake is usually around 500 mg. Therefore, many people need some sort of calcium supplement. The most popular forms are Tums and Oscal; each tablet contains 500 mg of calcium. One or two tablets a day will usually do it.

It's important for you to remember the "calcium paradox." Just taking enough calcium in your diet doesn't really help because the extra calcium is not, for the most part, absorbed by the body. You need both to take in enough calcium and to give your body a stimulus to absorb it. Weight-bearing exercise is a strong stimulus for your body to absorb more calcium and to develop stronger bones. Exercise is for everyone. For women after menopause, estrogen supplementation also can provide a strong stimulus for absorption of calcium, and this possible treatment should be discussed with your doctor.

Diet Supplements

What about fish oil capsules? These contain the good fish oils, such as those found in salmon and mackerel, which lower the serum cholesterol

level. Five capsules are about equivalent to one serving of salmon, but they cost less than salmon. There's nothing really wrong with using them, but in general we're not much for taking pills. The capsules are big and hard to swallow.

The good effects of some vitamin supplements, particularly vitamin E, have been supported by research. We discuss these in detail on pages 55-56.

Aspirin Treatment

What about taking a tablet of baby aspirin (80 mg) every day to thin the blood? This regimen has benefits for those at increased risk for heart attacks, but *don't do it instead of changing your diet*. Even very small doses of aspirin thin the blood and prevent clots in the arteries and veins, but these same doses can result in excessive bleeding. Studies of regular aspirin use have shown a decrease in the number of heart attacks, but this was partly compensated for by increases in other diseases, including hemorrhagic strokes. We believe that this regimen is good but should be undertaken only after discussion with your doctor, and generally not by those below age 40 or 50.

Drugs to Lower Cholesterol

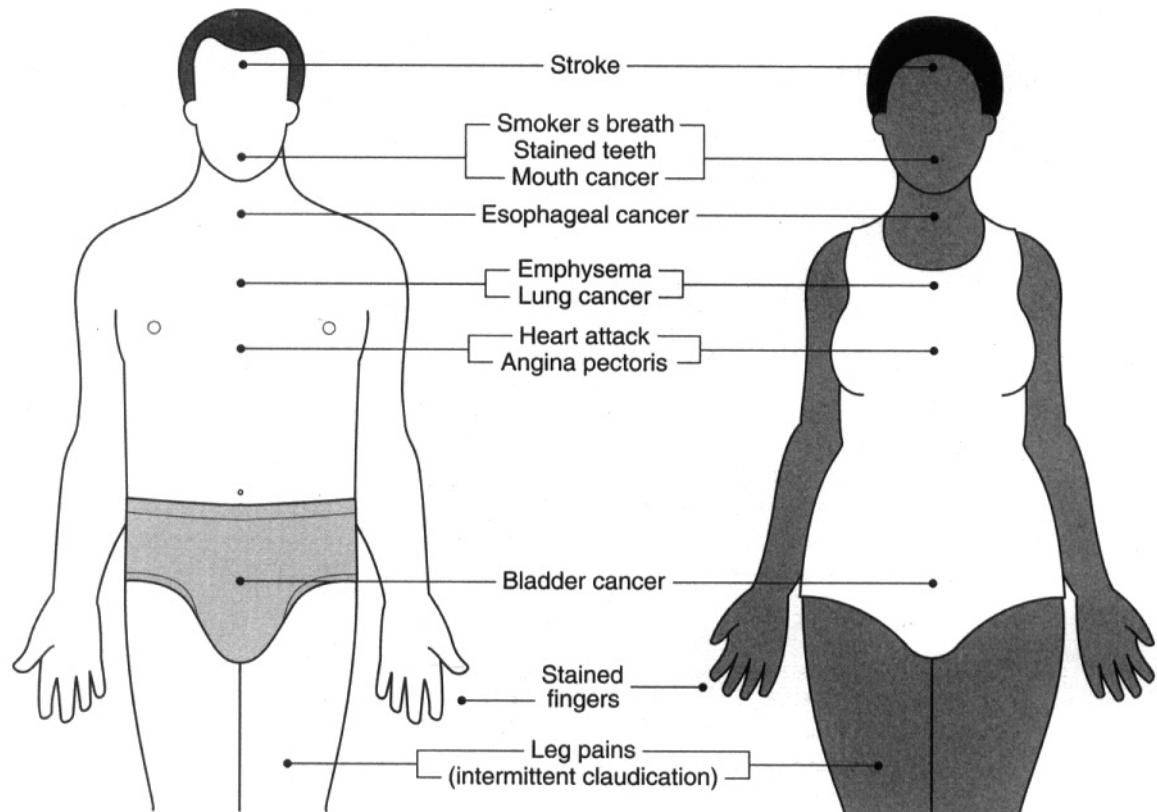
The same recommendation holds for newer cholesterol-lowering drugs, such as lovastatin or provastatin, as well as the older ones like niacin and cholestyramine. We recommend that you discuss such medications with your doctor if you continue to have high LDL cholesterol levels and if you're in one of the following groups:

- You've already had a heart attack.
- You have a very high cholesterol level, over 260 mg/dl total cholesterol or over 180 mg/dl LDL cholesterol.
- You have a family member who had an early heart attack (before age 40).

Nevertheless, try your diet and exercise program first, second, and third. Medication is the fourth step, if your doctor agrees.

NOT SMOKING

Cigarette smoking kills over 300,000 people in the United States each year. Think of it as two fully loaded 747s crashing each day. Lung cancer and emphysema (chronic lung disease) are the best known and among the most miserable outcomes. However, smoking causes atherosclerosis to develop faster, and that problem affects smokers whether or not the other diseases mentioned occur. Atherosclerosis results in heart attacks and strokes, angina pectoris (heart pains), intermittent claudication (leg pains), and many other problems. Pipe and cigar smoking don't have the pulmonary (lung) consequences that cigarette smoking does, but can lead to cancer of



Smoking. The damage occurs at many sites throughout the body.

the lips, tongue, and esophagus. Nicotine in any form has bad effects on the small blood vessels and thus increases your chance of heart attack.

It's never too late to quit. Only two years after your last cigarette, your risk of heart attack returns to average. It has actually decreased substantially the very next week! After only two years, there's a decrease in lung cancer risk by perhaps one-third, and after ten years the risk is back to nearly normal. The development of emphysema is stopped for many people when they stop smoking, although this condition doesn't actually reverse. Most people who quit smoking will enjoy major health benefits the rest of their lives.

Moreover, you'll notice at once that your environment has become more friendly when you're not a smoker. A lot of the daily hassles that impair the quality of your life go away when you stop offending others by this habit.

Here are some tips for quitting:

- Decide firmly that you really want to do it. You need to believe that you can. Set a date on which you will stop smoking. Announce this date to your friends. When the day comes, stop.
- You can expect that the physical addiction to nicotine may make you nervous and irritable for about 48 hours. After that, there's no further physical addiction. There is, of course, the psychological craving that sometimes lasts a very long time. Often, however, this craving is quite short.
- Reward yourself every week or so by buying something nice with what would have been cigarette money.
- Combine your stop-smoking program with an increase in your exercise program. The two changes fit together naturally. Exercise will take your mind off the smoking change, and it will decrease the tendency to gain weight in the early weeks after you stop smoking; this weight gain is the only negative consequence of stopping smoking.

The immediate rewards of not smoking include better-tasting food, happier friends, less cough, better stamina, more money, fewer holes in your clothes, and membership in a larger world. If you have children, you become a better role model for them.

Many health educators are skeptical about cutting down slowly and stress that you need to stop completely. We don't think this is always true. For some people, rationing is a good way to get their smoking down to a much lower level, at which point it may be easier to stop entirely. For example, the simple decision not to smoke in public can help your health and decrease your daily hassles. To cut down, keep in the cigarette pack only those cigarettes that you'll allow yourself that day. Smoke the cigarettes only halfway down before extinguishing them.

Many good stop-smoking courses are offered through the American Cancer Society, the American Lung Association, and your local hospital. Most people actually don't need these, but if you do they can help you be successful. Try by yourself first. Then, if you still need help, there's a lot of it around.

Nicotine chewing gum or nicotine patches can help some people quit, and your doctor can give you a prescription and advice. Don't plan on this as a long-term solution because the nicotine in the gum or patch is just as bad for your arteries as is the nicotine in cigarettes.

Your decision to stop smoking is one example of your ability to make your own choices. If you're trapped by your addictions, even the minor

ones, you can't make your own choices. Victory over smoking improves your mental health, in part because it is difficult. Winning this fight can open the door to success in other areas.

ALCOHOL MODERATION

Excessive alcohol intake is a serious problem for some people in every age group. Drinking too much leads to depression, danger, and disease. Among the potentially fatal complications are:

- Damage to the liver
- Delirium tremens (the DTs) from alcohol withdrawal
- Car, motorcycle, or domestic violence in which alcohol plays a role

There are many other problems that aren't fatal but that decrease the quality of your life. A drinking problem makes a person dependent on the next drink, interferes with emotions and thinking, and burdens loved ones, diminishing everyone's quality of life.

Fortunately, alcoholism is a disease from which many people recover, although recovery is a lifelong process. There are about a million recovered alcoholics in the United States, and between half and three-quarters of the people who attempt rehabilitation succeed. Among some highly motivated groups, the success rate is much higher. For example, more than 90% of physicians and airline pilots who go into highly structured, monitored programs stay in recovery. Success depends on personal characteristics, early treatment, the quality of counselors or of a support program, access to the right medical services, and the strong support of family, friends, and coworkers.

We discuss the warning signs and treatment of alcoholism on page 284. Please refer to this section if you have any questions about your drinking. Usually this problem gets too little attention too late. Be alert for alcohol-related problems in family and friends, express your concerns to them, and cooperate in helping them establish a program for alcohol control or elimination. You can save their lives, and perhaps even save your own.

WEIGHT CONTROL

Excessive body weight compounds many health problems. It stresses the heart, the muscles, and the joints. It increases the likelihood of hernias, hemorrhoids, gallbladder disease, varicose veins, and many other problems. Excess weight makes breathing more difficult. It slows you down, makes you less effective in personal encounters, and lowers your self-image. You snore more if you're overweight. Fat people are hospitalized more frequently than people with normal weight; they have more heart

burn, more surgical complications, more cases of breast cancer, more high blood pressure, more heart attacks, and more strokes.

Weight control is a difficult task. Think of "weight control" as "fat control," and it will fit in well with your other good health habits. For most of us, the problem and the solution are personal, not medical. (Excess weight is very seldom due to thyroid disease or other specific illness.) As with the other habits that change health, management of this problem begins with recognizing that it is a problem. Weight control requires your continued attention. There are genetic factors that act to make weight control very difficult for some. For those of us with a potential problem, we must have lifelong vigilance.

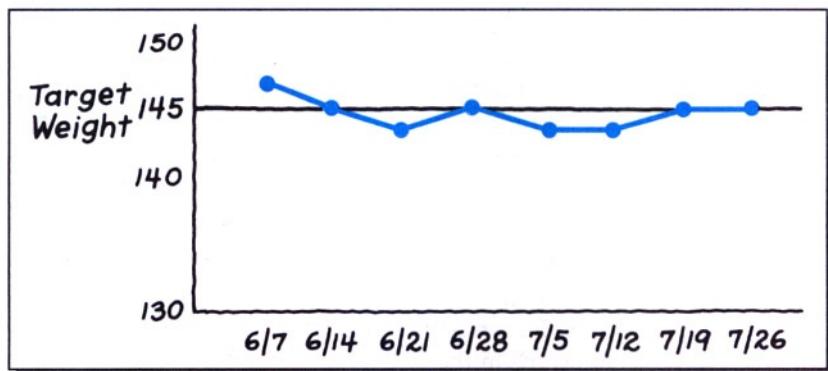
Increasingly, exercise is recognized as an important key to weight control. Part of every weight-control program should be an exercise program. Obesity isn't just the result of overeating; obese people, when studied carefully, are found to move around less and therefore to burn too few calories. There's nothing very mysterious about calories. Thirty-five hundred calories equals about one pound (450 g). If you take in 3,500 calories fewer than you burn, you lose a pound. If you take in 3,500 calories more than you burn, you gain a pound.

There are two important phases to weight control: the weight-reduction phase and the weight-maintenance phase. Surprisingly, the **weight-reduction phase** is the easiest. Here, the method you use to lose weight doesn't matter too much, although you should check with your doctor if you plan to lose a large amount of weight unusually quickly. You want to be sure that the diet you intend to follow is sound. Complex carbohydrates are important to most sound diets. During the weight-loss stage, many of your calories are provided by your own body fat and protein as they're being broken down and burned as fuel; thus, you need less fat and less protein in your diet during this period. Weight-loss diets usually have a gimmick of some kind that encourages you and helps you remember the diet, and there are dozens of books available with "secret" tips.

Remember that weight loss is naturally slow; even a total fast will cause weight loss of less than one pound a day. More rapid changes in weight are generally due to loss of fluid. The first few days of a diet often give you a false sense of accomplishment as you lose fluid. Then, when the rate of weight loss slows, you may think that the diet has failed. You have to be patient with this weight-loss phase.

Most people have some success in losing weight. If you set a target, tell people what you're trying to do, and stick with the effort for a while, you can probably lose weight. One pound a week is a reasonable goal. This requires elimination of the equivalent of one day's food each week.

The **weight-maintenance phase** involves staying at the desirable weight you've achieved. This is more difficult, and it requires continual



attention. Weigh yourself regularly and record the weight on a chart. Draw a line at three pounds over your desired weight and maintain your weight below the line, using whatever method works best for you. Keep exercising. Accept no excuses for increasing weight; it's easier and healthier to make frequent small adjustments in what you eat than to try to counteract binges of overeating with crash diets. Keep yourself off the dietary roller coaster. Failure at weight maintenance accounts for most diet failures.

AVOIDING INJURY

Each year more than 400,000 Americans are killed or maimed as a result of preventable traumatic injury. More than half of all deaths before age 45 are due to injury! Yet somehow we all think that it can't happen to us. When a loved one, friend, or neighbor is killed or crippled, or when we read about tragedies in the newspaper, we tend not to associate them directly with our own lives. Because we get away with so many risky behaviors, we tend to feel immune from such "bad luck" ourselves. True, there are some unavoidable risks. But we can avoid 90% of our risk by our own actions.

Seat Belts

Automobile seat belts reduce death and injury by 75%—but only when people wear them! Wear seat belts all of the time, whether you're a driver or passenger. Strap the little kid into a secure infant car seat. Air bags are great, but you still need to buckle the belt. All the time. Thousands of people, mostly children and young adults, die or suffer severe head injuries because they neglected to wear a helmet while bicycling, motorcycling, or skating. Wear one!

Seat belt and helmet use symbolize the other healthy actions you can take to avoid injury. This simple and easy-to-achieve habit greatly reduces

health risks, and adopting the habit means that you've thought ahead, considered the probabilities and the risks, and taken action to preserve your future health. The same kind of thinking will help you reduce other risks. Studies show that people who always use their seat belts have also lowered their risks in other areas. They're less frequently smokers, for example, and they're less likely to drink and drive.

Impairment

The other extremely important preventable contribution to automotive injury is from alcohol or, less frequently, from impairment by other drugs. Often it seems the intoxicated driver survives intact, while passengers or innocents in the other car suffer. Your primary responsibility to yourself and those around you is not to drive when under the influence. You can wreck your life, not just your car. We believe, however, that responsibility extends to passengers as well. Don't ride with an impaired driver under any circumstances. Walk, call a cab, or go with someone else. Before a party appoint a "designated driver" whose responsibility it is to stay sober. Hide the car keys from someone who has had too much to drink.

Water

Drownings are also usually preventable. Watch the kids whether they are in a pool, a lake, or the sea. Wear life preservers on small boats. Don't go boating with an impaired captain, and don't be one yourself. Don't dive into hard objects or shallow depths. Watch out for the undertow. Use common sense.

Fire

Fires are usually preventable tragedies. They're started by overloaded electrical systems, faulty heaters, smoking in bed, hot ashes in garbage cans, careless use of fireworks, playing with matches, inadequate fireplace screening—all avoidable hazards. Fires have an even better chance to hurt people when there are no smoke alarms or no fire extinguishers. Having well-placed and functioning smoke alarms in your home is another proof that you're thinking ahead, considering probabilities and risks, and taking action to protect your future.

Falls

Most broken bones are caused by falls, and most falls are preventable. Clutter in the home, nothing to hold on to in the bathroom, poor lighting, wrong shoes, careless use of ladders, unsteady walking because of alcohol or other drugs—all are causes.

Firearms

Gunshot wounds are a major cause of death in our society, especially among young people. Adolescents with thoughts of suicide are much more

likely to succeed in killing themselves if there is a gun available. Criminals, especially in the illegal drug trade, often use guns without regard for whom they injure. Use common sense to protect yourself from crime. Take extreme care in using and storing firearms. Lock ammunition securely away from the firearm.

PROFESSIONAL PREVENTION

Most prevention is personal. But, to take care of yourself, you'll sometimes require professional help. Medicine in recent years has been oriented to "cure" rather than to "prevent," even though most of the greatest medical successes, such as eradication of smallpox and control of paralytic polio, have been achieved through preventive measures. We doctors have been crisis-oriented: our approach has been to wait for a consequence to appear and then to try to treat it.

Today doctors are becoming more interested in preventive medicine. The most important part of prevention, developing good health habits, has been discussed and is your personal responsibility. But the idea of preventive medicine also includes the following five strategies that involve health professionals, and it's important to understand both the strengths and the limitations of these strategies:

- The checkup or periodic health examination
- Screening for early problems
- Early treatment for problems
- Immunizations and other public health measures
- Health risk appraisal

Periodic Checkups

The "annual checkup" is still recommended by some schools, camps, employers, and the army. However, doctors seldom go to each other for routine checkups. Checkups don't detect treatable diseases early with any regularity, and they may raise false confidence; that is, they may encourage the false belief that if you're regularly checked you don't need to concern yourself as much about developing good health habits.

Your primary interest is in finding conditions about which something can be done, and for this the checkup is unfortunately not very useful. If you use the techniques described above to reduce your health risks, and if you attend to new symptoms as discussed in Part II of this book, you'll gain few advantages from an annual "complete checkup."

Are "complete" checkups ever worthwhile? Yes. The first examination by a new doctor allows you to establish a relationship with him or her. Increasingly, the periodic checkup is being used not as much for the

detection of disease as for the opportunity to counsel the patient about poor health habits, so that patients can do a better job of personal disease prevention. We applaud this change and look to doctors to further refine their skills at influencing their patients to take care of themselves.

Screening for Early Problems

Although complete checkups may offer limited benefits, periodic screening tests in several specific areas are important. Try to arrange these tests when you visit your doctor for another reason so as not to require a special trip.

- **High blood pressure** is a significant medical condition that gives little warning of its presence. During adult life, it's advisable to have your blood pressure checked at least every year or so. This measurement can easily be done by a nurse, physician's assistant, or nurse's aide, but a doctor's visit isn't required. If high blood pressure is found, a doctor should confirm it and you should carefully attend to the measures needed to keep it under control (see *High Blood Pressure*, page 274).
- If you're a woman over age 20, you should have a **Pap smear** taken every year or so. Some authorities now recommend beginning annual Pap smear testing at the age of first sexual activity, decreasing its frequency to every three to five years after the first three tests are negative, and again increasing the frequency to every one or two years after age 40. This test detects cancer of the cervix, the portion of the womb (uterus) that protrudes into the vagina. In early stages this cancer is almost always curable. See Chapter 11, "Women's Health," page 293, for more information.
- Women over age 25 should practice **breast self-examination** monthly. Any suspicious changes should be checked out with a doctor; the great majority of breast cancers are first detected as suspicious lumps by the patient. Women with large breasts can't practice self-examination with as much reliability as other women and may wish to discuss other screening procedures with their doctors. We recommend **mammography** as a yearly screening procedure for women after age 50, and others believe screening should start at age 40. Women who have already had a breast tumor should follow their doctors' recommendations. Women with a strong history of breast cancer in their family should begin mammography screening by age 40. See pages 290-291.

The importance of these few examinations is underscored by their availability as a public service, free of charge, at many city and county clinics. The United States Preventive Services Task Force consists of the

TABLE 2*Recommended Adult Screening Procedures*

| <i>Procedure</i> | <i>Recommendation</i> |
|---|--|
| Pap smear for cervical cancer (women) | Annually for 3 years starting at age 21, or when sexual activity begins, whichever is earlier. If these first 3 tests are negative, every 3 years from then on. |
| Fecal occult blood tests for colorectal cancer | Annually after age 50. |
| Sigmoidoscopy for colorectal cancer | Every 3 to 5 years after age 50. If a parent or sibling has had colon cancer, air-contrast barium enema and sigmoidoscopy every 3 to 5 years after age 40. |
| Breast cancer screening (women) | Monthly self-examination. Yearly physician examination after age 40. Annual mammography after age 50, or after age 40 if mother or a sister has had breast cancer. |
| Serum cholesterol and triglyceride screening | Cholesterol measured at intervals of 5 or more years up to age 70. Screening serum triglyceride is now controversial and currently <i>not recommended</i> . |
| High blood pressure screening | Recommended, incidental to other health-care services (no special visit is needed). |
| Diabetes screening | Glucose tolerance test or glycosalated hemoglobin test recommended for pregnant women between the 24th and 28th week of gestation, or women with diabetes in their family who are planning to become pregnant. Otherwise <i>not recommended</i> . |
| Asymptomatic coronary artery disease screening | Screening with exercise stress testing <i>not recommended</i> . |
| Lung cancer screening | Screening <i>not recommended</i> . |
| Osteoporosis screening | Screening <i>not recommended</i> . |
| Prostate screening | PSA test <i>not recommended</i> . |

leading experts on the science of screening procedures. Its recommendations are summarized in Table 2 and closely parallel our views about screening.

The value of other screening tests is more dubious. Some doctors believe that routine glaucoma tests, tests for blood in the stool after age 30, and regular sigmoidoscopy after age 50 are worthwhile, and others don't.

Many news stories have suggested that screening with prostate specific antigen (PSA) determinations, with or without digital rectal examination, revolutionizes the outlook for prostate cancer and promises to save many men's lives. Unfortunately, there's no convincing evidence that this screening improves the outlook for prostate cancer.

Early Treatment

An effective health maintenance strategy includes seeking medical care promptly whenever an important new problem or finding appears. For example, you should seek medical attention without delay if you notice one of the following symptoms:

- A lump in your breast
- Unexplained weight loss
- A fever for more than a week
- Coughing up blood

These symptoms don't always represent true emergencies, but they do indicate a need for professional attention. Most times, nothing will be seriously wrong; on other occasions, however, an early cancer, tuberculosis, or other treatable disease will be found. You always need to carefully consider how to respond to some change you've noted in your body.

The guidelines in Part II of this book can help you select those instances in which you should seek medical care. In most cases, you can take care of yourself with home treatment. However, you must respond appropriately when professional care is needed.

To ensure timely treatment, you need to have a plan. Think things through ahead of time.

- Do you have a doctor?
- If you need emergency care, where will you go? To an emergency hospital? To the emergency room of a general hospital? To the on-call physician of a local medical group?
- If you're not sure what to do after consulting this book, who can you call for further advice?
- Have you written down the phone numbers you need?

Only rarely will you need emergency services. But the time that you need them is not the time to begin wondering what to do. If you have a routine problem that requires medical care, where will you go? Is there a nearby doctor? Who has your medical records? Chapter 13, "Working with Your Doctor and Your Health Care System," will help you answer these questions. Plan ahead.

TABLE 3A

Immunization Schedule—Children

| Vaccine | Age (months) | | | | | | | | Age (years) | | |
|--|--------------|-------|----------------|----------------|----------------|-----|-----|----------------|----------------|-------|-------|
| | Birth | 1 | 2 | 4 | 6 | 12 | 15 | 18 | 4–6 | 11–12 | 14–16 |
| Hepatitis B | Hep B-1 | | | | | | | | Hep B | | |
| Diphtheria, tetanus, and pertussis | | | Hep B-2 | | Hep B-3 | | | DTaP or DTP | DTaP or DTP | Td | |
| <i>Hemophilus influenzae</i> type B | | | DTaP or DTP | DTaP or DTP | DTaP or DTP | HIB | HIB | HIB | | | |
| Poliovirus | | Polio | Polio | Polio | Polio | | | | Polio | | |
| Measles- mumps- rubella | | | | | MMR | | | | MMR | MMR | |
| Chicken pox (varicella) | | | | | Chicken pox | | | | Ch. pox | | |

Range of acceptable ages for vaccination Vaccines may not be needed; check with your doctor

Adapted from the Centers for Disease Control, United States Public Health Service

Immunizations

Immunizations have had far greater impact on health in the developed nations than all of the other health services put together. Only a few years ago smallpox, cholera, paralytic polio, diphtheria, whooping cough, and tetanus killed large numbers of people. These diseases have been effectively controlled by immunization in the United States and in most other developed nations. Smallpox has been eradicated from the entire world, and there's no longer any need for smallpox immunization. An incredible success story!

Unfortunately, many Americans have become lax about childhood immunizations. As a result, there has been a resurgence of measles,

TABLE 3B*Immunization Schedule—Adults*

| <i>Schedule/Frequency</i> | <i>Vaccine</i> |
|---|--------------------------------|
| Every 10 years | T(d) adult tetanus, diphtheria |
| Over age 65/once | Pneumococcal |
| Over age 65, or with chronic illness such as lung disease/yearly | Influenza (flu) |

mumps, and rubella. You and your children can reap the benefits of immunizations while minimizing their risk by following the recommendations in Table 3A on page 25.

Keep a record of your immunizations in the back of this book. Don't allow yourself to be reinoculated just because you've lost records of previous immunizations. If you haven't had a tetanus shot for ten years or so, ask for a booster shot while visiting the doctor for another reason. You can save future trips to the doctor by being protected for the next ten years.

In general, don't seek out the optional immunizations. Flu shots, for example, are only partially effective and often cause a degree of fever and aching; they're recommended only for the elderly and for those with severe major diseases. We recommend that the optional immunizations (including pneumonia and flu, Table 3B, above) be taken only on the recommendation of your doctor. They have a definite role for some people, but not for all.

Health Risk Appraisal

Your future health is largely determined by what you do now. Your lifestyle and your habits have a dominant influence on how healthy you are, how healthy you'll be, how much time you'll spend in hospitals, and how rapidly you'll "physiologically" age.

Recently techniques have been developed for mathematically estimating your future health risks, and these techniques are variously termed "health risk appraisal," "health hazard appraisal," or "health assessment." You complete a questionnaire or otherwise provide information about your lifestyle and health habits. Your responses are mathematically combined to estimate your likelihood of developing major medical problems such as heart disease and cancer. Other estimates such as your "physiologic" age also may be calculated. These techniques form an increasingly important part of comprehensive health education programs such as Healthtrac, Senior Healthtrac, and Informed Choice. They also have a potentially large role in helping you shape your own personal health program.

You should know several things about health risk appraisals:

- The results are only estimates. Even though they're based on the best medical studies, data are incomplete and may not apply equally to all populations. In general, the estimates may be accurate to within 10 to 20%. Think of health risk scores as similar to IQ or achievement test scores; they're approximately correct but not exact.
- The predictions are only averages. Some people will do better than the tests predict and others worse.
- Any single assessment represents you at one point in time, but your actual risks depend on the changes you make and your average lifetime health habits as well. Regular repeated assessments can reveal your current status and the benefits you've achieved through lifestyle changes.
- A good health risk appraisal should be based only on those relatively few risk factors that are scientifically well established and associated with major health problems. These include cigarette smoking, exercise, automobile seat belt use, helmet use, alcohol intake, obesity, dietary fiber, salt, fat intake, blood pressure, cholesterol levels, and stress level.
- The health risk assessment itself provides no health benefits unless it results in changes in your health-related behaviors, and the risk assessment might even frighten you unnecessarily. Therefore, these assessments are best used as part of a program that not only identifies risk but also educates you, motivates you for change, provides suggestions and recommendations, and reinforces positive changes.

We're enthusiastic about the growing role of health promotion programs that focus attention on prevention of disease and about the use of good health assessment tools. Well-designed programs are already having a large effect, decreasing human illness. As a bonus, they also reduce medical care costs.

The Power of Prevention: How It Works

Now you can put together a master plan for illness prevention. The plan is simple. First, you need to prevent the fatal illnesses mentioned at the beginning of this chapter. Second, you need to prevent the nonfatal illnesses.

Table 4 summarizes the ways that you can substantially reduce risks for 24 serious and very common conditions. You may be surprised to learn

TABLE 4*Your Master Plan for Preserving Your Health*

| | <i>Exercise</i> | <i>Diet and Nutrition</i> | <i>Not Smoking</i> | <i>Alcohol Moderation</i> | <i>Weight Control</i> | <i>Avoiding Injury</i> |
|----------------------------------|-----------------|---------------------------|--------------------|---------------------------|-----------------------|------------------------|
| POTENTIALLY FATAL DISEASE | | | | | | |
| Heart Attack and Stroke | X | X | X | | X | |
| Lung Cancer | | | X | | | |
| Breast Cancer | | X | | | X | |
| Colon Cancer | X | | | | | |
| Mouth Cancer | | | X | | | |
| Liver Cancer | | | X | X | | |
| Esophageal Cancer | | | X | X | | |
| Cervical Cancer | | | | | | |
| Emphysema | | | X | | | |
| Cirrhosis | | X | | X | | |
| Diabetes | X | X | | | X | |
| Trauma | | | | X | | X |
| NONFATAL DISEASE | | | | | | |
| Osteoarthritis | X | | | | X | |
| Hernias | X | | X | | X | |
| Hemorrhoids | X | | | | X | |
| Varicose Veins | X | | X | | X | |
| Thrombophlebitis | X | | X | | X | |
| Gallbladder Disease | | X | | | X | |
| Stomach Ulcers | | X | X | X | | |
| Dental Problems | | X | X | | | |
| Osteoporosis | X | X | | | | |
| Falls and Fractures | X | X | | | | X |

TABLE 4*Your Master Plan for Preserving Your Health*

| | <i>Treat High Blood Pressure</i> | <i>Screening Tests</i> | <i>Estimated Risk Reduction</i> | <i>Notes</i> |
|----------------------------------|----------------------------------|------------------------|---------------------------------|--|
| POTENTIALLY FATAL DISEASE | | | | |
| Heart Attack and Stroke | X | | 70% | Diet: low in saturated fat and salt, high in fiber; vitamin E and aspirin as advised |
| Lung Cancer | | | 90% | Smoking causes nearly all cases |
| Breast Cancer | | X | 50% | Screening: self-examination, annual doctor's exam, mammography |
| Colon Cancer | | X | 50% | Aspirin or similar drugs as advised. Screening: colonoscopy, fecal blood tests. |
| Mouth Cancer | | | 90% | Smoking (pipes and cigars) causes nearly all cases |
| Liver Cancer | | | 50% | Alcohol causes many cases |
| Esophageal Cancer | | | 50% | Smoking causes many cases |
| Cervical Cancer | | X | 90% | Screening: Pap smears |
| Emphysema | | | 90% | Smoking causes nearly all cases |
| Cirrhosis | | | 90% | Alcohol, together with poor nutrition, causes nearly all cases |
| Diabetes | | | 50% | Much diabetes occurring late in life can be prevented entirely |
| Trauma | | | 75% | Failure to wear seat belts and drunk driving are the largest factors |
| NONFATAL DISEASE | | | | |
| Osteoarthritis | | | 50% | You can prevent the disability, not necessarily the arthritis |
| Hernias | | | 50% | Poor muscle tone, a big belly, and coughing are a bad combination |
| Hemorrhoids | | | 50% | Sitting around while overweight causes much of the problem; hygiene is also important |
| Varicose Veins | | | 50% | Inactivity lets the fluid drop to the lowest point; using leg muscles helps blood flow in legs |
| Thrombophlebitis | | | 50% | The factors for this condition can also cause blood clots in the legs |
| Gallbladder Disease | | | 40% | Dietary fat and obesity are the causes in many cases |
| Stomach Ulcers | | | 70% | Also be aware that aspirin and other drugs can cause stomach problems |
| Dental Problems | X | | 80% | Diet: low in sugar. Screening: dental checkups. Brush and floss. |
| Osteoporosis | | | 50% | Diet: high in calcium. Exercise: weight-bearing. Estrogen and other drugs may help. |
| Falls and Fractures | | | 50% | Keep your body and bones strong; make your environment friendly |

how many different health problems can be prevented. If you do everything right to reduce your risk for individual conditions, you can reduce your risk for all diseases combined by about 70%. That's the power of prevention!

THE HABIT OF HEALTH

An old joke maintains that everything pleasurable is either illegal, immoral, or fattening. This is exactly the wrong idea. Health is pleasurable; ill health is miserable. Good health habits have their own immediate reward. If changing your behavior for health is making you feel less well, you're doing something wrong. Exercise makes you feel better. Good diets make you feel better. Avoiding nicotine makes you feel better. Having a good body weight makes your life activities easier and more pleasurable.

Much of what's written about healthy behaviors makes the whole process seem mysterious and complicated. The supermarket tabloids are always reporting some new threat to your health. There is indeed a long list of possible threats to health, but trying to keep track of them all overlooks two important facts. First, these threats often aren't adequately proven. Second, even if they do prove to be true, they aren't that important. For instance, barbecued foods may pose cancer-causing risks, and we suggest moderating the amount of barbecued foods you eat—but only if you eat such meals more than 30 times a year. Many people find a benefit in controlling caffeine intake, particularly in the evening, but this is a minor problem compared with drinking alcohol.

Here we've tried to emphasize only the important and the proven. As we said before, only seven or fewer areas require your attention.

- **Exercise:** work up to a regular aerobic (endurance) exercise program
- **Diet and nutrition:** especially cut down fat
- **Not smoking**
- **Alcohol moderation:** no more than two drinks a day
- **Weight control:** maintain a healthy weight instead of losing and gaining
- **Avoiding injury:** exercise your common sense
- **Professional prevention:** work alongside your doctor

CHAPTER 2

Your Home Pharmacy

You can prepare for most minor illnesses by keeping a few remedies and supplies in your home. To save money, buy only the items you will need often, and buy the inexpensive brands. The table on page 32 lists the products we recommend that you keep on hand. You can do almost all the home care described in this book with these items.

This chapter discusses dosages and side effects of some common medicines. Keep these points about drugs in mind:

- Always read the manufacturer's information for every product because that information can change. Talk to your doctor or pharmacist if you have questions.
- Medications eventually go bad, so you should replace them at least every three years. Check your medicine cabinet; you may find items that have expired or that you don't need.
- Keep all drugs out of reach of children. No bottle is totally childproof.
- All drugs can cause side effects, even when you use them properly. Many common medicines have unavoidable side effects, such as drowsiness.
- Don't assume that a drug is safe just because it doesn't require a prescription. Misusing over-the-counter drugs can be dangerous.
- The drugs in this chapter may relieve symptoms, but they aren't cures. If you can get along without drugs, you're usually better off.
- For most medicines, different brands are available. Look for the one with the best price. A brand-name drug is not necessarily better than a less costly generic or off-brand drug.

Hundreds of over-the-counter medicines are available at your supermarket or drugstore. For most medicines, several nearly identical products exist as competing brands. This has posed a problem for us in organizing

YOUR HOME PHARMACY

TABLE 5 *Home Pharmacy*

| <i>Page</i> | <i>Medication or Tool</i> | <i>Use</i> |
|---|---|---|
| ESSENTIAL | | |
| p. 34 | Bandages and Adhesive Tape | To close and protect minor wounds |
| p. 36 | Antiseptic Cleansers (3% hydrogen peroxide, iodine) | To cleanse minor wounds |
| p. 37 | Thermometer | To measure body temperature |
| p. 38 | Pain and Fever Medications (acetaminophen, aspirin, ibuprofen, naproxen, or ketoprofen) | To relieve pain, to lower fever |
| p. 41 | Antacids (nonabsorbable) | To relieve upset stomach |
| p. 43 | Skin Soothers (baking soda) | To treat skin irritation and soak wounds |
| RECOMMENDED FOR FAMILIES WITH SMALL CHILDREN | | |
| p. 43 | Syrup of Ipecac | To induce vomiting in cases of poisoning from drugs or plants |
| See p. 39 | Liquid Acetaminophen | To relieve pain and fever in young children |
| See p. 39 | Acetaminophen Rectal Suppositories | To relieve fever in small children who can't keep down other medicine |
| OPTIONAL | | |
| p. 44 | Antihistamines and Decongestants | To treat allergy symptoms |
| p. 45 | Nose Drops and Sprays | To treat runny nose |
| p. 46 | Cold Tablets | To treat cold symptoms |
| p. 47 | Cough Syrups | To treat coughing |
| p. 48 | Laxatives | To treat constipation |
| p. 49 | Diarrhea Remedies | To treat diarrhea |
| p. 49 | Sodium Fluoride | To prevent dental problems |
| p. 50 | "Artificial Tears" Eye Drops | To treat irritated eyes |
| p. 51 | Zinc Oxide | To treat hemorrhoids |
| p. 52 | Antifungal Preparations | To treat skin fungus |
| p. 52 | Hydrocortisone Cream | To treat rashes |
| p. 53 | Sunscreen Agents | To prevent sunburn |
| p. 53 | Wart Removers | To remove some warts |
| p. 54 | Elastic Bandages | To treat sprains and strains |

this chapter. If we discuss drugs by chemical name, the terms are long and confusing; if we use brand names, we may appear to favor a particular product when there are equally satisfactory alternatives. We decided to give you some clues to reading the list of ingredients on the package so that you can figure out what the drug is likely to do. We don't list all available drugs, but we do mention some representative alternatives. The brand names listed in this chapter are vigorously marketed and should be available almost everywhere. They aren't necessarily superior to alternatives containing similar formulas that aren't listed.

Bandages and Adhesive Tape

Purpose

To close and protect minor wounds. Bandages really don't "make it better." Sometimes it's better to leave a minor wound open to the air than to cover it. Still, a home medical shelf wouldn't be complete without a tin of assorted adhesive bandages. To fashion larger bandages, you also need adhesive tape and gauze. Bandages are useful for covering tender blisters, keeping dirt out of wounds, and keeping the edges of a cut together. They have some value in keeping the wound out of sight and thus are of cosmetic importance.

Dosage

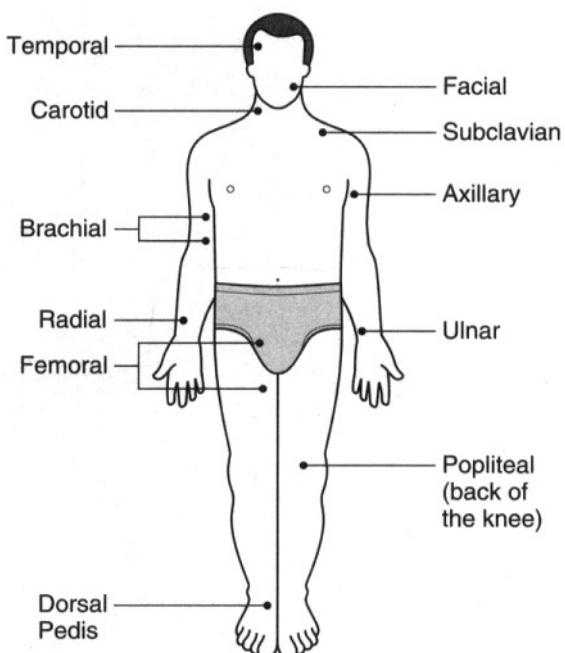
For smaller cuts and sores, use a bandage from the tin. Leaving the bandage on for a day or so is usually long enough; change the bandage daily if you wish to keep the wound covered longer. For cuts, apply the bandage perpendicular to the cut, and draw the skin toward the cut from both sides to relax skin tension before applying the bandage. The bandage should then act to keep the edges together during healing. For larger injuries, make a bandage from a roll of sterile gauze or from sterile 2"x2" (5x5 cm) or 4"x4" (10x10 cm) gauze pads, and firmly tape it in place with adhesive tape. Change the bandage daily. If you see white fat protruding from the cut, see your doctor.

Side Effects

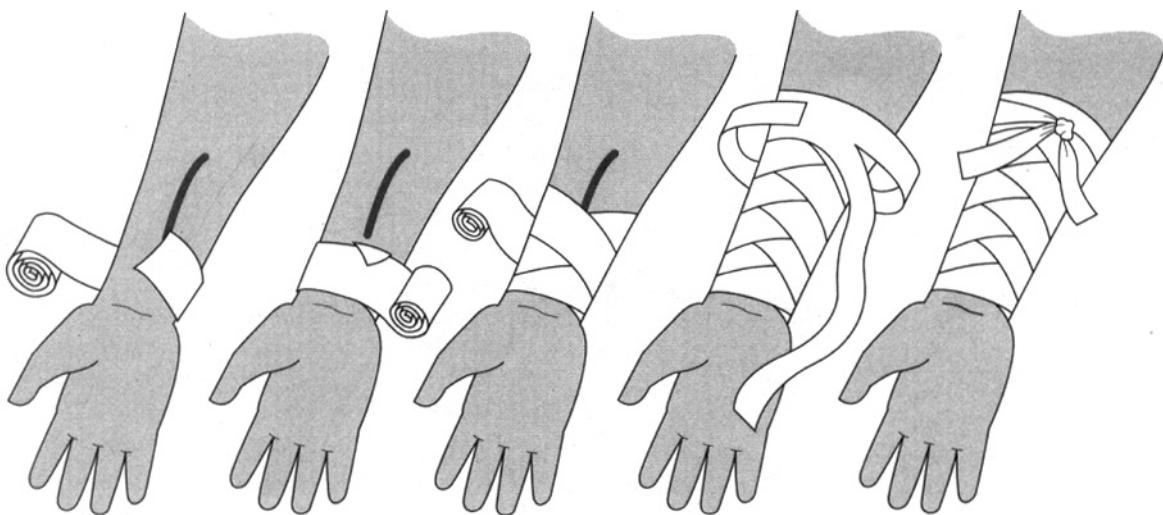
If the wound isn't clean when you cover it with a bandage, you may hide a developing infection from early discovery. Clean the wound with antiseptics and keep it clean.

Change the bandage if it becomes wet. Some people are allergic to adhesive tape and should use nonallergenic paper tape. If adhesive tape is left on for a week or so, it will irritate almost anyone's skin, so give the skin a rest.

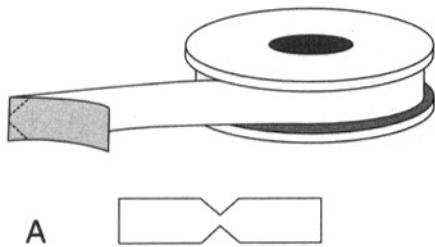
Some people leave a bandage on too long because they're afraid of the pain as they remove it—particularly if their hairs are stuck to the tape. For painless removal, apply nail polish remover to the back of the adhesive tape and let it soak for five minutes. This will dissolve the adhesive and release both the skin and hair.



Pressure points. If a bandage doesn't stop a person's wound from bleeding, slow the flow of blood to that part of the body by squeezing on a pressure point. Choose the nearest pressure point between the wound and the person's heart. The most commonly used pressure points are **inside the upper arm** and **inside the thigh**.



Wraparound bandage. This type of bandage makes a neat, long-lasting wrap for a large wound. It is easier to tape the end of the bandage, but if you have no tape you can tie the bandage as shown.



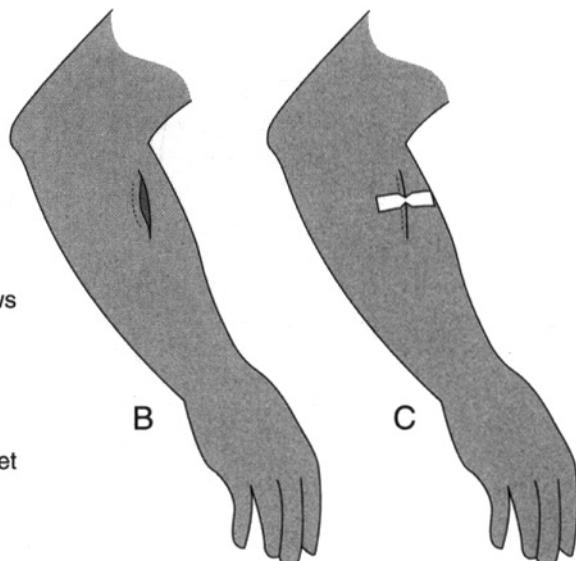
Butterfly bandage. This type of bandage allows a short, shallow wound to heal quickly.

(A) Fold a length of adhesive tape in two and snip off the folded corners.

(B) Make sure the wound is clean and that one edge is not lying over the other.

(C) Tape the wound together so that its edges meet and the narrow part of the bandage lies over the cut.

Use this only in the first six hours after injury; otherwise bacteria may grow in the wound.



Antiseptic Cleansers

Purpose

To cleanse minor wounds.

A dirty wound often becomes infected. If dirt or foreign bodies are trapped beneath the skin, they can fester and delay healing. Only a few germs are introduced at the time of a wound, but they may multiply to a very large number over several days. An antiseptic removes the dirt and kills the germs. A solution of 3% hydrogen peroxide, which foams and cleans as you work it into the wound, is a good cleansing agent, and iodine is a reasonably good agent with which to kill germs. A strong baking soda solution will draw fluid and swelling out of a wound and will act to soak and clean it at the same time.

Most of the time, the solutions' cleansing action is more important than germ killing because many preparations (Listerine, Zephiran, Bactine, etc.) really aren't very good at killing germs. Antibiotic creams (such as Bacitracin and Neosporin) are expensive, usually unnecessary, and of questionable effectiveness. First-aid sprays are a waste of money.

You must give scrupulous attention to the initial cleaning of a wound and scrub out any embedded dirt particles. Do this even though it hurts and bleeds. For small, clean cuts, use soap and water followed by iodine and then soap and water again. Betadine is a nonstinging iodine preparation. For larger wounds, use hydrogen peroxide with vigorous scrubbing.

Dosage

Most hydrogen peroxide is sold at the 3% strength. Don't use a hydrogen peroxide solution stronger than 3%, such as that used for bleaching hair. Pour the solution on the wound and scrub with a rough cloth. Wash it off and repeat. Continue until you can see no dirt beneath the level of the skin. If you can't get the wound clean, go to a doctor.

Iodine is painted or wiped onto the wound and the surrounding area. Wash it off within a few minutes, leaving a trace of the iodine color on the skin.

To soak a wound in a baking soda solution, use one tablespoon (15 ml) in one cup (250 ml) of warm water. If a finger or toe is injured, you can place it in the cup. For other wounds, soak a washcloth with the solution and place over the wound as a compress. Generally, a wound should be soaked for five to ten minutes at a time, twice a day. If the skin is puckered and "waterlogged" after the soak, it has been soaked too long. You can place cellophane or plastic wrap over the cloth compress to retain heat and moisture longer.

Side Effects

Hydrogen peroxide is safe to the skin but can bleach hair and clothing, so try not to spill it.

Iodine can burn the skin if left on full strength, so be careful. Iodine is also poisonous if swallowed; keep it away from children. Some people are allergic to iodine; discontinue use if you get a rash.

Baking soda is completely safe as long as it's used on the skin, not swallowed.

Thermometer

Purpose

To measure body temperature.

Fever is an important clue in diagnosing illness, and a very high body temperature may lead to problems. The best places to measure body temperature are the rectum and the mouth. Rectal temperatures are about 0.5°F (0.25°C) higher than oral (mouth) temperatures and usually reflect the body's condition more accurately. Oral temperature can be affected by hot or cold foods, routine breathing, and smoking.

Thermometers are designed in different ways to make taking oral and rectal temperatures easier. Generally, oral thermometers have a longer bulb at the business end, providing a greater surface area for a faster reading. Rectal thermometers may have a shorter, rounder bulb to facilitate entry into the rectum. The mercury in a mercury thermometer can be poisonous if the thermometer breaks.

Rectal thermometers are best for young children because it's hard for them to hold an oral thermometer under the tongue. Lubricants, such as Vaseline, can make

inserting rectal thermometers easier. Place the child on his or her stomach and hold one hand on the buttocks to prevent movement. Insert the thermometer an inch or so (2–3 cm) inside the rectum. The reading will begin to rise within seconds. Remove the thermometer when the mercury is no longer rising, after a minute or two.

You can take oral temperature with a rectal thermometer after sterilizing it for five to ten minutes in a 10:1 water:bleach solution. This will require a longer period in the mouth than an oral thermometer to achieve the same degree of accuracy. Oral thermometers can also be used to take rectal temperatures, but we don't recommend using them in children because of their shape.

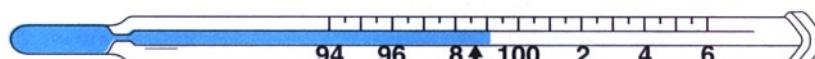
Electronic thermometers, including those that take temperatures from the ear, have the advantage of quicker readings, which is useful for younger children. They're more expensive than mercury thermometers, but safer. Contact thermometers—strips of plastic held against the forehead—aren't as accurate.

Side Effects

The mercury in older thermometers is poisonous, so care should be taken not to bite down while having an oral temperature taken.

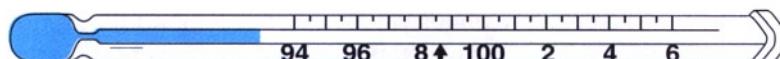
Oral thermometer.

Note the long, thin bulb. In this example the mercury needs to be shaken down toward the bulb before use.



Rectal thermometer.

The rounded bulb makes it easier to put into the rectum. This drawing shows a thermometer ready to use, its mercury shaken down.



Pain and Fever Medications

Purpose

To relieve pain and to lower fever. Sometimes, to help relieve itching.

There are five major over-the-counter drugs that do these tasks: acetaminophen, aspirin, ibuprofen, naproxen, and ketoprofen. Acetaminophen is the safest; the other four can cause severe or even fatal bleeding of the stomach, although only rarely if just a few tablets are taken. On the other hand, acetaminophen doesn't reduce inflammation; aspirin, ibuprofen, naproxen, and ketoprofen do, if taken in substantial dosage. These four drugs should not be used to treat fever in children because of the risk of Reye syndrome, a rare but serious problem of the liver and brain. Ibuprofen and naproxen are better than the others for relief of menstrual cramps.

In high doses ketoprofen appears to be more toxic than the four main drugs, so use it sparingly. Do not exceed the recommended dose.

Some pain reliever makers conceal the key drug in the pain relief medication somewhere in the fine print under "active ingredients," and refer obliquely to the amount of analgesic, or pain reliever, present in each tablet. It's often surprisingly hard to find out what is in the drug from the box. There are really only five drugs, but many manufacturers. Each company wants its product to seem unique in a crowded marketplace, so companies develop many minor variations on a similar theme and try to develop distinctive advertising.

For example, Excedrin is half aspirin and half acetaminophen. Excedrin Extra Strength

adds caffeine to the mix; this improves pain relief but may make you jittery. Some pain relievers include other ingredients. For example, an antacid may be added (as in Bufferin) in an attempt to cut down on stomach distress. Other than these variations, there's little medical reason to prefer one product over another in most cases. If you like a particular formulation, use it. If you want to save money, read the labels carefully and look for the best buys.

On some pain reliever bottles you may see the initials U.S.P., which stand for "United States Pharmacopoeia." Although not an absolute guarantee that the drug is the best, it does mean that the drug has met certain standards in composition and physical characteristics. The same is true of the designation N.F., which stands for "National Formulary."

Finally, remember that acetaminophen, ibuprofen, naproxen, and ketoprofen are available by doctor's prescription at up to twice the strength of the nonprescription formulas. If you have the stronger type of one drug in your medicine cabinet, don't confuse it with the weaker over-the-counter formula. And don't combine them unless your doctor concurs.

ACETAMINOPHEN

Usually, this should be your first choice because of its greater safety. Acetaminophen is available in several brand-name preparations (Tylenol, Datril, Liquiprin, Tempra, etc.). In the British Commonwealth, it's known as paracetamol. Acetaminophen is a good choice for adults because of its safety, and it's our first choice for children and teenagers. It's slightly less predictable than aspirin, somewhat less powerful, and doesn't have the anti-inflammatory action that makes aspirin

valuable in treatment of arthritis and some other diseases. On the other hand, it doesn't cause ringing in the ears or upset stomach, common side effects with aspirin. Nor can it cause Reye syndrome, a rare but serious potential side effect of aspirin when taken by children with chicken pox or the flu.

Dosage

Acetaminophen is used in doses identical to those of aspirin. For adults, two 325 mg tablets every three to four hours is standard. In children, 65 mg per year of age every four hours is satisfactory. There's never a reason to exceed these doses because there's no additional benefit in taking higher amounts. Like aspirin, acetaminophen comes combined with other ingredients in products that offer little advantage over acetaminophen.

Side Effects

People seldom experience side effects from acetaminophen. If you suspect a side effect, call your doctor. A variety of rare toxic effects have been reported, but none are definitely related to the use of this drug. A truly major overdose can cause liver failure, particularly in children, and this can be fatal. Keep the bottle where children can't get at it. If you abuse alcohol, severe liver toxicity can occur at as little as 4,000 to 6,000 mg a day. Never exceed 4,000 mg per day under any circumstances.

LIQUID ACETAMINOPHEN FOR SMALL CHILDREN

Most pediatricians never recommend aspirin for the small child, because of the possibility of Reye syndrome. If the child can't keep acetaminophen down because of vomiting, call your doctor for advice; acetaminophen

rectal suppositories, which require a prescription in many places, may work better.

Dosage

Liquid acetaminophen comes in varying concentrations, so read the label on your bottle for the correct dosage. In general, use a dropper to give 65 mg of acetaminophen for every year of the child's age up to age 10 every four hours. From noon to midnight, awaken the child if necessary. After midnight the fever will usually break by itself and become less of a problem, so if you miss a dose it's less important. But check the child's temperature at least once during the night to make sure. Remember, acetaminophen lasts only about four hours in the body, and you must keep repeating the dose or you'll lose the effect.

NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDs)

ASPIRIN

Expensive aspirin preparations may use coated tablets for easier swallowing or they may dissolve faster, but this usually doesn't make them more effective than cheaper brands.

If an aspirin bottle contains a vinegary odor when opened, the pills have begun to deteriorate and should be discarded. Aspirin usually has a shelf life of about three years, although shorter periods are sometimes quoted.

Dosage

In adults, the standard dose for pain relief is two tablets taken every three to four hours as required. The maximum effect occurs in about two hours. Each standard tablet is 5 grains, or

325 mg. If you use a nonstandard concoction, you'll have to do the arithmetic to calculate equivalent doses. The terms "extra strength," "arthritis pain formula," and the like merely indicate a greater amount of aspirin per tablet. This is medically trivial. You can take more tablets of the cheaper aspirin and still save money. When you read that a product "contains more of the ingredient that doctors recommend most," you may be sure that the product contains a little bit more aspirin per tablet; perhaps 400 to 500 mg instead of 325.

Here are some hints for good aspirin usage. Aspirin treats symptoms; it doesn't cure problems. Thus, for symptoms such as headache or muscle pain or menstrual cramps, don't take it unless you hurt. On the other hand, for control of fever, you'll be more comfortable if you repeat the dose every four hours during the day because this prevents fever from moving up and down. The afternoon and evening are the worst for fever, so try not to miss a dose during these hours. If you need aspirin for relief from some symptom over a prolonged period, check the symptom with your doctor. Relief from pain or fever is not improved if you increase the dose, and you're more likely to irritate your stomach, so take only the standard dose (650mg every four hours) even if you still have some discomfort.

To control inflammation, as in serious arthritis, the dose of aspirin must be high, often up to 16 tablets daily, and must continue over a prolonged period. A doctor should monitor such treatment; it's relatively safe, but problems sometimes occur.

Avoid using aspirin for children or teenagers with a fever because of the possibility they may later develop Reye syndrome, a potentially fatal disease of the liver and brain. We strongly recommend acetaminophen instead.

Aspirin is also used to prevent complications of high blood pressure in pregnant women and to prevent heart attacks and thrombotic strokes. The dose for this use is very low: 81 mg (one low-dose adult aspirin) every day or every other day. Ask your doctor before using it for these purposes.

Side Effects

In addition to Reye syndrome in children, aspirin can cause an upset stomach or ringing in the ears in adults and children. If your ears ring, reduce the dose.

Serious gastrointestinal hemorrhage or a perforated (ruptured) stomach can occur; aspirin more than doubles your risk of a bleeding ulcer. If your stomach is upset, try taking aspirin a half hour after meals, when the food in the stomach will act as a buffer. Coated aspirin (such as Ecotrin) can help protect the stomach. However, some people don't digest coated aspirin and so receive no benefit. Buffers are sometimes added to aspirin to protect the stomach and may help a little. If you take a lot of aspirin, you may want to ask your doctor about new prescription drugs that may be safer though more expensive.

Asthma, nasal polyps, deafness, serious bleeding from the digestive tract, ulcers, and other major problems have been associated with aspirin.

IBUPROFEN

Ibuprofen (Advil, Motrin, Nuprin, etc.) has long been used as a prescription drug for arthritis and is approved for over-the-counter use for pain and fever. Ibuprofen is about as toxic to the stomach as aspirin, and more so than acetaminophen. It doesn't cause ringing in the ears like aspirin or severe liver disease like acetaminophen (in rare cases). It appears to be almost impossible to commit suicide by

overdose with ibuprofen. But concern has been raised about kidney problems (mild and reversible), and ibuprofen is sometimes more expensive than the alternatives. It's the best over-the-counter preparation for menstrual cramps.

Dosage

Ibuprofen comes in 200 mg tablets, and the maximum recommended dose is 1,200 mg (six tablets) per day. This is about one-half the recommended dose for the prescription equivalent, but this dose is effective for minor problems and shouldn't be exceeded without a doctor's advice. Avoid use in children.

Side Effects

Gastrointestinal upset is the most frequent problem and is reason to stop or to call the doctor. Serious gastrointestinal hemorrhage or a perforated stomach can result. The rare patient with aspirin allergy may also react to ibuprofen. Read the label carefully.

NAPROXEN and KETOPROFEN

Naproxen (Naprosyn and Anaprox by prescription; Aleve over the counter) and ketoprofen (Orudis) are also available without prescription. Naproxen has a longer "half-life" than other pain relievers, so you need to take it only twice a day. It is effective against pain, fever, and inflammation. Ketoprofen is similar and does not offer any new benefits; it may be more toxic.

Dosage

Naproxen comes in 200 mg tablets. Read the label carefully. Because naproxen is slightly more toxic to the stomach than ibuprofen, don't take more than three tablets in 24 hours or more than two if you're over 65 years old. Ketoprofen comes in 12.5 mg tablets. Do not take more than six in 24 hours.

Side Effects

Stop taking the drug and call your doctor if you experience gastrointestinal upset. Avoid use in children. Do not use if there is an allergy to aspirin.

Antacids

Purpose

To relieve upset stomach.

NONABSORBABLE ANTACIDS

Maalox, Gelusil, Mylanta, Di-Gel, and Amphojel are examples of nonabsorbable antacids. They're an important part of the home pharmacy. They help neutralize stomach acid and thus decrease heartburn, ulcer pain, gas pains, and stomach upset. Because they aren't absorbed by the body, they usually don't upset the acid-base balance of the body and are quite safe.

Almost all these antacids are available in both liquid and tablet form. For most purposes, the liquid form is superior. It coats more of the surface area of the gullet and stomach than the tablets do. Indeed, if not well chewed, tablets may be almost worthless. Still, during work or play, a bottle can be cumbersome, and a few tablets in a shirt pocket or handbag may help with midday doses.

ABSORBABLE ANTACIDS

Baking soda, Alka-Seltzer, Rolaids, and Tums contain absorbable antacids. The main ingredient in these products is sodium bicarbonate (Alka-Seltzer, baking soda),

dihydroxyaluminum sodium carbonate (Rolaids), or calcium carbonate (Tums). These medicines are more powerful acid neutralizers than nonabsorbable antacids, and they come in convenient tablet form. Calcium carbonate is also an excellent source of supplemental calcium and can help prevent osteoporosis.

Reading the Labels

Nonabsorbable antacids contain magnesium or aluminum or both. As a general rule, magnesium causes diarrhea and aluminum causes constipation. Different brands are slightly different mixtures of the salts of these two metals, designed to avoid both diarrhea and constipation. A few brands also contain calcium, which can be mildly constipating.

Different products differ in taste. While there are some differences in potency, most people will ultimately select the particular antacid that has a taste they can tolerate and that doesn't upset their bowels. Keep trying different brands until you're satisfied.

Dosage

The standard adult dose is two tablespoons (30 ml) or two well-chewed tablets. Use one-half the adult dose for children ages six to twelve, and one-fourth the adult dose for children ages three to six. The frequency of the dose depends on the severity of the problem. For stomach upset or heartburn, one or two doses will often suffice. For gastritis, several doses a day for several days may be needed. For ulcers, six weeks or more may be needed, with the medication taken as frequently as every hour or so; this type of program should be supervised by a doctor.

If you wish to use baking soda as an antacid, use one teaspoon (5 ml) in a glass of water every four hours as needed—but only occasionally. Baking soda is absorbable and can upset the body's acid-base balance.

Side Effects

In general, the only problem is the effect on bowel movements. Maalox tends to loosen stools slightly, Mylanta and Gelusil are about average, and Amphojel and Aludrox (with more aluminum) tend to be more constipating. Aluminum intake has been linked to Alzheimer's disease, but this is far from certain. Adjust the dose and change brands as needed. Check with your doctor before using these compounds if you have kidney disease, heart disease, or high blood pressure. Some brands contain significant quantities of salt and should be avoided by people on a low-salt diet. Di-Gel has the lowest salt content of the popular brands.

Be careful if you take baking soda by mouth. First, there's a lot of sodium in it. If you have heart trouble or high blood pressure or are on a low-salt diet, you can get into trouble. Second, if you take baking soda for many months on a regular basis, there's some evidence that it may result in calcium deposits in the kidneys and thus cause kidney damage.

Talk with your doctor before using antacids to treat side effects of other medications, such as aspirin, naproxen, ibuprofen, or ketoprofen, as they may mask a serious problem such as ulcers.

STOMACH ACID BLOCKERS

Cimetidine (Tagamet), famotidine (Pepcid AC), ranitidine (Zantac), and nizatidine (Axid AR) are prescription drugs widely used for stomach ulcers and have been approved for over-the-counter use in lower doses to treat heartburn. Rather than neutralize stomach acid like antacids, they act to block the body's production of the acid. Most people won't need these medicines, but you can consider them if antacids aren't effective. If you take other medications, check with your doctor

before taking Tagamet; it can increase the potency of a number of other medications, including some taken for blood thinning (warfarin), asthma (theophylline), and seizures. Pepcid AC may be slightly better in this regard. Don't exceed the recommended dose.

Your doctor may recommend stronger medications, called proton pump inhibitors, if necessary.

Side Effects

There are none as long as the baking soda is applied only to the skin.

SKIN CREAMS AND MOISTURIZING LOTIONS

There's little to be said about the various artificial materials—for example, Lubriderm, Vaseline, Alpha-Keri—that people apply to their skin in an attempt to temporarily improve its appearance or retard its aging. The various claims of such products are not scientifically based, and long-term benefits have not been demonstrated.

Sometimes dry skin can actually cause symptoms, thus becoming a medical problem. Remember that bathing or exposure to detergents may contribute to the drying of skin. Decreasing the frequency of baths or showers, wearing gloves when working with cleansing agents, and other similar measures are more important than using any lotion or cream.

Moisturizing creams and lotions may make your skin feel better to you; this is the "soothing" action. Use such creams as the product labels state. They have essentially no side effects, except that some people are allergic to the lanolin in some of these products.

Skin Soothers

BAKING SODA

Baking soda (sodium bicarbonate, NaHCO_3) is a very useful household chemical. It has three principal medical uses:

- As a weak solution, it acts to soothe the skin and reduce itching; thus, it's helpful in conditions ranging from sunburn to poison oak to chicken pox. This is the usage we discuss on this page.
- As a strong solution, it will draw fluid and swelling out of a wound and will act to soak and clean the wound at the same time. (See Antiseptic Cleansers, page 36.)
- If taken by mouth, it serves as an antacid and may help alleviate heartburn or stomach upset. Because the sodium in baking soda is absorbed by the body, however, we strongly recommend using another antacid instead.

Dosage

To soothe the skin, use from two tablespoons to a half cup (30–120 ml) in a bath of warm water. Blot the skin gently after the bath and allow the solution to dry on the skin. Repeat this procedure as often as necessary.

Syrup of Ipecac

Purpose

To induce vomiting if someone has been poisoned by a plant or a drug. Vomiting will empty the stomach of any poison that has not already been absorbed. Syrup of ipecac is especially useful if you have small children.

Don't use ipecac or anything else to induce vomiting if the poison swallowed is a petroleum-based compound or a strong acid or alkali. Call the Poison Control Center immediately. See Poisoning (page 66) for more advice on poisoning.

It's far better to keep toxic chemicals out of a child's reach than to have to use ipecac. When you buy ipecac, use the purchase as a reminder to check the house for toxic materials that a child might reach; move them to a safer place. If your child does swallow something, the sooner the stomach is emptied, the milder the problem will be, with the exceptions listed above. There's no time to buy ipecac after your child has swallowed poison; therefore, you should have it on hand just in case you ever need it.

Dosage

One tablespoon (15 ml) of ipecac may suffice for a small child; two to four teaspoons (10–20ml) are necessary for older children and adults. Follow the dose with as much warm water as can be given, until vomiting occurs. Repeat the dose in 15 minutes if you haven't had any results.

Side Effects

This is an uncomfortable medication, but it's not hazardous unless vomiting causes material to be thrown down the windpipe into the lungs. This can cause pneumonia, so do *not* induce vomiting in a victim who is unconscious or nearly unconscious. Do *not* cause vomiting of volatile materials, such as petroleum compounds or drain cleaner, that can be inhaled into the lungs and cause damage.

Allergy Medications: Antihistamines and Decongestants

Purpose

To treat allergy symptoms; these agents can also reduce itching.

Allerest, Chlor-Trimeton, Sinarest, Actifed, Benadryl, Sudafed, Dimetapp, and Tavist D are among the over-the-counter drugs designed for treatment of minor allergic symptoms. They're similar to the cold compounds described on page 46, but they less frequently contain pain and fever agents like aspirin, acetaminophen, naproxen, ibuprofen, or ketoprofen. Usually these drug compounds contain an antihistamine and a decongestant agent, and sometimes acetaminophen. These ingredients can be identified from the label.

If you tolerate one of these drugs well and get relief, you may continue to take it for several weeks (for example, through a hay fever season) without seeing a doctor. However, decongestants taken as nose drops or nasal spray should be used more sparingly and only for short periods, as detailed in Nose Drops and Sprays (page 45).

Reading the Labels

The decongestant is usually pseudoephedrine or phenylpropanolamine. If the compound name is not familiar, the suffix “-ephine” or “-edrine” usually identifies a decongestant. The antihistamine is often chlorpheniramine, diphenhydramine, or brompheniramine. If not, the antihistamine is sometimes identifiable on the label by the suffix “-amine.”

Dosage

Take according to product directions. Reduce the dose if you note side effects, or try another compound.

Side Effects

These are usually minor and disappear after the drug is stopped or decreased in dose. Agitation and insomnia usually indicate too much of the decongestant. Drowsiness usually indicates too much antihistamine. If you can avoid the substances to which you are allergic, it's far superior to taking drugs. Drugs, to a certain degree, inevitably impair your functioning.

causing the muscle in the walls of the blood vessels to shrink, decreasing blood flow, and after many applications these small muscles become fatigued and fail to respond. Finally, they're so fatigued that they relax entirely, and the situation becomes worse than it was in the beginning. This is medically termed "rebound vasodilation" and can occur if you use these drugs steadily for three days or more. Many patients interpret these increased symptoms as a need for more medication, but taking more only makes the problem worse. Therefore, *use nose drops or sprays for only three days at a time*. After several days' rest, you may use them again for three more days.

Dosage

These drugs are almost always used in the wrong way. If you don't bathe the swollen membranes on the side surface of the inner nose, you won't get the desired effect. If you can taste the drug, you've applied it to the wrong area. Apply small amounts to one nostril while lying down on that side for a few minutes so that the medicine will bathe the membranes. Then apply the agent to the other nostril while lying on that side (see diagram below). Treat four times a day if

Nose Drops and Sprays

Purpose

To treat a runny nose.

A runny nose is often the worst symptom of a cold or allergy. Because this complaint is so common, remedies are big business, and there are many advertised as decreasing your nasal drip: Afrin, Neo-Synephrine, Vicks, Sinarest, and other drops or sprays.

The active ingredient in these compounds is a decongestant drug, often ephedrine or phenylephrine. These preparations are "topical," meaning that you apply them directly to the inflamed tissue. You can then feel the membranes shrinking down and "drawing," and you will note a decrease in the amount of secretion. However, there are some problems associated with using these compounds.

The major drawback is that the relief is temporary. Usually the symptoms return in a couple of hours, so you repeat the dose. This is fine for a while. But these drugs work by



needed, but don't continue for more than three days without interrupting the therapy.

Side Effects

Rebound vasodilation from prolonged use is the most common problem. If you apply these agents incorrectly and swallow a large amount of the drug, you may experience a rapid heart rate and an uneasy, agitated feeling. The drying effect of the drug can result in nosebleeds.

Try to avoid the substances to which you're allergic rather than treating the consequences of exposure. Often, simple measures like changing a furnace filter, using a vaporizer, or using an air conditioner to filter the air can improve allergic symptoms.

Cold Tablets

Purpose

To relieve some symptoms of colds and flu.

Coricidin, Actifed, Triaminic, Contac, Dimetapp, and dozens of other products are widely advertised as being effective against the common cold. Surprisingly, many give satisfactory symptomatic relief. We don't think that these compounds add much to standard treatment with acetaminophen and fluids, but some people believe otherwise. We don't discourage their use for short periods.

These compounds usually have three basic ingredients. The most important is a fever and pain reducer: acetaminophen, aspirin, or ibuprofen. In addition, there is a decongestant drug to shrink the swollen membranes and the small blood vessels, and an antihistamine to block any allergy and to dry mucus.

Reading the Labels

The decongestant is often pseudoephedrine or phenylpropanolamine. If not, the suffix "-ephine" or "-edrine" will usually identify this component of the compound. The antihistamine is often chlorpheniramine (Chlor-Trimeton, etc.) or diphenhydramine. If not, the antihistamine is usually (but not always) identifiable on the label by the suffix "-amine."

Occasionally a "belladonna alkaloid" is added to these compounds to enhance other actions and reduce stomach spasms. In the small doses used, there's little effect from such a drug. It is listed as "scopolamine," "belladonna," or something similar. Other ingredients that may be listed contribute little. Don't use products with caffeine if you have heart trouble or difficulty sleeping.

These products take the much promoted "combination-of-ingredients" approach. As a rule, single drugs are preferable to combinations of drugs; they allow you to be more selective in treatment of symptoms, and consequently you take fewer drugs. The ingredients in combination products are available separately, and these individual products should be considered as alternatives. For example, the major ingredient in combination products is usually aspirin or acetaminophen. Pseudoephedrine is an excellent decongestant and is available without prescription in 30 mg and 60 mg tablets. Chlorpheniramine, a strong antihistamine, is available without a prescription in the standard 4 mg size. When possible, consider applying medicine directly to the affected area, as with nose drops or sprays for a runny nose.

Finally, note that the commonly prescribed cold medicines (Sudafed, Actifed, Dimetapp) are really just more concentrated and expensive formulations of the same type

of drugs that are available over the counter (often even under the same names). Is it worth a trip to the doctor just for that?

Dosage

Try the recommended dosage. If you feel no effect, you may increase the dosage by one-half. Don't exceed twice the recommended dosage. Remember that you're trying to find a compromise between desired effects and side effects. Increasing the dosage gives some chance of increased beneficial effects, but it guarantees a greater probability of side effects.

Side Effects

Drugs that put one person to sleep will keep another awake. The most frequent side effects of cold tablets are either drowsiness or agitation. The drowsiness is usually caused by the antihistamine component, and the insomnia or agitation results from the decongestant component. You can try another compound that has less or none of the offending chemical, or you can reduce the dose. There are no frequent serious side effects; the most dangerous is drowsiness if you intend to drive or operate machinery. In rare cases, the "belladonna" component will cause dry mouth, blurred vision, or inability to urinate. You may experience aspirin's usual side effects—upset stomach, ringing in the ears, or, rarely, bleeding from the stomach.

- **Expectorants** are usually preferable because they liquefy the secretions the body produces while fighting illness and allow the body's defenses to get rid of the bad material by coughing it up more easily.
- **Cough suppressants** should be avoided if the cough is bringing up any material or if there's a lot of mucus. In the late stages of a cough, when it's dry and hacking, compounds containing a cough suppressant may be useful.

We prefer cough compounds that don't contain an antihistamine, which dries mucus and can harm as much as help.

Reading the Labels

Guaifenesin (Robitussin, Benylin expectorant, Vicks, etc.), potassium iodide, and several other frequently used chemicals cause an expectorant action.

Cough-suppressant action comes principally from narcotics, such as codeine. Over-the-counter cough suppressants cannot contain codeine. They often contain dextromethorphan hydrobromide (DM), which is not a narcotic but is a close chemical relative.

Many commercial mixtures contain a little of everything and may have some of the ingredients of the cold compounds as well.

We'll discuss guaifenesin (Robitussin, Benylin expectorant, Vicks, etc.) and dextromethorphan (Vicks Formula 44, Robitussin-DM, etc.) specifically; follow the label instructions for other agents.

Cough Syrups

Purpose

Cough medication is a confusing area, with many products from which to choose. To simplify, consider two major categories:

GUAIFENESIN

Guaifenesin draws more liquid into the mucus that triggers a cough. Thus, the cough medicine liquefies these mucus secretions so that they may be coughed free. The resulting

cough is easier and less irritating. For a dry, hacking cough remaining after a cold, the lubrication alone often soothes the inflamed area. Guaifenesin doesn't suppress the cough reflex but encourages the natural defense mechanisms of the body. There's controversy over its effectiveness, but it appears to be safe. It isn't as powerful as the codeine-containing preparations, but for routine use we prefer it to prescription drugs. Pepper and garlic, not usually thought of as medicines, have a similar effect.

Reading the Labels

Guaifenesin is also available in combination with decongestants and cough suppressants; the decongestants may carry a "-PE" suffix for "phenylephrine" and the cough suppressants a "-DM" for "dextromethorphan."

Dosage

Follow directions on the label. Call your doctor if you have a sick and coughing child less than one year old.

Side Effects

No significant problems have been reported. If you use preparations containing other drugs, you may feel side effects from the other components of the combination.

DEXTROMETHORPHAN (DM)

Robitussin-DM, Triaminic-DM, Vicks Formula 44, and others contain dextromethorphan, a drug that "calms the cough center." The drug makes the areas of the brain that control coughs less sensitive to the stimuli that trigger coughs. No matter how much you use, it will seldom decrease a cough by more than 50%. Thus, you usually can't totally suppress a cough; this is actually good for you because the cough is a protective reflex. Dextromethor-

phan is best used with dry, hacking coughs that are preventing sleep or work.

Dosage

See directions on the label. Adults may require up to twice the recommended dosage to obtain any effect, but don't exceed this amount. A higher dose may produce problems, not further benefit.

Side Effects

Drowsiness is the only side effect that has been frequently reported.

Laxatives

Purpose

To treat constipation.

We prefer a natural diet, with natural vegetable fiber residue, to the use of any laxative. But if you must use a laxative, the most attractive alternative is psyllium as a bulk laxative to hold water in the bowel and soften the stool.

Metamucil, EfferSyllium, and similar preparations contain substances refined from the psyllium seed. They can help both diarrhea and constipation. Psyllium draws water into the stool, forms a gel or thick solution, and thus provides bulk. It isn't absorbed by the digestive tract but only passes through; thus, it's a natural product and essentially has no side effects. However, it doesn't always work. A similar effect probably can be obtained by eating enough celery.

Dosage

One teaspoon (5 ml), stirred in a glass of water, taken twice daily is a typical dose. A second glass of water or juice should also

be taken. Psyllium is also available in more expensive, individual-dose packets, for when you don't have a measuring spoon. The effervescent versions mix a bit more rapidly and taste better to some people.

Side Effects

If you take a bulk laxative without sufficient water, the gel that is formed could conceivably lodge in your esophagus (the tube that leads from the mouth to the stomach). Sufficient liquid will prevent this problem.

There are other laxatives, less frequently needed, which are less natural. These include fecal softeners such as Colace, Dialose, and Doxidan; bowel stimulants such as Correctol, Ex-lax, coffee, and milk of magnesia; and that old family standby, mineral oil. All are safe if used in moderation, but can lead to "laxative habit" in which they become necessary for good bowel movements.

cycline, doxycycline, or others. Consult your doctor before the trip for a prescription. Sometimes you can just do this by phone.

ATTAPULGITE

Diasorb, Rheaban, and similar medicines contain a mineral called attapulgite. This ingredient has a gelling effect that helps form a solid stool.

Dosage

Follow the directions on the label. For children below age three, call your doctor to ask for the correct dosage. In general, more severe diarrhea is treated more vigorously, whereas minor problems require less medicine.

Side Effects

None have been reported.

BISMUTH SUBSALICYLATE (PEPTO-BISMOL)

Dosage

Follow label directions. For children below age three, call the doctor for dosage.

Side Effects

Bismuth may cause a temporary, harmless darkening of the tongue and/or stool.

Diarrhea Remedies

Purpose

To treat diarrhea.

For occasional loose stools, no medication is required. A clear liquid diet (for example, water or ginger ale) is the first remedy for any diarrhea; it rests the bowel and replaces lost fluid. When diarrhea persists, products with kaolin, pectin, or bismuth are often helpful. If these don't control the diarrhea, stronger agents containing substances such as paregoric may be prescribed. Long-term or severe diarrhea may require the help of a doctor and antibiotic treatments.

To Prevent "Traveler's Diarrhea."

It's best to use antibiotics, such as tetra-

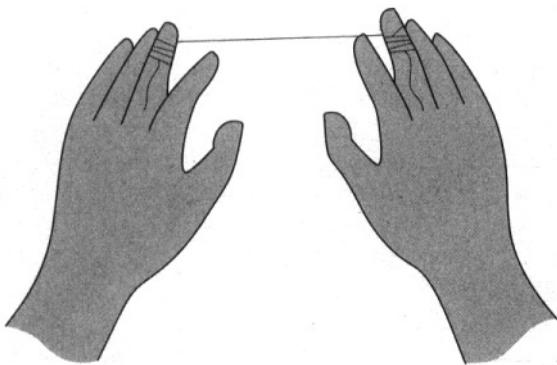
Sodium Fluoride

Purpose

To protect teeth from decay.

Take care of your teeth; they help you chew. There's good evidence that preventive measures can save teeth. Brush your teeth with a toothpaste that contains fluoride as

recommended by your dentist. Many doctors feel that daily flossing is the most important way to prevent adult tooth decay. Adult tooth loss is usually due to plaque buildup, gum disease, and bone loss. Water jets (such as Water Pik) remove food products from between the teeth, but they're less effective than proper flossing.



Dental floss. Wrap floss around your two middle fingers. Use your index fingers to guide the floss into the spaces between your teeth. This way you don't need to wrap the floss tightly. Rub the floss up and down against the teeth's surfaces.

SODIUM FLUORIDE SUPPLEMENTS

If your water supply is fluoridated, your fluoride intake is adequate and you don't need to supplement your diet. The ground water in many areas is naturally fluoridated. Find out if your water is fluoridated; your local health department usually has the answer. If it isn't fluoridated, it's important for you to supplement your children's diet with fluoride. All authorities agree that fluoride is needed through age ten, and probably longer. Adults probably don't require dietary fluoride, although painting teeth with sodium fluoride paste by the

dentist is felt to be helpful, as is use of a fluoride toothpaste. Fluoride is effective in preventing tooth decay in persons of all ages.

Dosage

Fortunately it's relatively easy to supplement with fluoride when the water supply isn't treated. Buy a large bottle of soluble fluoride tablets. Most tablets are 2.2 mg and contain 2 mg of fluoride; the rest is a soluble sugar. If the water supply has low fluoride content, children under the age of three need approximately 0.25 mg per day, ages three to six need 0.5 mg, and ages six to ten need 1 mg. With partially fluoridated water, check doses with your dentist. The tablets can be chewed or swallowed. They may also be taken in milk; they don't alter its taste. In states where fluoride is available only by prescription, request a prescription from your doctor or dentist on a routine visit.

Side Effects

Too much fluoride will mottle the teeth (make gray spots) and won't give them additional strength, so don't exceed the recommended dosage. At the recommended dosage, there are no known side effects; fluoride is a natural mineral present in many natural water supplies.

"Artificial Tears" Eye Drops

Purpose

To treat irritated eyes.

The tear mechanism normally soothes, cleans, and lubricates the eye. Occasionally, the environment can overwhelm this mecha-

nism, or not enough tears may flow. In these cases the eye becomes "tired," feels dry or gritty, and may itch. A number of compounds that may aid this problem are available.

There are two general classes of eye preparations. One class contains compounds intended to soothe the eye (Murine, Prefrin, etc.). Added to these compounds may be decongestants that shrink blood vessels and thus "get the red out" (Visine, Murine Plus, Visine LR). Their capacity to soothe is debatable. The use of decongestants to get rid of a bloodshot appearance is totally cosmetic. It's even possible that such preparations interfere with the normal healing process, so we don't recommend them.

The other class of preparations makes no claims of special soothing effects and contains no decongestants. Their purpose is to lubricate the eye, to be "artificial tears." These are chemical solutions similar to those of the body, so that no irritation occurs. Ophthalmologists prefer such preparations for minor eye irritation. Murine Lubricating Eyedrops is one example.

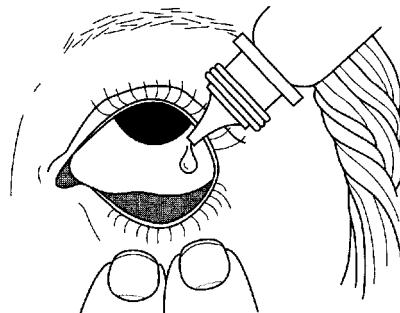
Dosage

Use as frequently as needed in the quantity required. You can't use too much, although usually a few drops give just as much relief as a bottleful. If you have a constant problem of dry eyes, check it out with your doctor because it may indicate an underlying problem. Usually the symptom of dry eyes lasts only a few hours and is readily relieved. Too much sun, wind, or dust usually causes the minor irritation.

Side Effects

No serious side effects have been reported. Visine and other drugs containing decongestants tend to sting a bit.

None of these drugs treats eye infections or injuries or removes foreign bodies from the eye. In Part II, "Common Problems," we give instructions for more severe eye complaints (pages 128-137).



Inserting eye drops. Gently pull down the lower lid. Drip the solution into the sac formed by the lid, not on the eyeball itself. Blink a few times.

Zinc Oxide

Purpose

To treat hemorrhoids.

Zinc oxide powders and creams soothe the irritated area while the body heals the inflamed vein. They also help toughen the skin over the hemorrhoids so that it's less easily irritated. Many people get relief with Preparation H, Anusol, or others, but these offer little advantage.

Reading the Labels

We don't advocate the use of creams that contain ingredients identified by the suffix "-caine" because repeated use of these local anesthetics can cause further irritation.

Dosage

Apply as needed, following label directions. Don't trap bacteria beneath the creams; apply them after a bath when you have carefully cleaned and dried the area. Remember to clean the area thoroughly with soap and water each day.

Side Effects

Essentially none.

Dosage

For athlete's foot, use as directed on the label. For other skin problems, selenium sulfide is effective. It's available by prescription in a 2.5% solution but also over the counter in a 1% solution as Selsun Blue shampoo. Use the shampoo as a cream and let it dry on the skin; repeat several times a day to compensate for the solution's weaker strength.

Side Effects

There are very few. Selenium sulfide can burn the skin if used to excess, so decrease application if you notice any irritation. Selenium may discolor hair and will stain clothes. Be very careful when applying any of these products around the eyes. Don't take them by mouth.

Antifungal Preparations

Purpose

To treat fungus infecting the skin, mouth, throat, and vagina.

Fungal infections of the skin usually aren't serious, so treatment isn't urgent. In general the fungus needs moist, undisturbed areas to grow and will often disappear with regular cleansing, drying, and application of powder to keep the area dry. Clean the area twice daily.

If you need a medication, there are effective nontoxic agents available. For athlete's foot, try one of the zinc undecylenate creams or powders, such as Desenex. In difficult cases, tolnaftate (Tinactin, etc.) and clotrimazole (Lotrimin, etc.) are useful for almost all skin fungus problems, but they are more expensive.

Miconazole (e.g., Monistat 7) is effective and safe for yeast infections (candida monilia) of the mouth, throat, and vagina. If you experience no relief after a week, see the doctor.

Hydrocortisone Cream

Purpose

To temporarily relieve skin itching and rashes such as poison ivy and poison oak.

Brand names of over-the-counter hydrocortisone cream include CaldeCORT, Cortizone-10, and Benadryl Itch Relief Cream. These are strong, local anti-inflammatory preparations. Used for a short period, these creams are safe and almost totally nontoxic. They'll clear up many minor rashes, but they "suppress" a condition rather than "cure" it.

Dosage

Rub a very small amount into the rash. If you can see any cream remaining on the skin, you've used too much. Repeat as frequently as needed, which often is every two to four hours.

Side Effects

Over the long term, these creams can cause skin atrophy (thinning of the skin), so limit their use to a two-week period. Beyond this time, check with your doctor. Theoretically, these creams can make an infection worse, so be careful about using them if it is possible the "rash" might be infected. Don't use these creams around the eyes, and don't take them by mouth.

look for the non-water-soluble products if you plan to be in and out of the water.

Dosage

Apply evenly to exposed areas of skin as directed on the label.

Side Effects

Very rare skin irritation and allergy have been reported.

Sunscreen Agents

Purpose

To prevent sunburn.

Dermatologists continually remind us that sun is bad for the skin. Exposure to the sun accelerates skin aging and increases the chance of skin cancer. Advertisements, on the other hand, keep extolling the virtues of a suntan. As a nation, we spend much of our youth trying to achieve a pleasing skin tone, disregarding the later consequences.

Sunscreen agents can prevent burning but allow you to be in the sun. If your skin is unusually sensitive to the sun's effects, it's best to block the rays; this is achieved with a strong sunscreen agent, like Presun, or any PABA-containing agent with a high sunscreen number. The rating numbers on the label are a good guide to the blocking power of the different agents. The higher the number, the better the blocking power. Suntan lotions that aren't sunscreen agents block relatively little solar radiation.

The length of time an agent stays on the skin is important. Even the strongest cream or lotion won't help after it has washed off, so

Wart Removers

Purpose

To remove some warts.

Warts are a curious little problem. The capricious way in which they form and disappear has led to countless myths and home therapies. They can be surgically removed, burned off, or frozen off, but they'll also go away by themselves or after treatment by hypnosis. Warts are caused by a virus and are a reaction to a minor local viral infection. If you get one, you're likely to get more. When one disappears, the others often follow. The exception is plantar warts, on the sole of the foot, which won't go away by themselves and sometimes not even with home treatment; the doctor may be needed.

Over-the-counter chemicals, such as Compound W and Wart-Off, are moderately effective for treatment of warts. They contain a mild skin irritant. By repeated application they slowly burn off the top layers of the wart and eventually the virus is destroyed.

Dosage

Apply repeatedly, as directed on the product label. Persistence is necessary.

Side Effects

These products are effective because they are caustic to the skin. Be careful to apply them only to the wart, and be very careful around your eyes or mouth.

most important function of these bandages is to remind yourself that you have a problem so that you're less likely to reinjure yourself.

Dosage

When wrapping with the bandage, start at the far end of the area to be bandaged and work toward the trunk of the body, making each loop a little looser than the one before. Thus, a knee bandage should be tighter below the knee than above, and an ankle bandage should be tighter on the foot than on the lower leg. Many people think that because a bandage is elastic it must be stretched. That's wrong. The stretchability is to allow the person to move. Simply wrap the bandage as you would a roll of gauze.

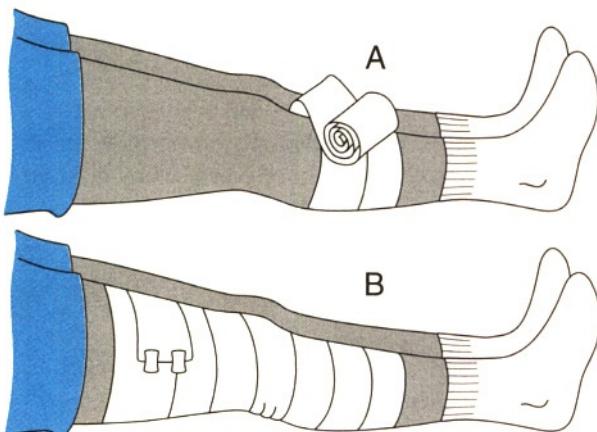
Continue using the bandage as support well past the time of active discomfort to allow complete healing and to help prevent reinjury; this usually takes about six weeks. During the latter part of this period, you can stop using the bandage except during activities that will likely stress the injured part. Remember that reinjury is still possible while these bandages are being used.

Elastic Bandages

Purpose

To treat sprains and similar injuries.

Any family periodically needs elastic (Ace, etc.) bandages. You'll probably need both a narrow and a broad width. If problems recur, the one-piece devices designed specifically for knee and ankle are sometimes more convenient. All these bandages primarily provide gentle support, but they also act to reduce swelling. The support given is minimal, and it's possible to reinjure the body part despite the bandage. Thus, an elastic bandage isn't a substitute for a splint, a cast, or a proper adhesive-type dressing. Perhaps the



Wrapping an elastic bandage.

(A) Start wrapping the bandage on the far side of the joint (in this case, the knee). Don't stretch the bandage as you wrap.
(B) Wrap past the joint, firmly at first then more loosely the farther up you go. Use the clips that come with most elastic bandages to fasten the loose end.

Side Effects

The simple elastic bandage can cause trouble when it is applied too tightly. Problems arise when circulation in the limb beyond the bandage is impaired. The bandage should be firm but not tight. The limb shouldn't swell, hurt, or be cooler beyond the bandage. The skin shouldn't have any blue or purple color.

- **Vitamin C:** A Canadian study indicated that people over age 55 who took vitamin C supplements (at least 300 mg daily for five years) have a 70% lower risk for eye cataracts, but most other studies of a variety of conditions have been disappointing or have shown only minor benefit.

- **Vitamin D:** Most pediatricians recommend vitamin D supplements for infants who are breast-feeding.

- **Vitamin E:** Several studies now suggest that vitamin E supplements (400 International Units [IU] or more per day) may reduce the risk of heart disease by as much as one-half by preventing the oxidation of LDL cholesterol. The Canadian study that looked at vitamin C supplements and cataracts also investigated vitamin E supplementation (400 IU daily) and found a 50% lower risk of cataracts.

- **Folic acid:** Several studies have demonstrated that the use of a folic acid supplement (1 mg per day) before and during early pregnancy greatly reduces the risk of severe defects of the nervous system in the baby. With vitamin B₆ and B₁₂, folic acid may reduce the chances of a heart attack by reducing blood levels of homocysteine.

- **Multivitamins and minerals:** One study suggested that the use of a multivitamin and mineral preparation by healthy adults over 65 reduced the number of illness days by more than half. This supplement contained vitamin A, beta-carotene, thiamine, riboflavin, niacin, vitamin B₆, folic acid, vitamin B₁₂, vitamin C, vitamin D, vitamin E, iron, zinc, copper, selenium, iodine, calcium, and magnesium. The amount of each vitamin or mineral was similar to the

Vitamin Preparations

The use of vitamin supplements has always been controversial. In the past there was theoretical reason to believe that supplements might have benefits; there were also good reasons to believe that these benefits might only be theoretical. Classic diseases of vitamin deficiency (scurvy, beriberi, pellagra, etc.) are rare and occur only in people whose diets are inadequate in virtually every respect, or who have diseases or take medications that interfere with natural vitamins. Most past research on vitamin intake studied diet only and didn't directly address the issue of supplements to the diet. This research suggested that a well-balanced diet should provide adequate amounts of vitamins and minerals.

On the other hand, it's now known that there are specific situations in which vitamin supplements are appropriate. There are good studies indicating that supplements may be useful in individuals with "average" diets outside the special circumstances mentioned above. Here's a summary of current information on vitamin supplements.

- **Vitamin A:** Multiple studies of prevention of a variety of conditions have been inconclusive.

current recommended daily allowances except for beta-carotene and vitamin E, which were above the usual recommended allowances.

The use of vitamin supplements for purposes other than those indicated above is entirely optional. They're unlikely to cause problems when taken in reasonable dosages, but consider the cautions listed below. If you do buy vitamins, the cheaper "house" brands usually are of similar quality to those that are heavily advertised.

Dosage

Multivitamin preparations usually contain the current recommended daily allowance of each vitamin. Other dosages are indicated above.

Side Effects

Vitamin A, vitamin D, and vitamin B₆ (pyridoxine) can cause severe problems when taken in excessively large doses. Large doses of vitamin C have been reported to be associated with kidney problems in rare instances. Other vitamins have not been as well studied, but serious side effects appear to be very rare.

PART II

*Common
Problems*

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CHAPTER 3

Emergencies

Emergencies require prompt action, not panic. What action you should take depends on the facilities available and the nature of the problem.

If there are massive injuries or if the victim is unconscious, you must get help immediately. Go to the emergency room if it is close. Have someone call ahead if you can.

If you can't reach the emergency room quickly, you can often obtain help by calling an emergency room or the rescue squad. Calling for help is especially important if you think that someone has swallowed poison. Poison control centers and emergency rooms can often tell you over the phone how to counteract the poison, thus beginning treatment as early as possible.

The most important thing is to *be prepared*. Work out a procedure for medical emergencies. Develop and test it before an actual emergency arises. Know the best way to reach the emergency room by car. If you plan emergency action ahead of time, you'll decrease the likelihood of panic and increase the probability of receiving the proper care quickly.

CALL AN AMBULANCE?

An ambulance isn't always the fastest way to reach a medical facility. It must travel to both your location and back and often isn't twice as fast as a private car. If the victim can readily move or be moved and a private car is available, use the car and have someone call ahead.

On the other hand, the ambulance brings with it a trained crew who know how to lift a victim to minimize the chance of further injury. Intravenous fluids and oxygen are usually available; splints and bandages are provided; and in some instances, lifesaving resuscitation may be employed on the way to the hospital. Thus, care by ambulance attendants may most benefit a person who:

- Is gravely ill
- May have a back or neck injury
- May be having a heart attack
- Is short of breath

In our experience, ambulances are too often used as expensive taxis. An ambulance may be needed more urgently at another location, so use good judgment in deciding to call for one. Your community's EMT (emergency medical technician) program can be a great resource; use it wisely.

Emergency Signs

The decision charts for the common problems covered in Part II of this book assume that no emergency signs are present. *Emergency signs overrule the charts and dictate that you must seek medical help immediately.* Be familiar with the following emergency signs.

Major Injury

Common sense tells us that a person with a broken leg or large chest wound deserves immediate attention. Emergency facilities exist to take care of major injuries. They must be used promptly.

Possible Neck or Spinal Injury

Do not move the patient before skilled help arrives unless absolutely required. Injury can be made worse if the patient is moved before being adequately splinted.

No Pulse or Breath

Someone whose heart or lungs aren't working needs help right away. Call for help. If you know CPR (cardiopulmonary resuscitation), start it after you call for help or direct someone else to call. If the person is choking, see Choking (page 62).

Unconsciousness

The person who is unconscious needs emergency care immediately.

Bleeding That Can't Be Stopped

Most cuts will stop bleeding if pressure is applied to the wound. This is the most important part of first aid for such wounds.

Unless the bleeding is obviously minor, a wound that continues to bleed despite the application of pressure requires attention in order to prevent unnecessary loss of blood. The average adult can tolerate the loss of several cups of blood with little ill effect, but children can tolerate only smaller amounts, relative to their body size.

Stupor or Drowsiness

A decreased level of mental activity, short of unconsciousness, is termed "stupor." A practical way of determining if the severity of stupor or drowsiness needs urgent treatment is to note the victim's ability to answer questions. If the victim is not sufficiently awake to answer questions concerning what has happened, then urgent action is necessary. Children are more difficult to judge, but the child who cannot be aroused needs immediate attention.

Disorientation

In medicine, disorientation is described and measured in terms of time, place, and person—that is, according to whether the person can answer these questions correctly:

- What is the date?
- Where are we?
- Who are you?

A person who doesn't know his or her identity is in more trouble than a person who doesn't know where he or she is, and that person is in more trouble than a person who can't give the correct date.

Disorientation may be part of a variety of illnesses and is especially common when the person has a high fever. The person who previously has been alert and then becomes disoriented and confused deserves immediate medical attention.

Shortness of Breath

We discuss shortness of breath more extensively in its own section (page 240). As a general rule, emergency attention is needed if the person is short of breath even though resting. However, in young adults the most frequent cause of shortness of breath at rest is the hyperventilation syndrome, which is not a serious concern (page 278). Nevertheless, if you can't confidently determine that shortness of breath is due to the hyperventilation syndrome, then the reasonable course of action is to seek immediate aid.

Cold Sweats

As an isolated symptom, sweating isn't likely to be serious. It's the normal response to elevated temperature. It's also the natural response to stress, either psychological or physical. Most people have experienced sweaty palms when "put on the spot" or stressed psychologically.

In contrast, a "cold sweat" in a person complaining of chest pain, abdominal pain, or lightheadedness indicates a need for immediate attention. It's a common effect of severe pain or serious illness. Also, sweating may occur with breaking a fever, and this kind of sweating is usually not serious.

Severe Pain

Surprisingly, severe pain by itself rarely determines if a problem is serious and urgent. Most often, pain is associated with other symptoms that indicate the urgency of the condition. The most obvious example is pain associated with major injury—like a broken leg—which itself clearly requires urgent care.

The severity of pain is subjective and depends on the individual; often the magnitude of the pain is altered by emotional and psychological factors. Nevertheless, severe

pain demands urgent medical attention, if for no other reason than to relieve the pain.

Much of the art and science of medicine is directed at the relief of pain, and the use of emergency procedures to secure this relief is justified even if the cause of the pain eventually proves to be minor. However, the person who frequently complains of severe pain from minor causes is in much the same situation as the boy who cried "wolf"; calls for help will inevitably be taken less and less seriously by the doctor. This situation is a dangerous one, for the person may have difficulty obtaining help when it is most needed.

EMERGENCY FIRST AID

We haven't tried to teach complex first-aid procedures such as CPR (cardiopulmonary resuscitation) in this book. To use such procedures correctly, you need hands-on instruction and practice. Community organizations such as the American Red Cross and the American Heart Association offer training in these procedures. We urge you to take these classes.

Choking

Your dinner companion can't breathe, can't talk, and is turning blue. He's gasping for air and puts his hand to his throat. These signs tell you he's choking. Do you know what to do?

Choking on a foreign object, usually food, is all too common. The most frequent setting for choking in adults is the evening meal, often in a restaurant or at a party. This situation increases the risk of choking in several ways: First, the victim is likely to have been drinking alcoholic beverages, and this may slow the reflexes that normally keep food from going down the wrong way. Second, the victim is likely to be distracted from the business of eating by conversation or entertainment. Finally, this is the time that solid meats such as steak are most commonly eaten, and these meats are usually the culprits in adult choking.

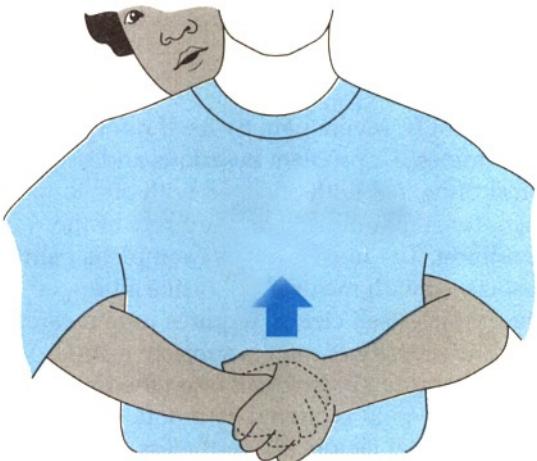
Children stick a much wider variety of objects into their mouths, are likely to do so at any time of the day or night, and are much less likely to complicate the situation with alcohol. Nevertheless, a child is still most likely to choke on food. The most likely foods are hot dogs, grapes, peanuts, and hard candy.

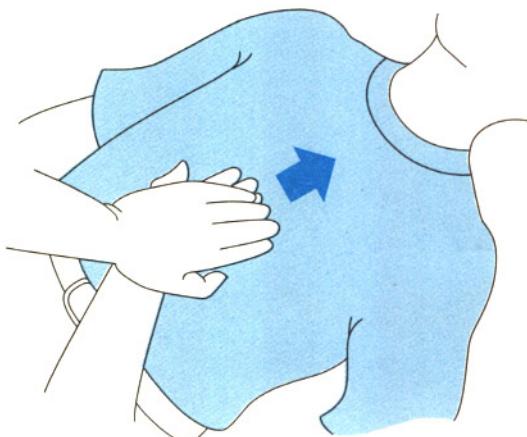
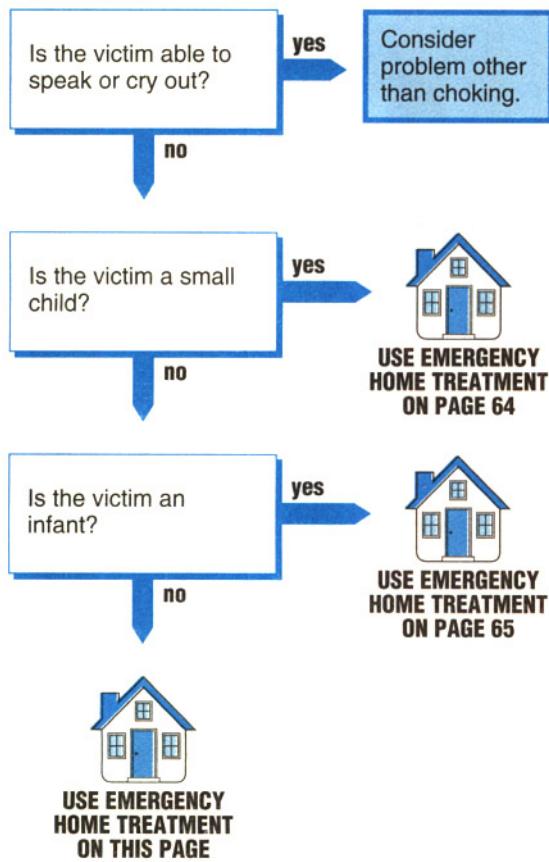
Abdominal-thrust (Heimlich) maneuver for adults. The figures show proper hand positions: (right): standing position; (far right): prone position.

HOME TREATMENT

Choking is an emergency, but emergency medical services—doctors, EMTs, ambulances, emergency rooms, hospitals—play virtually no role in its treatment. In almost every case the victim's fate will be decided by the time such help can respond. Either someone knowledgeable steps forward and relieves the choking, or there's a very good chance the person won't survive.

You can be that knowledgeable someone. The most effective way to relieve choking is with the abdominal-thrust, or Heimlich, maneuver. Pushing on the lungs from below rapidly raises the air pressure inside the lungs and behind the foreign object that is causing the choking. This results in the forceful expulsion of the object from the throat back into the mouth. Done properly, an abdominal-thrust maneuver does not pose great risk of doing harm. Still, it's not the kind of thing you want to do to someone who won't benefit from it. The most important sign that a person should be treated with the abdominal-thrust maneuver is the inability to talk. If the person in difficulty can speak, forget about the abdominal-thrust maneuver.



CHOKING**FOR ADULTS**

1. Stand behind the choking victim and place your arms around him or her. Make a fist and place it against the victim's abdomen, thumb side in, between the navel and the breastbone.
2. Hold the fist with your other hand, and push upward and inward, four times quickly.

If the victim is pregnant or obese, place your arms around his or her chest and your hands over the middle of the breastbone. Give four quick chest thrusts.

If the victim is lying down, roll the victim over onto his or her back. Place your hands on the abdomen and push in the same direction on the body that you would if the victim were standing (inward and toward the upper body).

If the victim is much taller or heavier than you, make the victim lie on the floor and use the lying-down method described above.

3. If the victim doesn't start to breathe, open the mouth by moving the jaw and tongue, and look for the swallowed object. *If you can see the object, sweep it out with your little finger. If you try to remove an object you can't see, you may only push it in more tightly.*
4. If the victim doesn't begin to breathe after the object has been removed from the air passage, use mouth-to-mouth resuscitation.
5. Call for help, and repeat these steps until the object is dislodged and the victim is breathing normally.

FOR SMALL CHILDREN

1. Kneel next to the child, who should be lying on his or her back.
2. Position the heel of one hand on the child's abdomen between the navel and the breastbone. Deliver six to ten thrusts inward and toward the upper body.
3. If this doesn't work, open the mouth by moving the jaw and tongue and look for the swallowed object. *If you can see the object, sweep it out of the throat using your little finger.* If you try to remove an object you can't see, you may only push it in more tightly.
4. If the child doesn't begin to breathe after the object has been removed, use mouth-to-mouth resuscitation.
5. Call for assistance, and repeat these steps until the object is dislodged and the child is breathing normally or until help arrives.

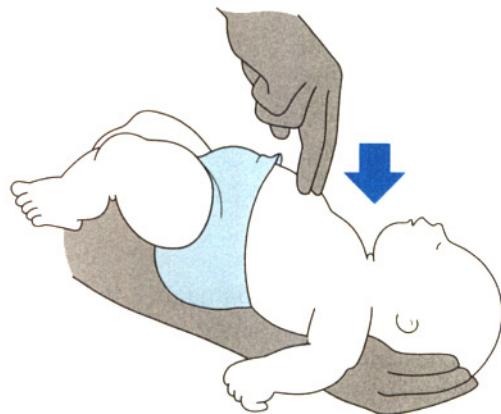
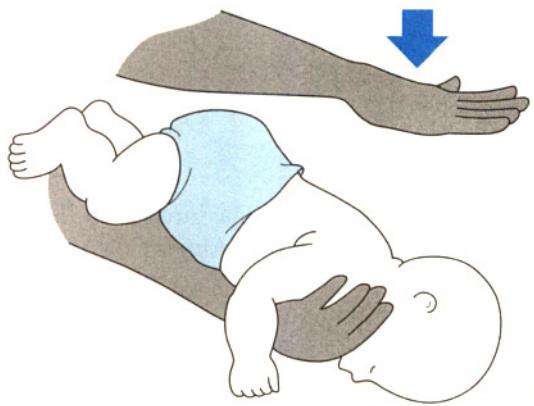


Abdominal thrust for choking children.

Place the bottom of your hand between the child's navel and breastbone. Deliver six to ten quick thrusts. If this doesn't work, go to step 3.

FOR INFANTS

1. Hold the infant along your forearm, face-down, so that the head is lower than the feet.
2. Deliver four rapid blows to the back, between the shoulder blades, with the heel of your hand.
3. If this doesn't work, turn the baby over and, using two fingers, give four quick upward thrusts to the chest.
4. If you're still not successful, open the infant's mouth by moving the jaw and tongue and look for the swallowed object in the throat. *If you can see the object, try to sweep it out gently with your little finger.* If you try to remove an object you can't see, you may do more harm by pushing it in more tightly or triggering the child's gag reflex.
5. If the baby doesn't begin to breathe after the object has been removed, use mouth-to-nose-and-mouth resuscitation.
6. Call for assistance, and repeat these steps until the object is dislodged and the baby is breathing normally.



Abdominal thrust for choking infants.
If four rapid blows to the infant's back don't work, deliver four quick thrusts to the infant's chest as shown above.

Poisoning

Although poisons may be inhaled or absorbed through the skin, for the most part they are swallowed. The term "ingestion" refers to swallowing.

Most poisoning can be prevented. Children almost always swallow poison accidentally. Don't allow children to reach potentially harmful substances like these:

- Medications
- Insecticides
- Caustic cleansers
- Organic solvents
- Fuels
- Furniture polishes
- Antifreezes
- Drain cleaners

The last item is the most damaging: drain cleaners like Drano are strong alkali solutions that can destroy any tissue they touch.

Keep all drugs in child-resistant bottles. Because there are no totally childproof bottles, keep drugs out of small children's reach. Aspirin overdoses have been responsible for more childhood deaths than any other medication.

Identifying the Problem

Treatment must be prompt to be effective, but identifying the poison is as important as speed. *Don't panic.* Try to identify the swallowed substance without taking up too much time. If you can't or if the victim is unconscious, go to the emergency room right

away. If you can identify the poison, call the doctor or Poison Control Center immediately and get advice on what to do. Always bring the container with you to the hospital. Life-support measures come first in the case of an unconscious victim, but doctors must identify the ingested substance before they can begin the proper therapy.

Many significant medication overdoses are due to suicide attempts. Any suicide attempt is an indication that the person needs help, even if he or she has physically recovered from the overdose itself and is in no immediate danger. Most successful suicides are preceded by unsuccessful attempts.

HOME TREATMENT

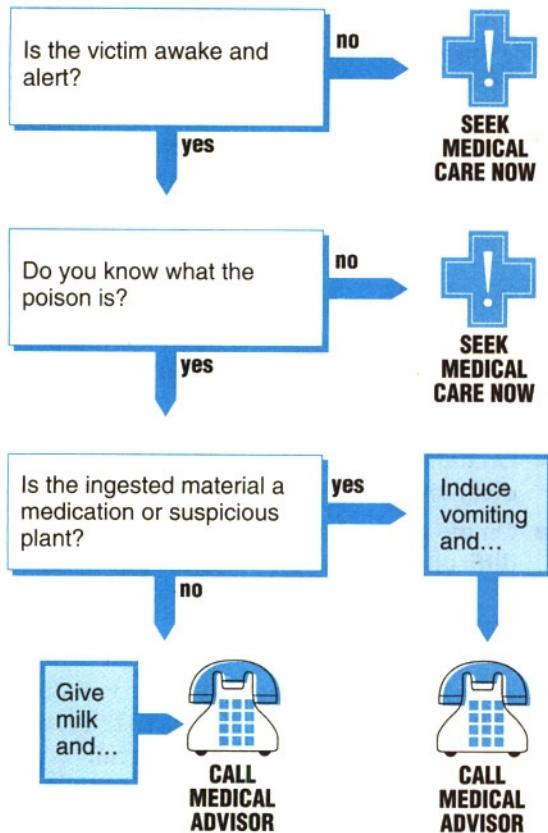
All cases of poisoning require professional help. Someone should call for help immediately. If the victim is conscious and alert and the ingredients swallowed are known, there are two types of treatment: those in which vomiting should be induced, and those in which it should not.

Do not induce vomiting if the victim has swallowed any of the following:

- **Acids:** battery acid, sulfuric acid, hydrochloric acid, bleach, hair straightener, etc.
- **Alkalies:** Drano, drain cleaners, oven cleaners, etc.
- **Petroleum products:** gasoline, furniture polish, kerosene, lighter fluid, etc.

These substances can destroy the esophagus or damage the lungs as they are vomited. Neutralize them with milk while contacting the physician. If you don't have milk, use water or milk of magnesia.

Vomiting is a safe way to remove medications, plants, and suspicious materials

POISONING

from the stomach. It's more effective and safer than using a stomach pump and doesn't require the doctor's help. Vomiting can sometimes be achieved immediately by touching the back of the throat with a finger. This is usually the fastest way, and time is important.

Another way to induce vomiting is to give two to four teaspoons (10–20 ml) of syrup (not extract) of ipecac (page 43), followed by as much liquid as the victim can drink. Vomiting usually follows within 20 minutes. Mustard mixed with warm water also works. If there's no vomiting within 25 minutes, repeat the

FOOD POISONING

Food poisoning is sometimes blamed for stomach or bowel problems that don't have any obvious explanation ("Must have been something I ate"). In reality, food poisoning due to bacteria (e.g., staphylococcus, streptococcus) is rare and causes symptoms that are seldom serious or long-lasting. Treat these symptoms as described in the appropriate sections: Diarrhea (page 246) and Nausea and Vomiting (page 244). An exception is food poisoning due to botulism, but the main symptom of that disease is paralysis, starting with the muscles of the eyes, mouth, and throat, and then involving the entire body—that's obviously an emergency!

dose. Collect what comes up so that the doctor can examine it.

Before, during, and after first aid for poisoning, contact a doctor.

If an accidental poisoning has occurred, make sure that it doesn't happen again. Put poisons where children cannot reach them. Flush old medications down the toilet.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Significant poisoning is best managed at the emergency room. Treatment of the conscious victim depends on the particular poison and whether the person has vomited most of it back out. If indicated, the stomach will be emptied by vomiting or by the use of a stomach pump. Victims who are unconscious or have swallowed a strong acid or alkali will require admission to the hospital.

CHAPTER 4

Common Injuries

Cuts

Most cuts (lacerations) affect only the skin and the fatty tissue beneath it and heal without permanent damage. However, injury to internal structures such as muscles, tendons, blood vessels, ligaments, or nerves can bring permanent damage. Your doctor can decrease this chance. These are the signs that normally call for a cut to be examined by a doctor:

- Bleeding that you can't control with pressure—this is an emergency (page 60)
- Numbness or weakness in the limb beyond the wound
- Inability to move fingers or toes

Signs of infection—such as pus oozing from the wound, fever, or extensive redness and swelling—won't appear for at least 24 hours. Bacteria need time to grow and multiply. If these signs do appear, you must consult a doctor.

Stitches

The only purpose of stitching (suturing) a wound is to pull the edges together to hasten healing and minimize scarring. Stitches injure tissue to some extent, so they aren't recommended if the wound can be held closed

without them. Stitching should be done within eight hours of the injury. Otherwise, the edges of the wound are less likely to heal together and germs are more likely to be trapped under the skin. Stitching is often required in young children who are apt to pull off bandages, or in areas that are subject to a great deal of motion, such as the fingers or joints.

Difficult Cuts

Unless the cut is very small or shallow, call your doctor about cuts in these areas:

- On the chest, abdomen, or back
- On the face—facial wounds can be disfiguring
- On the palm—hand wounds can be difficult to treat if they become infected

HOME TREATMENT

Cleanse the wound. Soap and water will do, but be vigorous. You may also use 3% hydrogen peroxide (page 36) or a commercial antiseptic such as Merthiolate. Make sure no dirt, glass, or other foreign material remains in the wound.

The edges of a clean, minor cut can usually be held together by "butterfly" bandages or, preferably, by "steristrips"—strips of sterile paper tape (page 35). Apply either of these bandages so that the edges of the wound join without "rolling under."

Pain medication (page 38) can of course help reduce discomfort but is often not needed.

See the doctor if the edges of the wound can't be kept together, if signs of infection appear (pus, fever, extensive redness and swelling), or if the cut isn't healing well within two weeks.

CUTS

Is there a possibility of damage to major blood vessels or nerves, or is there fever, pus, or extensive redness and swelling?

yes



Can the edges of the wound be brought together easily?

no



Is the cut on face, chest, abdomen, back, or palm?

yes



See: Tetanus
Shots, p. 76

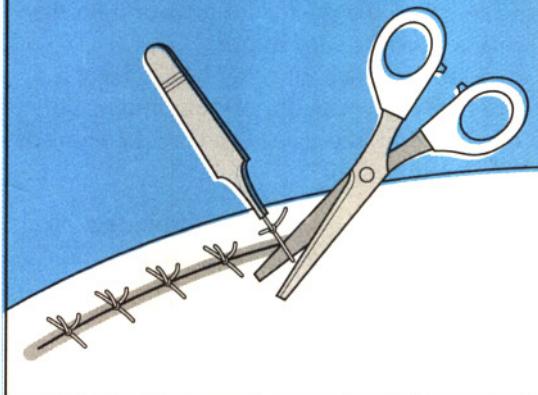
WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The wound will be thoroughly cleansed and explored to be sure that no foreign particles are left and that blood vessels, nerves, and tendons are undamaged. Since the doctor may use an anesthetic to numb the area, report any possible allergy to local anesthetics (Xylocaine, for example). The doctor will give a tetanus shot (page 76) and antibiotics if needed.

STITCHES

Your doctor will tell you when stitches are to be removed. You can often perform this simple procedure at home with a clean pair of small, sharp scissors or a fingernail clipper.

1. Clean the skin and the stitches. Sometimes a scab must be removed by soaking.
2. Gently lift the stitch away from the skin by grasping a loose end of the knot with tweezers.
3. Cut the stitch as close to the skin as possible, so that a minimum amount of the stitch that was outside the skin will be pulled through. This reduces the chance of infection.
4. Lift the tweezers to pull the stitch out.



Lacerations that may require a surgical specialist include those with injury to tendons or major vessels, especially in the hand, and those on the face.

Puncture Wounds

Nails, pins, tacks, and other sharp objects can cause puncture wounds of the skin. Since puncture wounds rarely need stitches, the important questions are:

- Are the underlying tissues injured?
- Is anything (dirt or object) left in the wound?
- Does the victim need a tetanus shot?

Most minor puncture wounds involve the extremities—arms, hands, legs, and especially feet. A deep puncture elsewhere on the body could cause internal injury that is not obvious, so call the doctor for advice. A puncture wound on the hand can be serious if it gets infected. Call the doctor for a wound on the hand unless it is very minor.

A nail, ice pick, or other large object is more likely to cause underlying injury than a narrow item like a needle. The rare signs of serious injury are:

- Blood pumping vigorously from the wound—possible injured artery
- Numbness or tingling in the limb beyond the wound—possible injured nerves
- Difficulty moving the limb beyond the wound—possible injured tendon

These symptoms require **emergency** care.

Puncture wounds can become infected, especially if foreign material remains inside—a splinter, needle, or piece of glass. See the doctor if you have any question whether the

wound is free of foreign material. Signs of infection include:

- Fever
- Extensive redness
- The formation of thick, yellowish pus
- Swelling of the area around the wound

These are signs to see a doctor and usually take 24 hours or more to develop.

HOME TREATMENT

Don't apply pressure to the wound unless it bleeds heavily or pumps in a way suggesting an artery has been injured. Let the wound bleed as much as possible to remove foreign material.

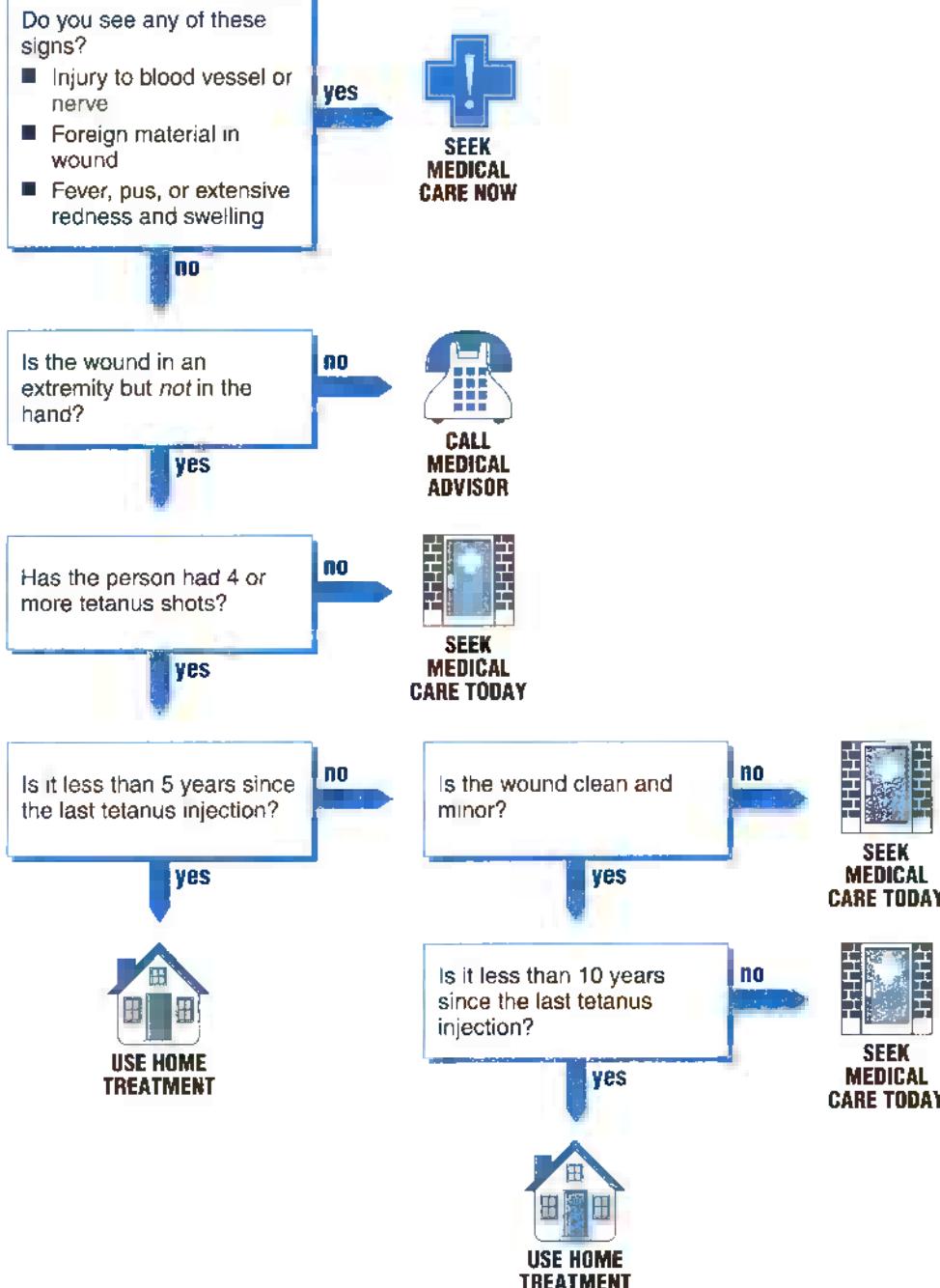
Clean the wound with soap and water or 3% hydrogen peroxide (page 36). Soak the wound in warm water or a baking soda solution several times a day for four or five days (page 36). This helps keep the skin puncture open so that germs or foreign debris can drain from it.

Seek medical care if you see signs of infection or if the wound hasn't healed after two weeks.

Make sure you are immunized against tetanus (page 25).

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the wound to assess the extent of the puncture, injury to underlying tissues, and possible infection. He or she may have X-rays taken or explore the wound surgically. Be prepared to tell the doctor about possible allergies to local anesthetics, such as *Xylocaine*. Most doctors recommend home treatment. Antibiotics are rarely prescribed.

PUNCTURE WOUNDS

Animal Bites

Rabies is a very serious viral infection carried in the saliva of animals. It can be transmitted to humans through a bite or scratch. Although 3,000 to 4,000 animals with rabies are found in the United States each year, only one or two people get the disease.

A rabid animal may behave in strange ways:

- Not running from humans as you would expect
- Attacking without provocation
- Drooling or foaming at the mouth
- Walking around in the daytime if it is normally nocturnal

Avoid animals that act out of the ordinary.

The main carriers of rabies are skunks, foxes, bats, and raccoons. Rabies is less common in cattle, dogs, and cats. The disease is extremely rare in squirrels, chipmunks, rats, and mice. Cats and dogs pose the greatest risk of rabies to people because of their frequent contact with humans and the large number of bites reported each year. For the sake of your pets, your neighbors, and yourself, immunize your cats and dogs against rabies.

If you have been bitten by a wild animal, or by a dog or cat whose immunization history you don't know, call your doctor to decide whether you need antirabies treatment.

If you have been bitten by a pet dog or cat, and the animal's owner has its shots up-to-date and will observe the animal for sickness, you don't need to go to the doctor.

HOME TREATMENT

Treat animal bites as you would other wounds. Turn to Cuts (page 68), Scrapes and Abrasions (page 74), Puncture Wounds (page 70), or Tetanus Shots (page 76) for the appropriate treatment.

If a wild animal causes the bite, call animal control officials. Trying to trap a wild animal may expose you or others to additional risk.

A pet whose shots are up-to-date is unlikely to have rabies. Still, you should arrange to have the animal observed for the next 15 days to make sure it does not develop the disease. You can usually rely on pet owners to watch the animal. If the owner is uncooperative, call animal control officials. If the animal develops rabies during the observation period, bite victims must be treated immediately.

Many localities require that you report animal bites to the health department.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor must balance the remote possibility of rabies exposure with the risks of treatment. An unprovoked attack by a wild animal, or a bite from an animal that appears to be rabid, may require the rabies vaccine and antirabies serum. A bite caused by an animal that escaped may require treatment to be safe.

Doctors give rabies vaccine in five injections—one immediately and four over the next 28 days. The vaccine may cause local skin reactions, fever, headache, and nausea. Severe reactions are rare. The antirabies serum used today is of human origin and causes few side effects.

The doctor may give you a tetanus shot, although tetanus is rare from an animal bite. Usually you don't need antibiotics.

ANIMAL BITES

Is bite from a dog or cat with up-to-date shots, and is animal presently being observed?

no



CALL
MEDICAL
ADVISOR

yes

Is wound a cut or puncture that may require medical attention?

yes

See: Cuts,
p. 68; Puncture
Wounds, p. 70;
or Scrapes and
Abrasions,
p. 74

no



USE HOME
TREATMENT

See: Tetanus
Shots, p. 76

Scrapes and Abrasions

Scrapes and abrasions are shallow wounds. Several layers of the skin may be torn or even totally scraped off, but the wound doesn't go far beneath the skin. Abrasions are usually caused by falls onto the hands, elbows, or knees; but skateboard and bicycle riders can get abrasions on just about any part of the body. Because abrasions expose millions of nerve endings, all of which send pain impulses to the brain, they're usually much more painful than cuts.

HOME TREATMENT

Remove all dirt and foreign matter. Washing the wound with soap and warm water is the most important step in treatment. You can also use 3% hydrogen peroxide to cleanse the wound (page 36). Most scrapes will scab rather quickly; this is nature's way of "dressing" the wound. Using Mercurochrome, iodine, and other antiseptics does little good and is sometimes painful.

Adhesive bandages may be used as necessary for a wound that continues to ooze blood; they must be removed if they get wet (page 34). Antibacterial ointments (Neosporin, Bacitracin, etc.) are optional; their main advantage is in keeping bandages from sticking to the wound.

Loose skin flaps, if they aren't dirty, may be left to help form a natural dressing. If the skin flap is dirty, cut it off carefully with nail scissors. (If it hurts, stop! You're cutting the wrong tissue.)

Watch the wound for signs of infection—pus, fever, or severe redness or swelling—but

don't be worried by redness around the edges; this is an indication of normal healing. Infection won't be obvious in the first 24 hours; fever may indicate a serious infection.

Pain can be treated for the first few minutes with an ice pack enclosed in a plastic bag or towel applied over the wound as needed. The worst pain subsides fairly quickly, and acetaminophen or other pain medication can then be used if needed (page 38).

See the doctor if signs of infection appear or if the scrape or abrasion isn't healed within two weeks.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will make sure that the wound is free of dirt and foreign matter. Soap and water and 3% hydrogen peroxide (page 36) will often be used. Sometimes a local anesthetic (Xylocaine, for example) is required to reduce the pain of the cleansing process. Tell the doctor of possible allergies to such anesthetics.

An antibacterial ointment such as Neosporin or Bacitracin is sometimes applied after cleansing the wound. Betadine is a painless iodine preparation that is also occasionally used (page 36). Tetanus shots aren't required for simple scrapes, but if the patient is overdue, it is a good chance to get caught up (page 76) and avoid a future doctor visit to get the shot.

SCRAPES

Can dirt and foreign matter be removed?

yes

no



SEEK
MEDICAL
CARE NOW

Are there signs of infection, such as fever, a big lump in part of the wound, or drainage of thick, smelly pus?

yes



SEEK
MEDICAL
CARE TODAY

no



USE HOME
TREATMENT

Tetanus Shots

People may come to the doctor's office or emergency room to get a tetanus shot even though it isn't needed. This section's decision chart illustrates the essentials of the current U.S. Public Health Service recommendations. It can save you and your family several visits to the doctor. See the advice on immunizations (page 25) and Cuts (page 68).

The question of whether or not a wound is "clean" and "minor" may be troublesome. Wounds caused by sharp, clean objects such as knives or razor blades have less chance of becoming infected than those in which dirt or foreign bodies have penetrated and lodged beneath the skin. Abrasions and minor burns won't result in tetanus. The tetanus germ can't grow in the presence of air, so the skin must be cut or punctured for the germ to reach an airless location.

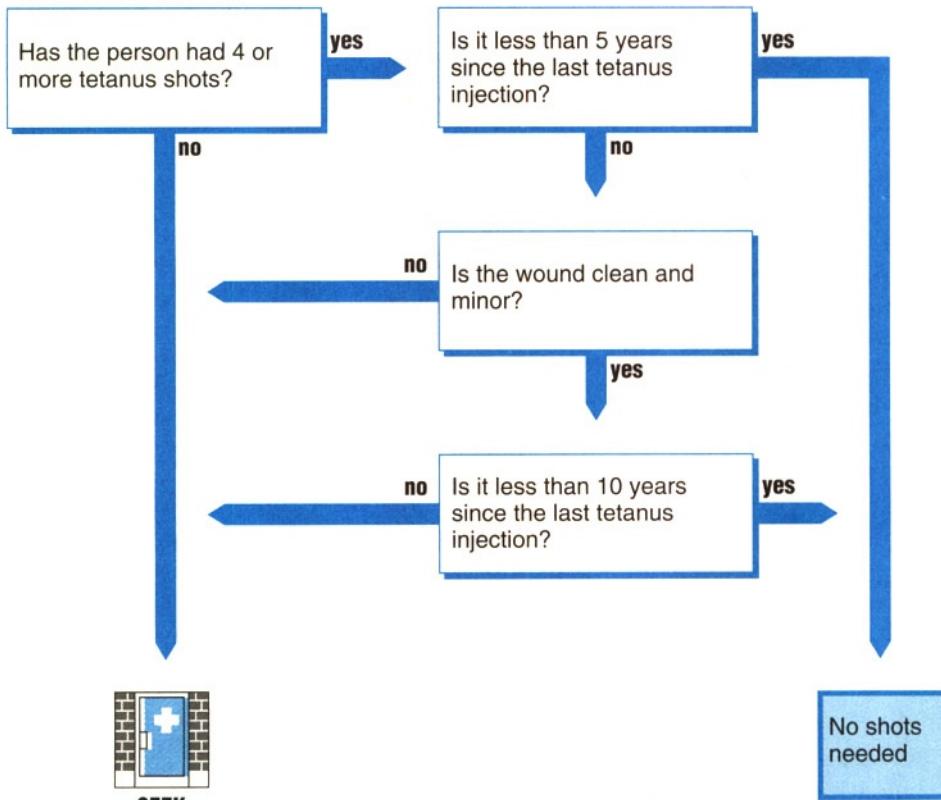
tetanus over a three-week period. This immunity then slowly declines over many months. After each booster, immunity develops more rapidly and lasts longer. If you have had an initial series of five tetanus injections, immunity will usually last at least ten years after every booster injection. Nevertheless, if a wound has contaminated material beneath the skin and isn't exposed to the air, and if you haven't had a tetanus shot within the past five years, a booster shot is advised to keep the level of immunity as high as possible.

Tetanus immunization is very important because the tetanus germ is quite common and the disease (lockjaw) is so severe. Be absolutely sure that each of your children has had the basic series of three injections and appropriate boosters. Because the immunity lasts so long, adults usually get away with a long period between boosters, but immunization of children should be "by the book."

IMMUNIZATION

If you've never received a basic series of three tetanus shots, you should see your doctor. Sometimes a different kind of tetanus shot is required if you haven't been adequately immunized. This shot is called "tetanus immune globulin" and is used when immunization isn't complete and there is a significant risk of tetanus. It is more expensive, more painful, and more likely to cause an allergic reaction than the tetanus booster. So keep a record of your family's immunizations in the back of this book and know the dates.

During the first tetanus shots (usually a series of three injections given in early childhood), the person develops a resistance to

TETANUS SHOTS

Broken Bone?

You may find it hard to tell a broken bone from an injury to soft tissues, such as ligaments and tendons. Like a sprain or a strain, fractures are very painful. In most cases, the bone fragments remain aligned after the fracture, so you can't tell by sight whether a bone is broken; usually, neither can a doctor.

Besides obvious deformity of a limb (which requires medical attention), here are some signs of a serious fracture:

- If the fracture injures nearby nerves or blood vessels, a limb can be cold, pale, or numb—signs to call the doctor.
- Paleness, sweating, dizziness, and thirst are signs of shock. The person with these **emergency signs** needs immediate medical attention (page 60).
- Sprains and other soft-tissue injuries usually allow some use of a limb, but fractures are often more disabling. While sprains and strains improve over a day or two, a broken bone may remain painful and unable to bear weight.
- Although soft-tissue injuries cause bruises under the skin, major bruising is more likely with a fracture.

Fortunately, few fractures are emergencies. In most fractures the bone pieces are in place and don't require setting. No harm is done if you wait a day or two before the doctor puts a cast on a broken arm or leg. After all, the cast doesn't cause healing; it just keeps the bones in place as they heal.

For broken ribs you can't do much more than tape and rest the affected ribs. If you

have shortness of breath after chest injury, you may have hurt a lung. See the doctor right away.

For possible skull fracture, see Head Injuries (page 86).

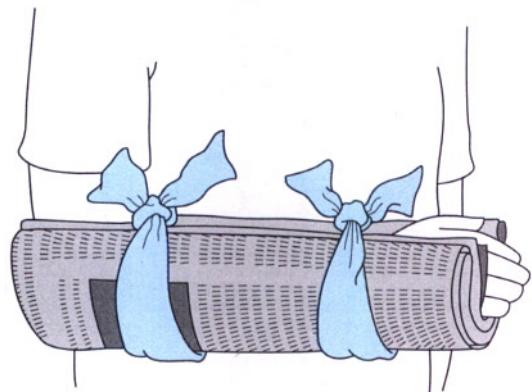
HOME TREATMENT

An ice pack on the injured area will help reduce pain and swelling. Rest and protect the limb for at least 48 hours.

Splinting an injured limb is a good way to rest the bone, especially if you are taking the person for medical care. Here are some guidelines for splinting:

- Immobilize the joints above and below the painful area. For example, to splint an injury of the lower arm, you must stop the elbow and wrist from moving.
- You can use any stiff material as a splint—a piece of wood, folded magazine, umbrella, or rolled-up newspaper.
- Don't wrap the limb so tightly that you cut off circulation.

After 48 hours of rest, carefully test the limb. See if you can use it and whether it is



BROKEN BONE?

Do you see any of these signs?

- Limb is cold, blue, or numb
- Pelvis or thigh might be broken
- Victim is sweaty, pale, dizzy, or thirsty
- Limb is crooked

yes



no

Do you see any of these signs?

- Limb that can't bear weight or be used
- A lot of bleeding and bruising in the injured area
- Fracture near a joint in a child

yes



no



painful when moved. See the doctor for any injury that is still painful.

Take acetaminophen, aspirin, ibuprofen, or naproxen for pain.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A technician or assistant usually takes an X-ray of the injured area before you see the doctor. A crooked limb must be set, or straightened, which may require general anesthesia. The doctor may put pins in the bone during surgery to hold pieces together as they heal.



Splints. If a person may have a broken limb, it's important to keep that limb from shifting as you apply home treatment or go to the hospital. *Left:* Forearm splint made of rolled newspapers and cloths. *Right:* Splint for one leg anchored by the other leg and by a board wrapped with a towel.

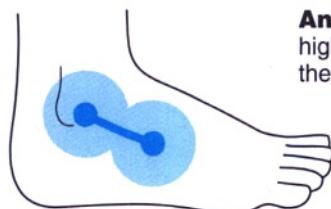
Ankle Injuries

Ligaments are tissues that connect the bones of a joint to provide stability during the joint's action. When the ankle is twisted severely, either the ligaments or the bone must give way. If the ligaments give way, they may be stretched (strained), partially torn (sprained), or completely torn (torn ligaments). If the ligaments don't give way, one of the bones around the ankle will break (fracture).

Strains, sprains, and even some minor fractures of the ankle will heal well with home treatment. Some torn ligaments do well without a great deal of medical care; operations to repair them are rare. For practical purposes, the immediate attention of the doctor is necessary only when the injury has been severe enough to cause obvious fracture to the bones around the ankle or to cause a completely torn ligament. This is indicated by a deformed joint with abnormal motion.

Swelling

The typical ankle sprain swells either around the bony bump at the outside of the ankle or about two inches (5 cm) in front of and below it. The amount of swelling doesn't differentiate among sprains, tears, and fractures. The common chip fractures around the ankle often cause less swelling than a sprain. Sprains and



Ankle swelling. The highlighted area shows the ligament that gets stressed when you "turn your ankle."

torn ligaments usually swell quickly because there is bleeding into the tissue around the ankle. The skin will turn blue-black in the area as the blood is broken down by the body.

A swollen ankle that isn't deformed doesn't need prolonged rest, casting, or X-rays. Home treatment should be started promptly. Detection of any damage to the ligaments may be difficult immediately after the injury if much swelling is present. Because it is easier to do an adequate examination of the foot after the swelling has gone down and because no damage is done by resting a mild fracture or torn ligament, there is no need to rush to the doctor.

Pain

Pain tells you what to do and not to do. If it hurts, don't do it. If pain prevents any standing on the ankle after 24 hours, see a doctor. If little progress is being made so that pain makes weight-bearing difficult at 72 hours, see the doctor.

HOME TREATMENT

RICE is the key word:

- Rest
- Ice
- Compression
- Elevation

Rest the ankle and keep it elevated. Apply ice in a towel to the injured area and leave it there for at least 30 minutes. If there is any evidence of swelling after the first 30 minutes, then apply ice for 30 minutes on and 15 minutes off through the next few hours. If the ankle stops being painful while elevated, you may cautiously try to put weight on that leg. If the ankle is still painful when bearing weight, you should avoid putting weight on that leg.

ANKLE INJURIES

Is the ankle deformed or bending in an abnormal fashion?

yes



SEEK
MEDICAL
CARE NOW

no

Is either of the following present?

- Pain preventing the ankle from bearing any weight for more than 8 hours
- Tenderness on the tip or rear of either bony bump on the ankle's sides

yes



SEEK
MEDICAL
CARE TODAY

no

Has pain made weight bearing difficult for more than 48 hours?

yes



SEEK
MEDICAL
CARE TODAY

no



USE HOME
TREATMENT

for the first 24 hours. Heat may be applied, but only after 24 hours.

An elastic bandage can help but won't prevent reinjury if you resume full activity (page 54). Don't stretch the bandage so that it's very tight and interferes with blood circulation. You generally shouldn't try taping on children; if it's done incorrectly, it may cut off circulation to the foot.

The ankle should feel relatively normal in about ten days. Be warned, however, that full healing won't take place for four to six weeks. If strenuous activity, such as organized athletics, is to be pursued during this time, the ankle should be taped by someone experienced in this technique.

Pain medication (page 38) can of course help to reduce discomfort.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the motions of the ankle to see if they are abnormal and may have an X-ray taken. If there is no fracture or only a minor chip fracture, it is likely that a continuation of home treatment will be recommended. For other fractures, a cast will be necessary or, rarely, an operation to put the bones back together. An operation may be required to repair a completely torn ligament.

Knee Injuries

The ligaments of the knee may be stretched (strained), partially torn (sprained), or completely torn (torn ligaments). Unlike ankle ligament injuries, torn ligaments in the knee need to be repaired surgically as soon as possible after the injury occurs. If surgery is delayed, the operation is more difficult and less likely to be successful. For this reason, the approach to knee injuries is more cautious than for ankle injuries. If there is any possibility of a torn ligament, go to the doctor.

Fractures in the area of the knee are less common than around the ankle; they always need to be cared for by a doctor.

Knee injuries usually occur during sports, when the knee is more likely to experience twisting and side contact. (Deep knee bends stretch ligaments and may contribute to injuries; they should be avoided.) Serious knee injuries occur when the leg is planted on the ground and a blow is received to the knee from the side. If the foot can't give way, the knee will. There is no way to totally avoid this possibility in athletics. The use of shorter spikes and cleats helps, but knee braces and supports give little protection.

Abnormal Motion

When ligaments are completely torn, the lower leg can be wiggled from side to side when the leg is straight. Compare the injured knee to the opposite knee to get some idea of what amount of side-to-side motion is normal. If the knee slides front to back (called "the drawer sign"), this is even more serious, since it suggests a tear of the ligament in the front

of the knee. If you think your knee motion may be abnormally loose, see a doctor.

If the cartilage within the knee has been torn, normal motion may be blocked, preventing it from being straightened. Although a torn cartilage doesn't need immediate surgery, it deserves medical attention.

Pain and Swelling

The amount of pain and swelling doesn't indicate the severity of the injury. The ability to bear weight, to move the knee through the normal range of motion, and to keep the knee stable when wiggled is more important.

Typically, strains and sprains hurt immediately and continue to hurt for hours and even days after the injury. Swelling tends to come on rather slowly over a period of hours but may reach rather large proportions. When a ligament is completely torn, there is intense pain immediately, which subsides until the knee may hurt little or not at all for a while. Usually there is significant bleeding into the tissues around the joint when a ligament is torn; swelling tends to come on quickly and be obvious, even impressive, to the eye.

The best policy when there is a potential injury to the ligament is to avoid any major activity until it is clear that this is a minor strain or sprain. Home treatment is intended only for minor strains and sprains.

HOME TREATMENT

RIP is the key word: rest, ice, and protection. Rest the knee and elevate it. Apply an ice pack, enclosed in a plastic bag or towel, for at least 30 minutes to minimize swelling. If there is more than slight swelling or pain despite the fact that the knee was immediately rested and ice was applied, see the doctor. If this isn't the case, apply the ice treatment on the knee for

KNEE INJURIES

Does the knee joint allow the leg to wobble from side to side, or is it impossible to straighten the knee?

no

yes



Is there more than mild pain or swelling associated with an athletic injury?

no

yes



Has the problem persisted for more than 72 hours?

no

yes



30 minutes and then off for 15 minutes for the next several hours. Limited weight bearing may be attempted during this time with a close watch for increased swelling and pain.

Heat can be applied after 24 hours. By then, the knee should look and feel relatively normal; after 72 hours this should clearly be the case. If not, see the doctor. Remember, however, that a strain or sprain isn't completely healed for four to six weeks and requires protection during this healing period. Elastic bandages won't prevent reinjury but will ease symptoms a bit and remind the injured person to be careful with the knee (page 54).

Pain medication (page 38) can of course help to reduce discomfort.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

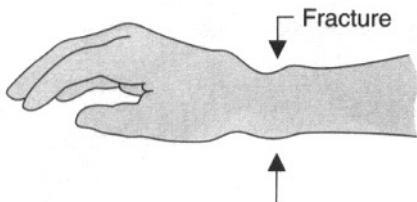
The knee will be examined for abnormal motion. A massively swollen knee may have blood removed from the joint with a needle. Torn ligaments need surgical repair. X-rays may be taken but usually aren't helpful. For injuries that appear minor, home treatment will be advised. Pain medications are sometimes, but not often, required (page 38).

Arm Injuries

The ligaments of the wrist, shoulder, and elbow joints may be stretched (strained) or partially torn (sprained), but complete tears are rare. Fractures may occur at the wrist, are less frequent around the elbow, and are uncommon around the shoulder. Injuries often occur during a fall, when the weight of the body is caught on the outstretched arm.

Wrists

The wrist is the most frequently injured joint in the arm. Strains and sprains are common, and the small bones in the wrist may be fractured. Fractures of these small bones may be difficult to see on an X-ray. The most frequent fracture of the wrist involves the ends of the long bones of the forearm and is easily recognized because it causes an unnatural bend near the wrist. Physicians refer to this as the "silver fork deformity."



Elbows

"Tennis elbow" is the most frequent elbow injury; if you think this is the problem, consult Elbow Pain (page 212). Other injuries are much less frequent and usually result from falls, automobile accidents, or contact sports. A common problem in children under five years of age is partial dislocation due to adults pulling on the arm.

Shoulders

The collarbone (clavicle) is a frequently fractured bone; fortunately, it has remarkable healing powers. An inability to raise the arm on the affected side is common; the shoulders may also appear uneven. Bandaging the arm to the chest is the only treatment required.

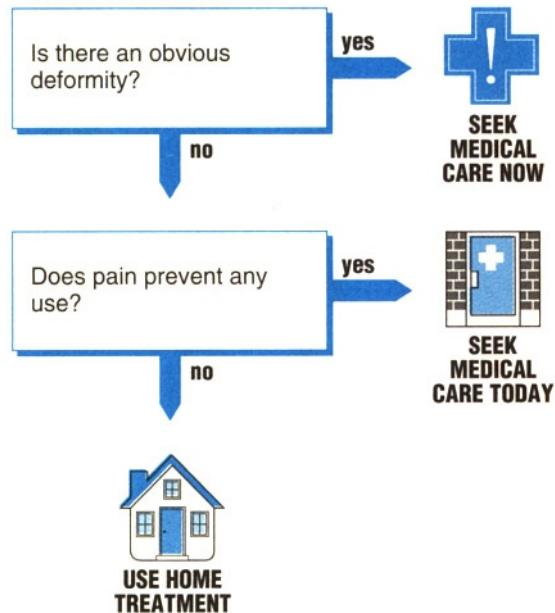
Shoulder separation, often seen in athletes, is perhaps the most common injury of the shoulder. It is a stretching or tearing of the ligament that attaches the collarbone to one of the bones that forms the shoulder joint. It causes a slight deformity and extreme tenderness at the end of the collarbone on the top of the shoulder. Sprains and strains of other ligaments occur, but complete tearing is unusual, as are fractures. Dislocations of the shoulder are rare but are best treated early when they do occur.

Severe fractures and dislocations are best treated early. These usually cause deformity, severe pain, and limited movement. Other fractures won't be harmed by delayed treatment if the injured limb is rested and protected. Complete tears of ligaments are rare; strains and sprains will heal with home treatment.

HOME TREATMENT

RICE is the key word: rest, ice, compression, and elevation. Rest the arm and apply ice wrapped in a towel for at least 30 minutes. If the pain is gone and there is no swelling at the end of this time, you can stop the ice treatment. A sling for shoulder and elbow injuries and a partial splint for wrist injuries will elevate, protect, and rest the injury while allowing the patient to move around. Continue ice treatment for 30 minutes on and 15 minutes off through the first eight hours.

Heat can be applied after 24 hours. The injured joint should be usable with little pain.

ARM INJURIES**Tying an arm sling.**

(A) Use a triangular piece of cloth (or a folded square sheet). A small folded towel adds support.

(B) Tie as shown.

(C) A safety pin will hold it securely.

(D) To add even greater security, tie another strip of cloth around the chest and arm as shown.

within 24 hours and should be almost normal by 72 hours. If not, see the doctor. Complete healing takes from four to six weeks, and activities with a likelihood of reinjury should be avoided during this time.

Pain medication (page 38) can help.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

An examination and sometimes X-rays will be performed. A cast or sling can be applied. Pain medication is sometimes given, but acetaminophen or other nonprescription medication (page 38) is usually adequate. Certain fractures, especially those around the elbow, may require surgery.

Head Injuries

The skull is a strong container that protects and carefully cushions the valuable contents inside. Head injuries are potentially serious, but few lead to long-term problems. Doctors divide head injuries into two basic types:

- Injury to the bone, skin, and other tissues of the skull
- Injuries to the brain, blood vessels, and other tissues within the skull

Treat cuts, abrasions, and other wounds of the head as you would other trauma to the skin (pages 68 and 74). See the doctor if you suspect fracture of a skull bone, or if you see blood or clear fluid in the ears or nose following head injury.

A head injury that causes concussion or loss of consciousness requires **emergency care**. See the doctor as well if there may be bleeding or severe bruising within the head, suggested by these signs:

- Loss of alertness: increasing lethargy, unresponsiveness, abnormally deep sleep, coma
- Unequal pupil size after head injury (though about one in four people has slightly unequal pupils all the time)
- Severe vomiting or “projectile vomiting,” which may be ejected several feet

In severe head injury, two or more signs are often present at once. Vomiting is usually forceful, repeated, and progressively worse.

In rare cases, slow bleeding inside the head forms a blood clot that causes chronic

headache, persistent vomiting, or personality changes months after the injury.

Careful observation is the most important part of diagnosing head injury. You can usually do this at home as well as, if not better than, a hospital staff member. A family member is more likely to pay closer attention to the person with head injury and know what is normal for him or her.

HOME TREATMENT

Stop the bleeding of skin wounds by applying pressure directly on the wound, preferably with a sterile dressing. Ice applied to a bruised area may reduce swelling, but “goose eggs” often form anyway.

The initial observation period is crucial. Symptoms of bleeding inside the head usually appear within 24 to 72 hours after injury. Check the person every 2 hours during the first 24 hours, every 4 hours for the second 24 hours, and every 8 hours for the third day.

Because many injuries occur during the evening, the injured person will usually be asleep several hours after the accident. You can look in on the sleeping person periodically to check his or her pulse, pupils, and arousability. If the person has a minor head bump and no sign of brain injury, nighttime checking is usually not necessary.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will ask about the nature of the accident and assess the patient's appearance and vital signs. He or she will do a physical exam and check for other injuries. If internal bleeding is possible, the patient may be kept in the hospital for observation. The doctor will avoid giving drugs, such as sedatives or strong pain medication, that may hide signs.

HEAD INJURIES

Have you seen any of the following signs?

- Unconsciousness
- Victim cannot remember injury
- Seizure
- Visual problems
- Bleeding from eyes, ears, or mouth
- Changes in behavior (irritability, lethargy, sleep)
- Fluid draining from nose
- Persistent vomiting
- Irregular breathing or heartbeat
- Child under 2 years of age, or possibly being abused
- Victim under influence of alcohol or drugs

yes



**SEEK
MEDICAL
CARE NOW**

no

Is there a cut?

yes

See: Cuts,
p. 68

no



**USE HOME
TREATMENT**

Bleeding within the skull is hard to diagnose. Skull X-rays are seldom helpful. CT scans and MRIs can be helpful but are expensive and may miss early accumulations of blood. With severe injuries, the victim may require X-rays of the neck to check for possible injury to the cervical spine.

Burns

Burns are injuries caused most commonly by heat. They can also result from chemicals, electricity, or radiation.

Heat burns are ranked according to the depth of skin injury:

- **First-degree burns** are superficial, resulting in red and tender skin. They are painful but rarely serious. The common sunburn is a first-degree burn. Even when first-degree burns affect a large area of skin, they seldom result in long-term problems. Usually you don't need to see a doctor.
- **Second-degree burns** are deeper, producing blisters of the skin. Scalding with hot water or a very severe sunburn are common types of second-degree burns. They are painful and may be serious if a large area of skin is affected. However, second-degree burns rarely result in infection or scarring. See a doctor for second-degree burns covering an area larger than the hand, or affecting the face or hands. Otherwise treat the burn at home.
- **Third-degree burns** destroy all skin layers and extend into deeper tissues. They do not hurt because nerve endings have been destroyed (but they may be surrounded by a painful second-degree burn). A third-degree burn usually involves obviously charred skin. Such burns can lead to fluid loss, infection, and scarring. All third-degree burns need medical attention.

One of the most common burns is sunburn. Sunburn is preventable, by avoiding

tanning salons or prolonged exposure to the sun, and by using a sunscreen (page 53).

Sunburn is most painful 6 to 48 hours after sun exposure. Injured skin may peel three to ten days after the burn. In rare cases, people with sunburn have visual problems. If this happens, call your doctor. Otherwise you don't need to see the doctor for a sunburn unless there is very severe pain or blistering.

HOME TREATMENT

For heat burns, immediately apply cold water or ice to the affected area. This stops the burning, limits the injury, and eases pain. Cool running water is fine. Apply cold until pain is relieved, or for about an hour. But do not apply cold so long that the burned area becomes numb. Reapply cold if needed.

For sunburn, cool compresses or cool oatmeal baths (Aveeno, etc.) may be helpful. Ordinary baking soda (one-half cup in a tub of water) is just as useful.

Anesthetic creams and sprays can relieve pain, but they may also slow healing, and they can cause irritation or allergic reactions in some people. Antibiotic creams such as Neosporin or Bacitracin probably do no harm to a burn, but they won't help a lot either. Don't apply butter, cream, or ointments such as Vaseline.

Use a pain reliever (page 38).

Don't break blisters. If blisters break by themselves, leave the overlying skin in place. Keep the area clean, and protect yourself against the cause of blisters next time.

A burn that is painful for more than 48 hours requires medical attention.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will assess the size and severity of the burn and determine whether the victim

BURNS

Does the burn have
painless or charred areas?

yes



**SEEK
MEDICAL
CARE NOW**

Is this a deep, painful burn
that is extensive or on the
face and hands?

yes



**SEEK
MEDICAL
CARE NOW**

Do you see any of these
signs after long exposure
to sun?

- Fever
- Fluid-filled blisters
- Dizziness
- Difficulty seeing

yes



**CALL
MEDICAL
ADVISOR**



**USE HOME
TREATMENT**

needs antibiotics, hospitalization, or skin grafts. Pain relievers may be prescribed.

The doctor may apply a dressing and/or an antibacterial ointment. Change the dressing regularly according to directions. Check the burn often for signs of infection.

Severe burns may require hospitalization. Third-degree burns may require skin grafts.

Infected Wounds

If a wound becomes infected, bacteria can grow in the bloodstream—a serious condition that doctors call “septicemia.” This is why it’s so important to clean a wound thoroughly and keep it clean.

Normally, after skin is hurt, the body begins to heal by forming a scab. These are the signs of *normal* healing:

- The wound may seep serum, which is yellowish and clear. (People often mistake serum for pus, which is thick, smelly, and never appears on the first day or so.)
- The edges of the wound will be pink or red.
- The wound may feel warm or itch.

The normal healing time depends on the type of wound. A minor wound requires about this amount of time:

- On the face—three to five days
- On the chest and arms—five to nine days
- On the legs—seven to twelve days

Larger wounds, or those that gape, requiring new skin or tissue to grow across an open space, need more time to heal. Children heal faster than adults. If a wound fails to heal within the expected time, call the doctor.

In contrast, an infected wound may fester within the skin, causing pain and swelling. Infection usually takes two to three days to develop. If you have an infection, it’s a good idea for a doctor to examine the wound unless it is clearly minor. Sometimes a festering wound will break open and pus will drain

out. This is good, often allowing the wound to heal well.

Overall, you should see the doctor for any of the following:

- A rise in pain, redness, or swelling around the wound days after the injury
- Drainage of pus (not serum) from the wound
- Fever above 99.9°F (37.7°C) and a general sick feeling

HOME TREATMENT

Keep the wound clean. Leave it open to the air if possible. You may bandage the wound if it is oozing blood or serum, unsightly, or likely to get dirty. Since children pick at scabs, a bandage may be a good idea for them.

Change the bandage daily.

Each day gently soak and clean the wound in warm water. This will help remove debris and keep the scab soft. Watch the wound for signs of infection.

WHAT TO EXPECT AT THE DOCTOR’S OFFICE

The doctor will examine the wound for infection, and an assistant will take your temperature. The doctor may sample blood or fluid from the wound for laboratory tests. The doctor may prescribe antibiotics.

If the wound is festering, the doctor may drain it with a needle or scalpel. This is not very painful and actually relieves discomfort.

For severe infections you may need to stay in the hospital.

INFECTED WOUNDS

Are any of the following present?

- Fever above 99.9°F (37.7°C) and a general ill feeling
- An increase in pain, redness, or swelling a day or more after the injury
- Thick, smelly pus draining from the wound

yes



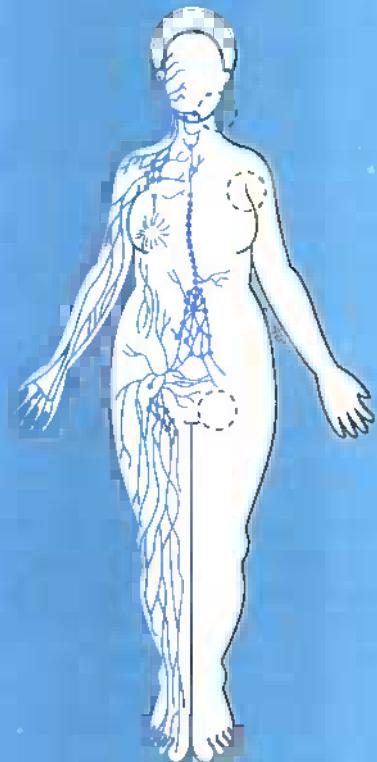
no



**USE HOME
TREATMENT**

IS IT BLOOD POISONING?

There is a folk saying that red streaks running up the arm or leg from a wound indicate blood poisoning and that the patient will die when the streaks reach the heart. In fact, such streaks are only an inflammation of the lymph channels carrying away the debris from the wound. They will stop when they reach local lymph nodes in the armpit or groin and do not, by themselves, indicate blood poisoning.



Lymph system. The left side of this figure shows the lymph channels through the body. The circles on the right side show the lymph node locations; swelling or pain in these areas can be an important symptom.

Insect Bites or Stings

Most insect bites are trivial, but some bites or stings may cause reactions. Local reactions consist of pain, swelling, and redness at the site of the bite or sting. They are uncomfortable but don't pose a serious hazard.

In contrast, systemic reactions (those that involve the whole body) may occasionally be serious and may require emergency treatment. There are three types of systemic reaction. All are rare.

- An **asthma attack** is the most common, causing difficulty in breathing and perhaps audible wheezing.
- **Hives** or extensive skin rashes following insect bites are less serious but indicate that a more severe reaction might occur if the patient is bitten or stung again.
- **Fainting** or loss of consciousness rarely occurs and suggests that the collapse is due to an allergic reaction. This is an **emergency** (page 60).

If the person has had any of these reactions in the past, he or she should be taken immediately to a medical facility if stung or bitten.

If the local reaction to a bite or sting is severe or a deep sore is developing, a doctor should be consulted by telephone. Children often have more severe local reactions than adults.

Spider Bites

Bites from poisonous spiders are rare. The female black widow spider accounts for many of them. This spider is glossy black with a body approximately one-half inch (1 cm) in

diameter, a leg span of about two inches (5 cm), and a characteristic red hourglass mark on the abdomen. The black widow spider is found in woodpiles, sheds, basements, or outdoor privies. The bite is often painless, and the first sign may be cramping abdominal pain. The abdomen becomes hard and boardlike as the waves of pain become severe. Breathing is difficult and accompanied by grunting. There may be nausea, vomiting, headache, sweating, twitching, shaking, and tingling sensations in the hands. The bite itself may not be prominent and may be overshadowed by the systemic reaction.

Brown recluse spiders, which are slightly smaller than black widows and have a white violin pattern on their backs, cause painful bites and serious local reactions but aren't as dangerous as black widows.

This book has separate sections on the bites of Ticks (page 178) and Chiggers (page 180).

HOME TREATMENT

Apply something cold, such as ice or cold packs, promptly. Delay in cold applications results in a more severe local reaction. Acetaminophen or other pain relievers may be used (page 38). Antihistamines, such as chlorpheniramine or diphenhydramine, can be helpful in relieving the itch somewhat (page 44). If the reaction is severe or if pain doesn't diminish in 48 hours, consult the doctor by telephone.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will ask what sort of insect or spider has inflicted the wound and will look for signs of systemic reaction. If a systemic reaction is present, adrenalin by injection is usually necessary. Rarely, measures to support

INSECT BITES

Has this bite or sting, or previous bites or stings, brought any of these problems?

- Wheezing or difficulty breathing
- Fainting
- Hives or skin rash
- Abdominal pain

yes



no

Is the bite from a black widow or brown recluse spider?

yes



no

Is there a severe local reaction?

yes



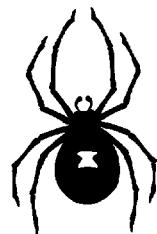
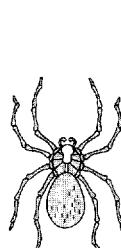
no



breathing or blood pressure will be needed; these measures require an emergency room or hospital.

If the problem is a local reaction, the doctor will examine the wound for signs of dead tissue or infection. Occasionally the wound will need to be drained surgically. In other cases pain relievers or antihistamines may make the patient more comfortable. Adrenalin injections are occasionally used for very severe local reactions.

If a systemic reaction has occurred, the doctor may give shots to try to desensitize the patient's body to the insect's poison. People with serious allergies to insect bites can buy emergency kits (such as EpiPen) to cut off systemic reactions.



Poisonous spiders. Left: Brown recluse, shown from above. Right: Black widow, shown from below. Both spiders appear at approximate actual size.

Snake Bites

North America's poisonous snakes come in two groups: coral snakes and pit vipers, which include rattlesnakes, copperheads, and cottonmouths. At least one species of poisonous snake is found in each of the contiguous United States except Maine, Delaware, and Michigan.

Of the 45,000 snake bites reported each year in the U.S., only 20% are made by poisonous snakes. Those snakes don't inject venom with every bite. All told, fewer than 20 people actually die from snake bites each year. The major damage caused by poisonous snake bites is loss of function in an arm or leg.

HOME TREATMENT

Experts agree that the most important steps for snake bites are:

1. Correct identification of the snake
2. A quick trip to the hospital

Pit Viper Bites

Most experts believe that trying to suck the venom out of the wound makes sense if you can do it within three minutes after the bite. Use a suction cup, if possible, but in emergencies you can use your mouth, quickly spitting out the venom and blood. Experts don't agree on the benefit of making cuts over the bite in an attempt to remove venom. Don't apply cold to the bite. Don't lie flat; keep the bite lower than the heart. It is helpful for the patient not to use the arm or leg with the bite and to rest, but these actions aren't as

important as getting to medical care as soon as possible.

Doctors don't agree on the use of tourniquets for pit viper bites. Tourniquets that are too tight and left in place too long may actually cause worse damage and even lead to amputation. If you use a tourniquet, follow these guidelines:

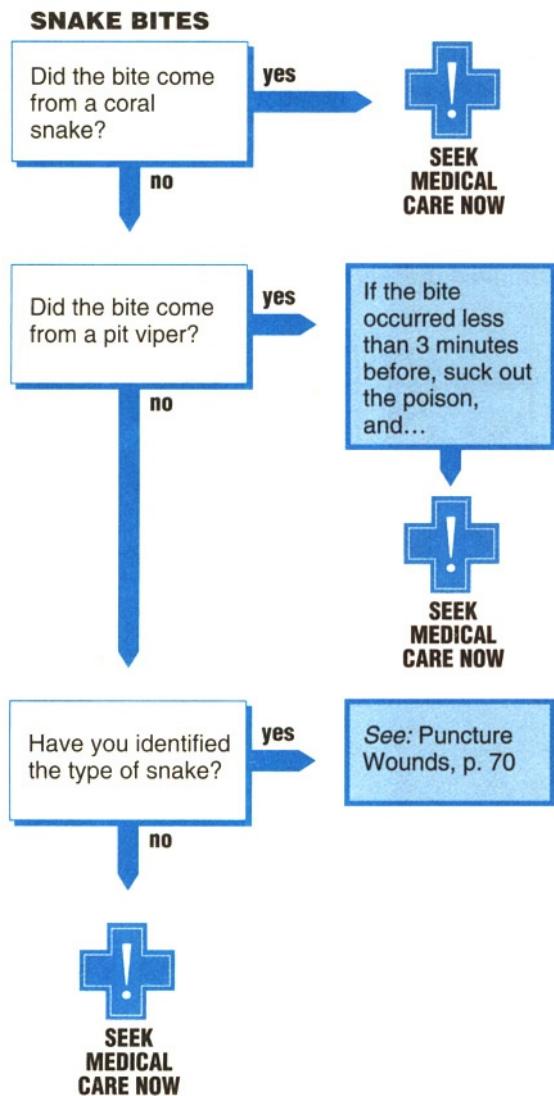
- Tourniquets are useful only on an arm or leg, not on the trunk of the body.
- Place the tourniquet four to six inches (10–15 cm) above the bite.
- Make the tourniquet snug, but not tight enough to cut off blood flow, and loosen it for at least 2 minutes every 15 minutes.

Coral Snake Bites

Neither a tourniquet nor suction is useful. It's probably good to wash the area around the wound right away. But the most important task is to find medical help as quickly as possible.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Hospitals are equipped with antivenin kits to counteract snake venoms. The doctor will want to know what sort of snake made the bite and if the patient has ever had a bad reaction to antivenin. Further treatment will depend on the condition of the patient. As stated above, most snake bites, even from poisonous snakes, are not fatal.



Coral snakes. Coral snakes, which are poisonous, can be identified by ring pattern—red rings between yellow rings. Some nonpoisonous snakes have rings of the same colors as coral snakes—red, yellow, and black—but in a different arrangement.

Pit vipers. Top: The pit viper's "pits" are small depressions located between the eye and nostril on either side of the snake's head. Bottom: Venom glands on either side of the head (inside the mouth) create the distinctive triangular head shape the pit viper has when viewed from above.

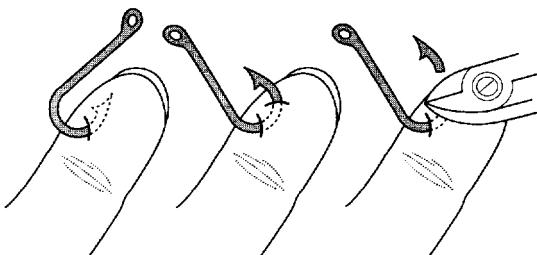
Fishhooks

The problem with fishhooks is, of course, the barb. Meant to keep the fish hooked, it has the same effect when people are caught. Nevertheless, a fishhook usually can be removed without a doctor's help, unless it is in someone's eye. *Never try to remove hooks that have actually penetrated the eyeball; this is a job for the doctor.*

The patient's confidence and cooperation are needed in order to avoid a visit to the doctor. A pair of electrician's pliers with a wire-cutting blade should be part of your fishing equipment. The advantage of the doctor's office is the availability of a local anesthetic.

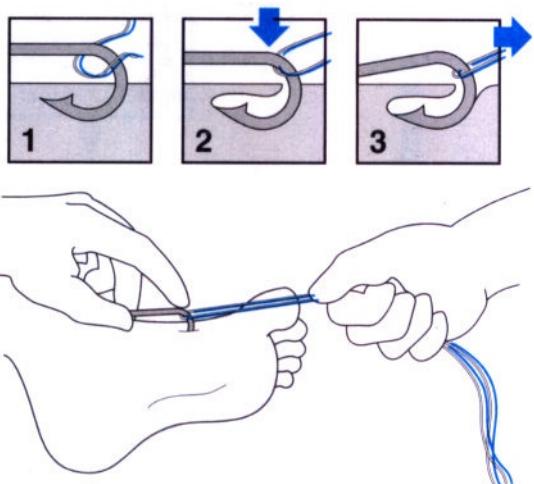
HOME TREATMENT

Occasionally, the hook will have moved all the way around so that it lies just beneath the surface of the skin. If this is the case, often the best technique is simply to push the hook on through the skin, cut it off just behind the barb with wire cutters, and remove it by pulling it back through the way it entered. This may be somewhat painful; the average child may not be able to tolerate it.



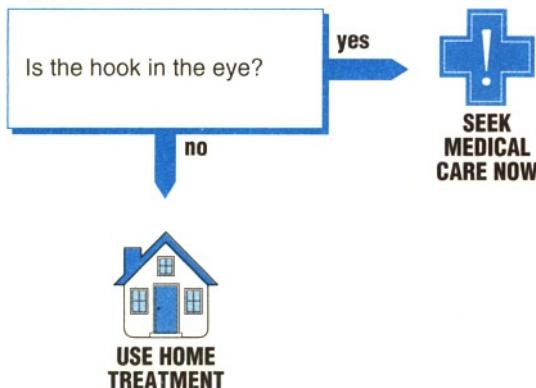
On other occasions the hook will be embedded only slightly and can be removed by simply grasping the shank of the hook (pliers help), pushing slightly forward and away from the barb, and then pulling it out.

If the barb isn't near the surface or if you don't have pliers or wire cutters, use the method illustrated below; the hook is usually removed quickly and almost painlessly.



1. Put a loop of fish line through the bend of the fishhook so that, at the appropriate time, a quick jerk can be applied and the hook can be pulled out directly in line with the shaft of the hook.
2. Holding on to the shaft, push the hook slightly in and away from the barb so as to disengage the barb.
3. Holding this pressure constant to keep the barb disengaged, give a quick jerk on the fish line and the hook will pop out.

If you aren't successful, push the hook all the way through and out so that the barb can be cut off with wire cutters.

FISHHOOKS

Be sure that the person's tetanus shots are up-to-date (page 76). Treat the wound as in the home treatment section for Puncture Wounds (page 70). If all else fails, a visit to the doctor should solve the problem.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will use one of the three methods above to remove the hook. If necessary, the area around the hook can be numbed with a local anesthetic before the hook is removed. Often, however, injecting a local anesthetic is more painful than just removing the hook without the anesthetic.

If the hook is in the eye, it's likely that the doctor will recommend the help of an eye specialist (ophthalmologist), and it may be necessary to remove the hook in the operating room.

REMOVING A SPLINTER

A splinter under the skin can often be pulled out with tweezers. If some material remains, you can usually dislodge it by picking away at the overlying skin with a clean needle. Sterilize the needle first by dipping it in rubbing alcohol or holding it in a match flame. Another option is to soak the area of skin twice a day in a cup of very warm, but not hot, water mixed with one tablespoon (15 ml) of baking soda (page 36); the splinter will probably come out by itself in a day or two. Don't let a splinter wound become infected.

Smashed Fingers

Smashing fingers in car doors or desk drawers, or with hammers or baseballs, is all too common. If the injury involves only the end segment of the finger (the terminal phalanx) and doesn't involve a significant cut, the help of a doctor is seldom needed. Blood under the fingernail (subungual hematoma) is a painful problem that you can treat.

Joint Fractures

Fractures of the bone in the end segment of the finger aren't treated unless they involve the joint. Many doctors feel that it is unwise to splint the finger even if there is a fracture of the joint. Although the splint will decrease pain, it may also increase the stiffness of the joint after healing. However, if the fracture isn't splinted, the pain may persist longer, and you may end up with a stiff joint anyway. Discuss the advantages and disadvantages of splinting with your doctor.

Dislocated Nails

Fingernails are often dislocated in these injuries. It isn't necessary to have the entire fingernail removed. The nail that is detached should be clipped off to avoid catching it on other objects. Nails will take from four to six weeks to grow back.

HOME TREATMENT

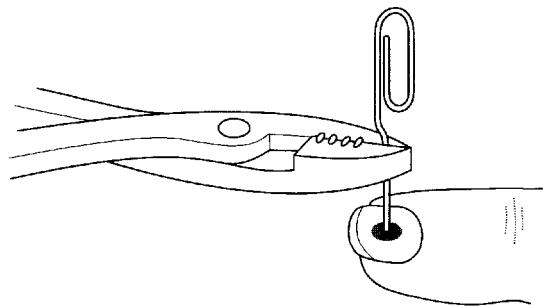
If the injury doesn't involve other parts of the finger and if the finger can be moved easily, apply an ice pack for swelling and use acetaminophen, aspirin, ibuprofen, or naproxen for pain (page 38).

Blood Under a Nail

Pain caused by a large amount of blood under the fingernail can often be relieved simply.

This home (or emergency room) remedy sounds terrible but is very simple and can sometimes save the nail.

1. Bend open an ordinary paper clip and hold it with a pair of pliers.
2. Heat one end with the flame from a butane lighter or gas stove, steadyng the hand holding the pliers with the opposite hand.
3. When the tip is very hot, touch it to the nail; it will melt its way through the fingernail, leaving a clean, small, painless hole. There is no need to press down hard. Take your time, lifting the paper clip to see if you are through the nail; usually the blood will spurt a little when you are through. Reheat the paper clip if necessary.



The blood trapped beneath the nail can now escape through the small hole, and the pain will be relieved as the pressure is released. If the hole closes and the blood reaccumulates, the procedure can be repeated using the same hole once again.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the finger. An X-ray is likely if it appears that more than the end

SMASHED FINGERS

Is the injury limited to the end section of the finger?

no



Is the end of the finger deformed?

yes

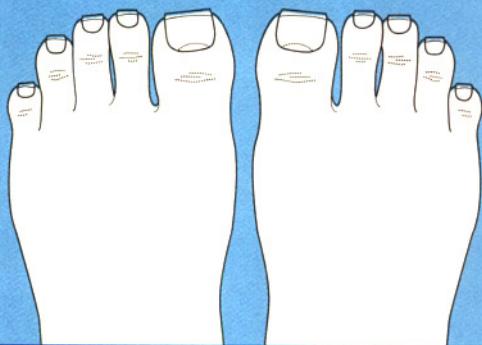


USE HOME
TREATMENT

segment is involved. If there is a fracture involving the last joint on the finger, you should expect a discussion of the advantages and disadvantages of splinting the finger. Often the injured finger is splinted by bandaging it together with an adjacent finger. If the finger is splinted, exercise it periodically to keep it mobile. Severe finger injuries may occasionally require surgery.

INGROWN NAILS

Ingrown nails can be treated at home. Cut the nail straight across so that its corner can grow outside the skin. Let the nail grow free by firmly pushing the skin back from the corner with a Q-tip twice a day. Keep the area clean. For hangnails, keep them clean. Don't chew on them.



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CHAPTER 5

Ear, Nose, Throat, Eye, and Mouth Problems

IS IT A VIRUS, A BACTERIUM, OR AN ALLERGY?

The first part of this chapter discusses upper respiratory problems, including colds and flu, sore throats, ear pain or stuffiness, runny nose, cough, hoarseness, swollen glands, and nosebleeds. A central question is important to each of these complaints: Is it caused by a virus, bacteria, or an allergic reaction?

In general, the doctor has more effective treatment than is available at home only for bacterial infections. Viral infections and allergies don't improve with treatment by penicillin or other antibiotics. To request a "penicillin shot" for a cold or allergy is to ask for a drug reaction, risk a more serious "superinfection," and waste time and money. Unnecessary use of antibiotics is a major cause of the growing problem of antibiotic-resistant bacteria.

Among common problems well treated at home are:

- The common cold, often termed "viral URI" (upper respiratory infection) by doctors
- The flu, when uncomplicated
- Hay fever

- Mononucleosis—*infectious mononucleosis or "mono"*

Medical treatment is commonly required for:

- Strep throat
- Ear infection
- Viral gastroenteritis (sometimes)

How can you tell these conditions apart? Table 6 and the decision charts for the symptoms discussed in this chapter will usually suffice. Here are some brief descriptions that may also help.

Viral Syndromes

Viruses usually involve several portions of the body and cause many different symptoms. Three basic patterns (or syndromes) are common in viral illnesses; however, overlap among these three syndromes is not unusual. Your illness may have features of each.

Viral URI. This is the "common cold." It includes some combination of the following: sore throat, runny nose, stuffy or congested ears, hoarseness, swollen glands, and fever. One symptom usually precedes the others, and another symptom (usually hoarseness or cough) may remain after the others have disappeared.

The Flu. Fever may be quite high. Headache can be excruciating. Muscle aches and pain (especially in the lower back and eye muscles) are equally troublesome.

Viral Gastroenteritis. This is "stomach flu" with nausea, vomiting, diarrhea, and crampy

EAR, NOSE, THROAT, EYE, AND MOUTH PROBLEMS

TABLE 6

Virus, Bacterium, or Allergy?

| | <i>Virus</i> | <i>Bacterium</i> | <i>Allergy</i> |
|---|--------------|------------------|----------------|
| Runny nose? | Often | Rare | Often |
| Aching muscles? | Usual | Rare | Never |
| Headache (nonsinus)? | Often | Rare | Never |
| Dizzy? | Often | Rare | Rare |
| Fever? | Often | Often | Never |
| Cough? | Often | Sometimes | Rare |
| Dry cough? | Often | Rare | Sometimes |
| Raising sputum? | Rare | Often | Rare |
| Hoarseness? | Often | Rare | Sometimes |
| Recurrs in a particular season? | No | No | Often |
| Only a single complaint? (sore throat, earache, sinus pain, or cough) | Unusual | Usual | Unusual |
| Do antibiotics help? | No | Yes | No |
| Can the doctor help? | Seldom | Yes | Sometimes |

Remember, viral infections and allergies do not improve with treatment by penicillin or other antibiotics.

abdominal pain. It may be incapacitating and can mimic a variety of other more serious conditions, including appendicitis.

Hay Fever

Allergic rhinitis is commonly called "hay fever" even though it's not a fever and not caused by hay. It is, however, the most common problem caused by allergies. A stuffy, runny nose, watering itchy eyes, headache, and sneezing are all common symptoms. Hay fever seems to run in families. Patients usually diagnose this condition accurately themselves.

As with viruses, hay fever is treated simply to relieve symptoms. Given enough time, the condition runs its course without doing any permanent harm. Avoiding the offending allergen is often the best preventive action. The cause in infants is often dust or food; in adults, it's dust or pollen.

Antihistamines block the action of histamine, a substance released during allergic reactions. They also have a drying effect on the runny nose and alleviate nasal stuffiness. Some antihistamines are available over the counter. Their most common side effect is drowsiness, and this may interfere

with work or school. Decongestants (pseudoephedrine, etc.) can be added to antihistamine medication. They may help with the runny nose as well as combat the sleepiness (page 44).

Sinusitis

Inflammation of the sinuses is often associated with hay fever and asthma. Symptoms include a sense of heaviness behind the nose and eyes, often resulting in a "sinus headache." If the sinuses are infected, there may be fever and nasal discharge. Antihistamines and decongestants (page 44) may be helpful in cases of sinusitis that accompany colds or hay fever. Don't use nasal sprays (page 45) for more than three days. For recurring sinusitis, consult a doctor to determine the precise cause and treatment; a course of antibiotics is frequently prescribed.

Strep Throat

Bacterial infections tend to localize at a single point. Involvement of the respiratory tract by

strep is usually limited to the throat. However, symptoms outside the respiratory tract can occur, most commonly fever and swollen lymph glands (from draining the infection) in the neck. A scarlet fever rash sometimes may help to distinguish a streptococcal (strep) from a viral infection. In children, abdominal pain may be associated with a strep throat. This disorder must be diagnosed and treated in individuals age 35 or less because serious heart and kidney complications can follow if adequate antibiotic therapy isn't given.

Other Conditions

Factors other than diseases may cause or contribute to upper respiratory symptoms. Smoking is probably the largest single cause of coughs and sore throats. Pollution (smog) can produce the same problems. Tumors and other frightening conditions account for only a very small number. Complaints lasting beyond two weeks without one of the common diseases as the obvious cause aren't alarming but should be investigated by the doctor.

Colds and Flu

The common cold and the different kinds of flu account for more unnecessary visits to the doctor than any other illness.

Because viruses cause colds and the flu, an antibiotic won't work. You can care for yourself as well as the doctor. Nonprescription drugs—pain relievers, decongestants, and antihistamines—can relieve your symptoms while your body recovers.

Read the appropriate pages for information about specific symptoms, such as Ear Pain and Stuffiness (page 108), Sore Throat (page 106), Cough (page 116), Nausea and Vomiting (page 244), and Diarrhea (page 246). The doctor can help if you develop an ear infection (page 108) or bacterial pneumonia. A very young child with a viral infection needs medical attention.

A runny nose is an important sign that the body is trying to rid itself of cold or flu viruses. Sneezes are a way the nose removes germs and other irritants. Unfortunately, sneezes also help viruses pass from person to person. Cover your nose and mouth with a tissue or handkerchief when you sneeze. Wash your hands often when you have a runny nose or sneeze; cold and flu viruses are spread most often by direct contact.

Complications from a runny nose are due to the excess mucus, which can run into the throat (postnasal drip) and cause a sore throat or a cough. Mucus drip can block the eustachian tube, resulting in ear infection and pain. It can also lead to infection and sinus pain.

A runny nose can also be a sign of:

- **Allergies.** Hay fever (allergic rhinitis) can cause the nose to run clear, very thin

mucus. People with hay fever will often have other symptoms, including sneezing and itching, and watery eyes. Hay fever lasts longer than a viral infection, often for weeks or months. Allergies are more common in the spring and fall, when pollen and other allergens are in the air. Other substances that can cause allergic rhinitis include house dust, mold, and animal dander.

- **Nose Sprays.** Prolonged use of nose sprays or drops can lead to a runny nose. Nose drops containing substances like ephedrine should never be used for more than three consecutive days. You can avoid this problem by switching to saline nose drops for a few days.
- **Head Injury.** Head injury is a rare but serious cause of a runny nose (page 114). If a person has a clear discharge that began after a head injury, he or she needs immediate medical attention.

HOME TREATMENT

You can take acetaminophen, aspirin, ibuprofen, or naproxen remedies (page 38) for the fever and aches of the common cold. These symptoms are usually worse in the afternoon and evening, so take medications regularly during this time. Don't give aspirin to children or teenagers; give them acetaminophen instead.

There are two basic kinds of cold symptom remedies:

- Decongestants that shrink the nasal membranes and open the passages
- Antihistamines that reduce secretions in the nose

Save money and have fewer side effects by matching the remedy to your symptoms.

COLDS AND FLU

Is ear pain more than mild, or is there clear drainage from nose that began after head injury?

no

yes



Does a child show any of the following symptoms?

- Rapid or difficult breathing
- Wheezing
- Marked irritability or lethargy

no

yes



Do you see either of these signs?

- Person coughing thick, foul-smelling, rusty, or greenish mucus
- Drainage from nose that is foul-smelling, one-sided, or a color other than white or yellow

no

yes



Is the throat more than mildly sore?

no

yes

See:
Sore
Throat,
p. 106



**USE HOME
TREATMENT**

Drink a lot of liquid. The body requires more fluid when you have a fever. Fluids help to keep the mucus more liquid and to prevent complications such as bronchitis and ear infection. A vaporizer, particularly in the winter, can help as well.

Blowing your nose makes you feel better and offers the advantage of safely moving mucus, virus particles, and allergens outside the body. Sniffing a runny nose increases your risk of ear infection.

Call the doctor if symptoms last more than two weeks.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will take the history and do a physical examination. He or she may order a chest X-ray or swab the nose or throat for laboratory analysis.

The doctor may prescribe a decongestant or antihistamine. If you have a bacterial infection, the doctor may prescribe an antibiotic. If you suffer from allergies, the doctor may advise you how to reduce your exposure to pollen and other triggers.

CHICKEN SOUP

A word about chicken soup: People with colds often feel dizzy when standing up, and this condition is helped by drinking salty liquids. Bouillon and chicken soup are excellent.

Sore Throat

Sore throat can affect a person of any age but is most common among children five to ten years old. One cause is breathing through the mouth, which can dry and irritate the air passages; this irritation improves quickly when moist air is breathed. The most common causes of sore throat, however, are viruses and bacteria.

Antibiotics are useless against viral infections. A sore throat caused by a virus must improve on its own. Pain relievers, throat lozenges, anesthetic sprays, and other medications may relieve symptoms.

Infectious mononucleosis, also called "mono" or "the kissing disease," is a viral sore throat common among older children and adolescents. The person with mono may have a severe sore throat for more than a week and feel particularly weak.

"Strep throat" is what we commonly call sore throat caused by a streptococcal bacterium. Strep throat is more common in children than adults. If one child in a family has strep throat, other members with a sore throat are likely also to be infected with strep.

A sore throat is unlikely to be strep if the person has several other cold symptoms: runny nose, stuffy ears, cough, and so on.

You should have a strep throat diagnosed and treated with antibiotics as soon as possible to avoid rare but serious complications, such as:

- **Throat Abscess.** Suspect a throat abscess if a child drools excessively or has great difficulty in swallowing or opening his or her mouth.

- **Rheumatic Fever.** This condition appears one to four weeks after the sore throat and results in painful joints, skin rashes, and heart damage. Antibiotic treatment of strep throat can prevent rheumatic fever.
- **Inflammation of the Kidney.** This condition also comes one to four weeks after the sore throat.

HOME TREATMENT

You can ease the symptoms of sore throat with nonprescription pain relievers. Fever and sore throat pain can be relieved by cold remedies, acetaminophen, aspirin, ibuprofen, and naproxen. Don't give aspirin or aspirin-containing cold remedies to children or teenagers.

A vaporizer will moisten the air and ease dry air passages. Saltwater gargles or tea with honey or lemon also may help. Your symptoms will improve over time.

TONSILS

Children between the ages of five and ten commonly have sore throats. There is no evidence that removing the tonsils lowers their frequency. Doctors now agree that children very seldom need the tonsillectomy operation.



SORE THROAT

Does a child show any of these signs?

- Severe difficulty in swallowing
- Difficulty in breathing
- Excessive drooling

yes



**SEEK
MEDICAL
CARE NOW**

no

Do you see any of the following signs?

- Temperature of 101°F (38°C) or more
- Yellowish pus in back of throat
- Red rash on skin that feels like sandpaper, redness in skin creases, and fever

yes



**CALL
MEDICAL
ADVISOR**

no

Is person less than 30 years of age?

no



**USE HOME
TREATMENT**

yes

Are the tonsils swollen?

no



**USE HOME
TREATMENT**

yes

See doctor for strep throat test

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor may do a “quick test” for strep or swab the throat for lab tests. Some doctors delay prescribing an antibiotic until they know the results of culture tests. A delay of treatment by a day or two doesn’t increase the risk of rheumatic fever.

The doctor may prescribe antibiotics, which treat a bacterial infection and prevent complications but don’t ease throat discomfort. Antibiotics are useless against sore throat caused by a virus.

Ear Pain and Stuffiness

Ear pain often is caused by a buildup of fluid and pressure in the middle ear (the portion of the ear behind the eardrum). Under normal circumstances, the middle ear is drained by a short narrow tube, the eustachian tube, into the nasal passages. Often during a cold or allergy, the mucous membranes lining the eustachian tube will swell, closing off the tube; this occurs most easily in small children in whom the tube is smaller. When the tube closes, the normal flow of fluid from the middle ear is prevented, and the fluid begins to accumulate. This causes stuffiness and decreased hearing.

The stagnant fluid provides a good place for the start of a bacterial infection. A bacterial infection usually results in pain and fever, often in one ear only.

Ear pain and ear stuffiness may occur when going from low to high altitudes, as when going up in an airplane. Here again the mechanism for the stuffiness or pain is a clog in the eustachian tube. Swallowing will frequently relieve this pressure. Closing the mouth and holding the nose closed while pretending to blow your nose is another way to open the eustachian tube. Using a decongestant may help prevent this problem.

Ear Infection in Children

The symptoms of an ear infection in children may include fever, ear pain, fussiness, increased crying, irritability, or pulling at the ears. Because infants can't tell you that their ears hurt, increased irritability or ear pulling should make a parent suspicious of ear infection.

Parents are often concerned about whether their children will lose hearing after ear infections. Most children will have a temporary and minor hearing loss during and immediately following an ear infection, but with adequate treatment there is seldom any permanent hearing loss.

HOME TREATMENT

Antihistamines, decongestants, and nose drops are used to decrease the amount of fluid flowing from the middle ear and shrink the mucous membranes in order to open the eustachian tube. See page 44 for more information on these drugs. Fluid in the ear will often respond to home treatment alone.

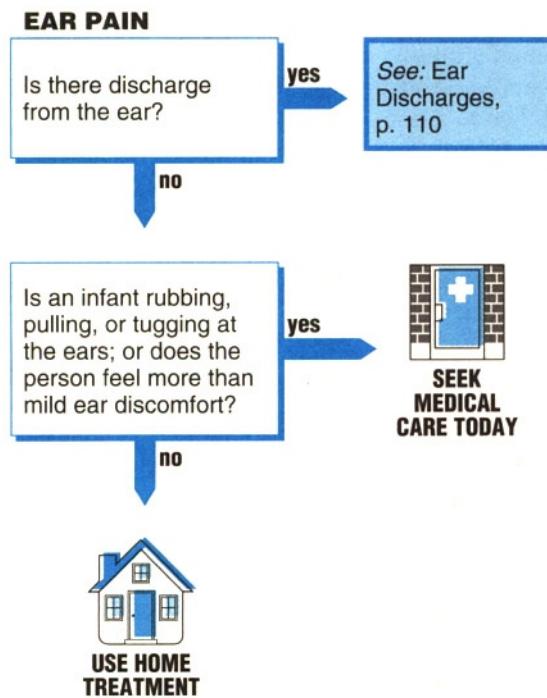
Acetaminophen, aspirin, ibuprofen, or naproxen will provide partial pain relief (page 38). Although ear pain isn't usually a part of chicken pox or the flu, avoid the use of aspirin or other NSAIDs in teenagers or children because of the association with Reye syndrome, a serious problem of the brain and liver.

Moisture and humidity are important in keeping the mucus that flows from the middle ear thin. Use a vaporizer if you have one. Curious maneuvers (such as hopping up and down in a steamy shower while shaking the head and swallowing) are sometimes dramatically successful in clearing out mucus.

If symptoms continue beyond two weeks, see the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the ear, nose, and throat as well as the bony portion of the skull behind the ears, known as the mastoid. Pain, tenderness, or redness of the mastoid means a serious infection.



Therapy will generally consist of an antibiotic and an attempt to open the eustachian tube by medication. Nose drops, decongestants, and antihistamines can be used for this purpose. Antibiotic therapy generally will be prescribed for at least a week, while other treatments will usually be given for a shorter period. Be sure to take all of the antibiotic prescribed, and on schedule.

Occasionally fluid in the middle ear will persist for a long period without infection. In this case there may be a slight decrease in hearing. This condition, known as "serous otitis media," is usually treated by trying to open the eustachian tube to allow the fluids to drain; it isn't treated with antibiotics. If this condition persists the doctor may resort to insertion of ear tubes in order to reestablish proper functioning of the middle ear. Placing ear tubes sounds frightening, but this is actually a simple and very effective procedure.

Ear Discharges

Ear discharges are usually just wax but may be caused by minor irritation or infection. Ear wax is almost never a problem unless attempts are made to "clean" the ear canal, the opening that leads from the external part of the ear to the internal parts. Ear wax functions as a protective lining for the ear canal. Taking warm showers or washing the external ears with a washcloth dipped in warm water usually provides enough vapor to prevent the buildup of wax. Children often like to push things in their ear canals, and they may pack the wax tightly. Adults armed with a cotton swab on a stick (for example, a Q-tip) often accomplish the same awkward result.

Swimmer's Ear

In the summertime ear discharges are commonly caused by swimmer's ear, an irritation of the ear canal and not a problem of the inner ear or eardrum. A tug on the ear that causes pain can be a helpful clue to an inflammation of the outer ear and canal, such as swimmer's ear. Children with such inflammation will often complain that their ears are itchy. The urge to scratch inside the ear is very tempting but must be resisted. We especially caution against the use of hairpins or other instruments because injury to the eardrum can result.

Ruptured Eardrum

In a child who has been complaining of ear pain, relief of pain accompanied by a white or yellow discharge—sometimes bloody—may be the sign of a ruptured eardrum. Sometimes

parents will find dry crusted material on the child's pillow; here again, a ruptured eardrum should be suspected. The child should be taken to a doctor for evaluation. Don't be unduly alarmed. A ruptured eardrum is actually the first stage of a natural healing process that the antibiotics will help. Children have remarkable healing powers, and most eardrums will heal completely within a matter of weeks.

A very rare, but very serious, cause of ear discharge is a head injury (page 86). If a person has clear discharge that began after a head injury, there is a possibility that a serious injury has occurred and spinal fluid is leaking through the ear. Treat the possibility of this situation as an urgent need for the doctor's help.

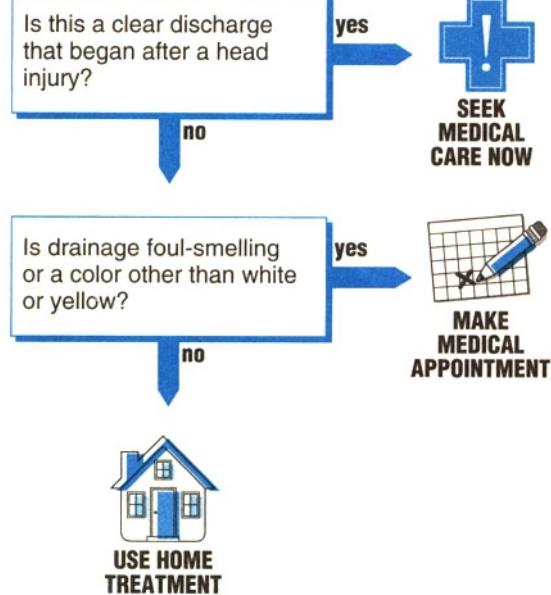
HOME TREATMENT

Packed-down ear wax can be removed by using warm water flushed in gently with a syringe available at drugstores. A water jet (Water Pik, etc.) that is set at the lowest setting can also be useful, but it can be frightening to young children and is dangerous at higher settings. We don't advise that parents try to remove impacted ear wax unless they are dealing with an older child and can see the impacted, blackened ear wax.

Wax softeners such as ordinary olive oil, Debrox, or Cerumenex are useful; however, all commercial products may be irritating, especially if not used properly. Cerumenex, for example, must be flushed out of the ear within 30 minutes using warm water.

Two warnings:

- The water must be as close to body temperature as possible; the use of cold water may result in dizziness and vomiting.

EAR DISCHARGES

- Washing should never be tried if there is any question about the condition of the eardrum; it must be intact and undamaged.

Although swimmer's ear (or other causes of similar "otitis externa") is often caused by a bacterial infection, the infection is very shallow and doesn't often require antibiotic treatment. The infection can be effectively treated by placing a cotton wick soaked in Burow's solution in the ear canal overnight, followed by a brief washing out with 3% hydrogen peroxide and then warm water. Success has also been reported with Merthiolate mixed with mineral oil (enough to make it pink), followed by the hydrogen peroxide and warm water rinse. For particularly severe or itching cases or persistence beyond five days, a doctor's visit is advisable.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A thorough examination of the ear will be performed. In severe cases, a culture for bacteria may be taken. Corticosteroid and antibiotic preparations that are placed in the ear canal may be prescribed, or one of the regimens described above under "Home Treatment" may be advised. Oral antibiotics will usually be given if a perforated eardrum is causing the discharge.

Hearing Loss

Problems with hearing may be divided into two broad categories: sudden and slow. When a child of age five or older complains of a difficulty in hearing that has developed over a short period, the problem is usually a blockage in the ear. On the outside of the eardrum, such a blockage may be due to the accumulation of wax, a foreign object that the child has put in the ear canal, or an infection of the ear canal. On the inside of the eardrum, a blockage may occur when fluid accumulates because of an ear infection or allergy.

Hearing problems in children may be present from birth. Hearing can now be tested in a child of any age through the use of computers that analyze changes in brain waves in response to sounds. More simply, an infant with normal hearing will react to a noise such as a hand clap, horn, or whistle. Normal speech development relies on hearing. A child whose speech is developing slowly or not at all may, in fact, have hearing problems.

Some decrease in hearing, especially of the higher frequencies, is normal after the age of 20. If this decrease becomes a problem in later life, it is time to visit the doctor. Occasionally, hearing problems will mimic problems with thinking or understanding, so people will wrongly suspect senility, Alzheimer's disease, or other neurological problems.

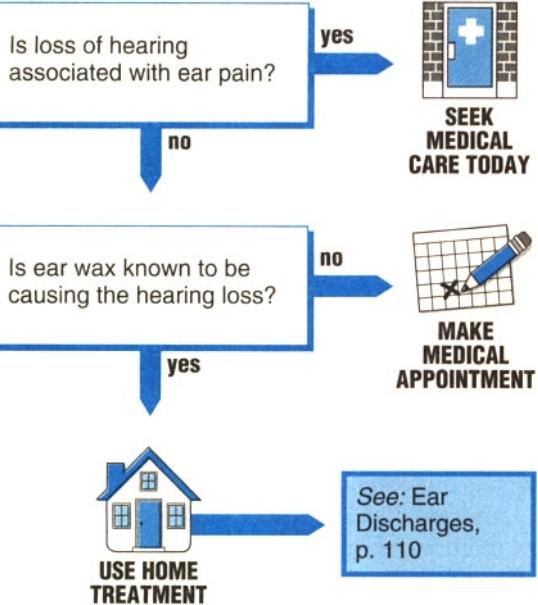
HOME TREATMENT

An accurate ear examination requires a trip to the doctor. However, if you know for sure that the problem is caused by too much ear wax, you may treat it at home. (See "Home Treatment" in Ear Discharges, page 110.)

Be cautious about removing foreign bodies from ears. Don't try to remove the object unless it is easily accessible and removing it clearly poses no threat of damage to ear structures. Never use sharp instruments to remove foreign bodies. Many times, trying to remove an object pushes it farther into the ear or damages the eardrum.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A thorough examination of both ears often reveals the cause of the hearing loss. If it doesn't, the doctor may recommend audiometry (an electronic hearing test) or other tests. Hearing can often be improved by a variety of methods, including hearing aids.

HEARING LOSS

Runny Nose

The hallmark of the common cold is a runny nose. It helps the body fight the viral infection. Nasal secretions contain antibodies against viruses. A runny nose means these secretions are carrying the virus outside the body.

Allergy is also a common cause of runny noses. People whose runny noses are due to an allergy have allergic rhinitis (hay fever). The nasal secretions are often clear and very thin. People with hay fever often have other symptoms, including sneezing, itching, and watery eyes. This problem often lasts for weeks or months, and occurs most commonly during the spring and fall when pollen particles or other allergens are in the air. Other substances may cause allergic rhinitis, including house dust, mold, and animal dander.

Another common cause of stuffy noses is prolonged use of nose drops. This problem is known as "rhinitis medicamentosum." Nose drops containing substances like ephedrine should never be used for longer than three days. This problem can be cured by switching to saline nose drops for a few days (page 45).

Complications from a runny nose are due to the excess mucus. The mucus can run into the throat (postnasal drip) and cause a sore throat or a cough that is most obvious at night. The mucus drip may plug the eustachian tube between the nasal passages and the ear, resulting in ear infection and pain (page 108). It may plug the sinus passages, resulting in sinus infection.

A very rare, but very serious, cause of a runny nose is a head injury (page 86). If a

person has a clear discharge that began after a head injury, there is a possibility that a serious injury has occurred and spinal fluid is draining through the nose. Treat the possibility of this situation as an urgent need for the doctor's help.

HOME TREATMENT

Using handkerchiefs or tissues to blow your nose has the great advantage of safely moving mucus, virus particles, and allergens outside the body. A facial tissue has no side effects and costs less than drugs.

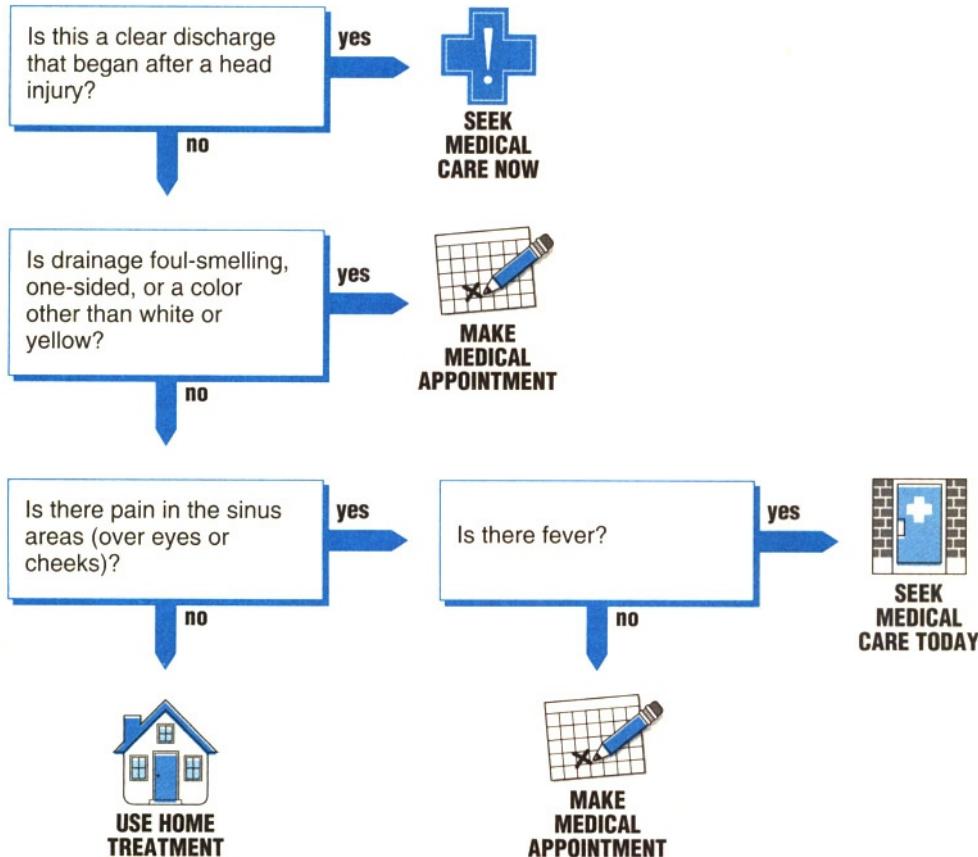
If drugs must be used, there are two types:

- **Decongestants** such as pseudoephedrine and ephedrine shrink the mucous membranes and open the nasal passages.
- **Antihistamines** block allergic reactions and decrease the amount of secretion.

Decongestants make some children overly active. Antihistamines may cause drowsiness and interfere with sleep (page 44).

If you choose to treat a runny nose with medication, nose drops are suitable. Saline nose drops are fine for young children. Older children and adults may use drops containing decongestants (page 45).

Complications such as ear and sinus infections may often be prevented by ensuring that the mucus is thin rather than thick and sticky. This helps prevent plugging of the nasal passages. Increasing the humidity in the air with a vaporizer or humidifier helps liquefy the mucus. Heated air inside a house is often very dry; cooler air contains more moisture. Drinking a large amount of liquid will also help liquefy the secretions. If symptoms persist beyond three weeks, consult your doctor.

RUNNY NOSE**WHAT TO EXPECT AT THE DOCTOR'S OFFICE**

The doctor will thoroughly examine the ears, nose, and throat and will check for tenderness over the sinuses. Often a swab of the nasal secretions will be taken and examined under a microscope for certain types of cells, known as eosinophils, which indicate hay fever (allergic rhinitis). For allergic rhinitis, antihistamines may be prescribed, and a program of avoidance of dust, mold, dander, and pollen suggested.

GESUNDHEIT!

Sneezes are healthy, removing germs, allergens, or dust from the nose. The only danger is infecting other people with the germ or virus that makes you sneeze. Cover your nose and mouth with a tissue or handkerchief. Wash your hands frequently. And let people say, "Bless you."

Cough

The cough reflex is one of the body's best defenses. The violent rush of air clears foreign material from the air passages. Smoke, air pollutants, accidentally inhaled food, or any other airway irritation can trigger a cough.

When you have a cold, mucus from the nasal passages may drain into the airway (postnasal drip) and trigger the cough reflex. You can treat this with a cough suppressant.

If your lungs are congested, coughing may expel pus and mucus. This type of "productive" cough is helpful in clearing the lungs. You should not suppress a productive cough with drugs.

Here are some of the common causes of cough:

- **Smoking** kills the cells lining the airway so that you can't expel mucus normally. The smoker's chronic cough is evidence of the continual irritation of the air passages.
- **Viral infections** can cause a cough that usually produces yellow or white mucus. Antibiotics are useless to treat a viral infection. The illness runs its course within a few days.
- **Bacterial infections** can cause a cough that usually produces rusty or green mucus. The mucus looks like it contains pus. Your doctor can prescribe an antibiotic to treat a bacterial infection. Doctors use the term "pneumonia" most often to mean a bacterial infection of the lung, but the same label can be applied to other lung infections, more or less serious. Don't panic if you hear that word.

For very young infants, coughing is unusual and may suggest a serious lung problem. Older infants are prone to swallow things and can get a foreign object lodged in the airway. Young children tend to inhale bits of peanut and popcorn, which can cause coughing.

HOME TREATMENT

Increase humidity by using a vaporizer or running a steamy shower. Drinking large quantities of fluids also is helpful.

In addition to moisture, guaifenesin (e.g., Robitussin, Naldecon CX), available without a prescription, may help thin mucus and relieve a cough (page 47). Cough lozenges or hard candy may relieve a dry, tickling cough.

Dextromethorphan (e.g., Romilar, Vicks Formula 44, Robitussin-DM) helps suppress a dry, hacking cough that is not helping to remove mucus (page 48).

Decongestants and/or antihistamines can help if postnasal drip is causing the cough. Otherwise avoid antihistamines because they dry and thicken secretions.

HICCUPS

Hiccups, which are caused by irregular contractions of the diaphragm muscle, may occasionally prove troublesome. Although there have been many home remedies recommended over the years, including drinking large amounts of water and startling the sufferer, research suggests that one-half teaspoon (3 ml) of dry sugar placed on the back of the tongue is the most effective treatment.

COUGH

Did violent cough begin suddenly, without signs of a cold, in a child who might have inhaled a small object?

yes



Are any of the following present in a child?

- Rapid breathing
- Difficulty in breathing
- Wheezing

yes



Is the patient less than 3 months of age?

yes



Is the cough producing thick, foul-smelling, rusty or greenish mucus?

yes



Has fever lasted for more than 4 days, or has cough persisted for more than 10 days?

yes



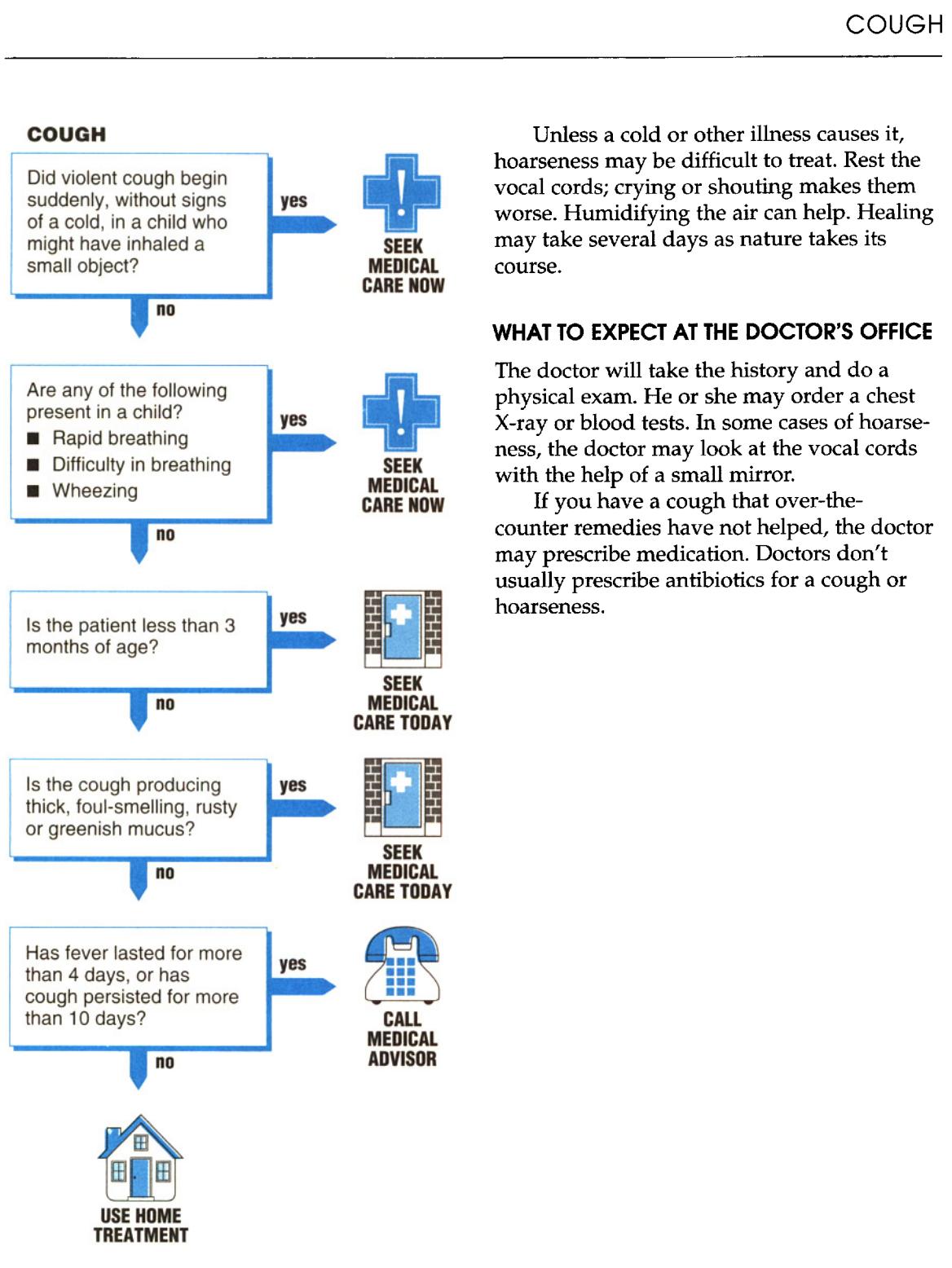
USE HOME TREATMENT

Unless a cold or other illness causes it, hoarseness may be difficult to treat. Rest the vocal cords; crying or shouting makes them worse. Humidifying the air can help. Healing may take several days as nature takes its course.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will take the history and do a physical exam. He or she may order a chest X-ray or blood tests. In some cases of hoarseness, the doctor may look at the vocal cords with the help of a small mirror.

If you have a cough that over-the-counter remedies have not helped, the doctor may prescribe medication. Doctors don't usually prescribe antibiotics for a cough or hoarseness.



Croup

Crush may be the most frightening of the common illnesses that parents encounter. It generally occurs in children under the age of three or four. In the middle of the night, a child may sit up in bed gasping for air. Often there will be an accompanying cough from the area of the voice box in the neck that sounds like the barking of a seal. The child's symptoms are so frightening that panic is often the response. However, the most severe problems with croup usually can be relieved safely, simply, and quickly at home.

Croup is caused by one of several viruses. The viral infection causes a swelling and outpouring of secretions in the larynx (voice box), trachea (windpipe), and bronchi (the larger airways going to the lungs). The air passages of the young child are narrowed by the swelling and further aggravated by the secretions, which may become dry and caked, making it difficult to breathe. There may also be a considerable amount of spasm of the airway passages, further complicating the problem. Treatment is aimed at dissolving the dried secretions.

In some children croup is a recurring problem. These children may have three or four bouts of croup. This seldom represents a serious underlying problem, but you should seek a doctor's advice. Croup will be outgrown as the airway passages grow larger; it is unusual after the age of seven.

Epiglottitis

Occasionally a more serious obstruction caused by a bacterial infection and known

as epiglottitis can be confused with croup. Epiglottitis is more common in children over the age of three, but there is considerable overlap in the ages of children affected by these two conditions. Children with epiglottitis often have more serious difficulty in breathing. They may have an extremely difficult time swallowing all of their saliva and may drool. Often they will gasp for air with the head tilted forward and the jaw pointed out.

Epiglottitis won't be relieved by the simple measures that bring prompt relief of croup. It must be brought to medical attention immediately.

HOME TREATMENT

Mist is the backbone of therapy for croup and can be supplied efficiently by a cold-steam vaporizer. Cold-steam vaporizers are preferable to hot-steam ones because the possibility of scalding from hot water is eliminated.

If breathing is very difficult you can obtain faster results by taking the child to the bathroom and turning on the hot shower to make thick clouds of steam. (Don't put the child in the hot shower!) Steam can be created more efficiently if there is some cold air in the room. Remember that steam rises, so the child won't benefit from the steam by sitting on the floor.

Relief usually occurs promptly and should be noticeable within the first 15 minutes. It is important to keep the child calm and not become alarmed; holding the child may comfort him or her and may help relieve some of the airway spasm. If the child doesn't show significant improvement within 15 minutes, contact your doctor or the local emergency room immediately. They'll want to see the child and will make arrangements in

CROUP

Are any of the following present?

- Drooling
- Breathing with chin jutting out and mouth open
- Severe difficulty in breathing

yes



no

Are the following present?

- Cough sounding like seal's bark
- Difficulty inhaling

no

Suspect... problem other than croup.
See: Cough, p. 116

yes

Does breathing improve with steam after 15 minutes?

no



yes



**USE HOME
TREATMENT**

advance while you are in transit. Unfortunately, few emergency rooms can provide steam as easily as the home shower.

If the child shows significant improvement but the problem persists for more than an hour, call the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If the doctor feels confident that this is croup, further use of mist will be tried. In difficult cases, X-rays of the neck are a reliable way of differentiating croup from epiglottitis. A swollen epiglottis often can be seen in the back of the throat. If epiglottitis is diagnosed, the child will be admitted to the hospital; an airway will be placed in the child's trachea to enable the child to breathe, and intravenous antibiotics directed at curing the bacterial infection will be started. In the case of croup the trip to the doctor often cures the problem that was resistant to steam at home.

Wheezing

Wheezing is the high-pitched whistling sound produced by air flowing through narrowed breathing tubes (bronchi and bronchioles). It's most obvious when the person breathes out but may be present when breathing both in and out. Wheezing comes from the breathing tubes deep in the chest, in contrast to the croupy, crowing, or whooping sounds that come from the area of the voice box in the neck (see Croup, page 118). Most often, a narrowing of the breathing tubes is due to a viral infection or an allergic reaction, as in asthma.

In infants younger than age two, the smallest air passages can narrow because of a viral infection. Pneumonia can also produce wheezing. Occasionally, a foreign body may be lodged in a breathing tube, causing a localized wheezing that's difficult to hear without a stethoscope.

Wheezing is commonly associated with emphysema (chronic obstructive pulmonary disease, or COPD), and asthma often exacerbates this problem. The irritation of smoking by itself is sufficient to cause wheezing, although almost all smokers have some degree of emphysema and bronchitis as well.

Asthma

Asthma is an obstructive lung disease that's most common in children and adolescents. It is becoming more frequent. The wheezing in asthma is caused by spasm of the muscles in the walls of the smaller air passages in the lungs. An excess amount of mucus production further narrows the air passages and can aggravate the difficulty in getting the air out.

An asthmatic attack can be triggered by an infection, an emotionally upsetting event, cold air, air pollution, or exposure to an allergen. Common allergens include house dust, pollen, mold, food, and animal dander. Wheezing can follow an insect sting or the use of a medicine; some individuals even wheeze after taking aspirin. Most often, however, there's no clear reason for a particular asthmatic attack.

Wheezing Alongside Fever

In a child with a respiratory infection, wheezing may occur before shortness of breath is obvious. Therefore, when wheezing appears in the presence of a fever—a sign of possible respiratory infection—early consultation with a doctor is advisable, even though the illness seldom turns out to be serious.

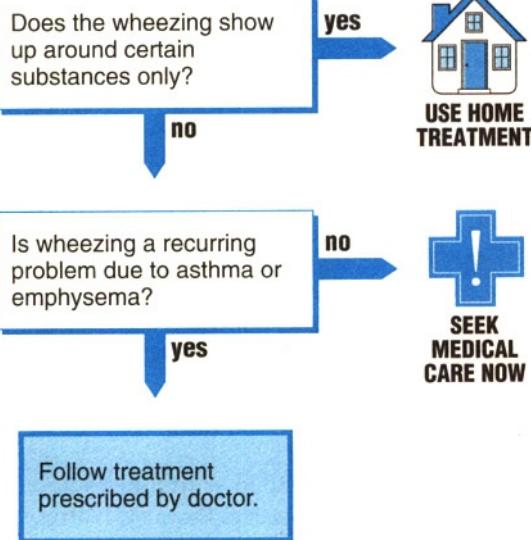
Home treatment is an important part of the approach. However, the doctor's help is needed so that drugs that widen the breathing passages can be used. Intravenous fluids may be required on some occasions.

HOME TREATMENT

All wheezing in children is potentially serious and should be evaluated by a medical professional, at least for the first few occurrences. Asthma tends to occur in families where other members have either asthma, hay fever, or eczema (page 166).

Drinking fluids is very important. It's best to drink water, but fruit juices or soft drinks may be used if the person will swallow more. Hydration (drinking more water) will be part of the therapy that the doctor recommends, so you may begin even before you visit the doctor.

The use of a vaporizer, preferably one that produces a cold mist, may sometimes help. If

WHEEZING

a vaporizer isn't available, you can use the shower to produce a mist.

A relatively clean and dust-free house is essential for a person whose allergies cause asthma. Regularly vacuum rugs, furniture, drapes, bedspreads, and other items that are particular dust-catchers, especially in an asthmatic's bedroom. Keep toy animals clean; washable ones are best. Avoid products that may be stuffed with animal hair. Finally, don't forget to change heating filters and air conditioner filters regularly.

Asthmatics *can* participate in athletics. Athletes with asthma have won numerous gold medals in Olympic swimming. Swimming appears to be far and away the best exercise and the best sport for the asthmatic.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Physical examination will focus on the chest and neck. The doctor will ask questions not

only about the current illness but also about a past history of allergies either in the patient or the family. The possibility that a foreign body has been swallowed may also be investigated in small children. Infections can trigger asthma, but the doctor shouldn't give antibiotics unless an infection is definitely present.

Drugs to open the breathing tube, such as epinephrine or theophylline, may be given by injection, by mouth, or by rectal suppository. Occasionally the patient will need to stay in a hospital to receive replacement fluids through a vein and to breathe humidified air. Most important, in a hospital the patient can be closely watched to prevent the condition from getting worse before it gets better.

After the crisis has passed, the doctor will work with you to prevent future asthma attacks. This should include working on environmental and emotional causes. More than half of the children diagnosed with asthma never have an asthmatic attack as an adult, and another 10% will have only occasional attacks during adult life.

Drug Treatments for Asthma

The doctor may prescribe medications that produce symptomatic relief of asthma, including epinephrine, isoproterenol, ephedrine, and theophylline. Use corticosteroid drugs, such as prednisone, only after full discussion with your doctor.

Learn to administer inhaled drugs correctly. If you feel the medicine hit your tongue or the back of your throat, it's not going into your airways where it belongs.

Antihistamines aren't useful in the treatment of asthma. In fact, by drying nasal secretions, antihistamines may actually cause airways to plug up.

Hoarseness

Hoarseness is usually caused by a problem in the vocal cords.

Children

In infants under three months of age this can be due to a serious problem, such as a birth defect or thyroid disorder. In young children hoarseness is more often due to prolonged or excessive crying, which puts a strain on the vocal cords.

In older children viral infections are the most common cause of hoarseness. If the hoarseness is accompanied by difficulty in breathing or a cough that sounds like a barking seal, the hoarseness is considered a symptom of croup (page 118). Croup is characteristic in children under age three or four, while the symptom of hoarseness by itself is more common in older children.

If hoarseness is accompanied by difficulty in breathing or swallowing, drooling, gasping for air, or breathing with the mouth wide open and the chin jutting forward, a doctor must be seen immediately. This is a medical emergency. This problem is known as epiglottitis and is a bacterial infection that affects the entrance to the airway.

Adults

In adults a virus is most often responsible for the development of hoarseness or laryngitis when no other symptoms are present. As with any symptom of an upper respiratory tract infection, hoarseness may linger after other symptoms disappear.

When hoarseness is mild, the most common cause is cigarette smoke. If persistent hoarseness is not associated with either a viral infection or with smoking, it should be investigated by a doctor. The amount of time to wait before seeing a doctor is controversial; we suggest one month. If you are a smoker, stop smoking and wait one month.

Persistent hoarseness has many causes. The most common are cysts or polyps on the vocal cords. Cancer is also a cause but is relatively rare. Overuse of the voice may result in hoarseness and requires voice rest.

HOME TREATMENT

Hoarseness not associated with other symptoms is resistant to medical therapy. Nature must heal the inflamed area. Humidifying the air with a vaporizer or taking in fluids can offer some relief; however, healing may not occur for several days. Resting the vocal cords is sensible; crying or shouting makes the situation worse. For the treatment of hoarseness associated with coughs, see Cough (page 116).

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If a child has severe difficulty in breathing, the first priority is to ensure that the air passage is adequate. This may require the placement of a breathing tube at the emergency room, hospital, or doctor's office. If X-rays of the neck are taken, a doctor should accompany the child at all times in case emergency care is needed.

In uncomplicated hoarseness that has persisted for a long time, a doctor will look at the vocal cords with the aid of a small mirror. Occasionally a more extensive physical examination and blood tests will be performed.

HOARSENESS

Are any of the following present in a small child?

- Difficulty in breathing
- Difficulty in swallowing
- Drooling

yes



SEEK
MEDICAL
CARE NOW

no

Is the child less than 3 months of age?

yes



CALL
MEDICAL
ADVISOR

no

Has hoarseness persisted for more than a week in a child or more than a month in an adult?

yes



MAKE
MEDICAL
APPOINTMENT

no



USE HOME
TREATMENT

Swollen Glands

The most common types of swollen glands are lymph glands and salivary glands. The biggest salivary glands are located below and in front of the ears. When they swell, the characteristic swollen jaw appearance of mumps is the result (page 190).

Lymph glands play a part in the body's defense against infection. They may become swollen even if the infection is trivial or not apparent, although you can usually identify the infection that is causing the swelling.

The locations of the lymph glands appear on page 91.

- Swollen neck glands frequently accompany sore throats or ear infections. The swelling of a gland simply indicates that it is taking part in the fight against infection.
- Lymph glands in the groin are enlarged when there is infection in the feet, legs, or genital region. These glands are often swollen when no obvious infection can be found.
- Swollen glands behind the ears are often the result of an infection in the scalp. If there is no scalp infection, it is possible that the person currently has or recently had rubella (page 196). Infectious mononucleosis (mono) can also cause swelling of the glands behind the ears (see Sore Throat, page 106).

If a swollen gland is red and tender, there may be a bacterial infection within the gland itself that requires antibiotic treatment. Swollen glands otherwise require no treatment

because they are merely fighting infections elsewhere. If there is an accompanying sore throat or earache, these should be treated as described on pages 106 and 108, respectively. However, swollen glands are usually the result of viral infections that require no treatment.

If you have noticed one or several glands progressively enlarging over a period of three weeks, a doctor should be consulted. On very rare occasions, swollen glands can signal serious underlying problems.

HOME TREATMENT

Observe the glands over several weeks to see if they are continuing to enlarge or if other glands become swollen. The vast majority of swollen glands that persist beyond three weeks aren't serious, but a doctor should be consulted if the glands show no tendency to become smaller. Soreness in the glands will usually disappear in a couple of days; the pain results from the rapid enlargement of the gland in the early stages of fighting the infection. The gland takes much longer to return to normal size than it does to swell up.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the glands and search for infections or other causes of the swelling. Other glands that may not have been noticed by the patient will be examined. The doctor will inquire about fever, weight loss, or other symptoms associated with the swelling of the glands. The doctor may decide that blood tests are indicated or may simply observe the glands for a period of time. In rare cases it might be necessary to remove (biopsy) a small piece of the gland for examination under the microscope.

SWOLLEN GLANDS

Are the swollen glands red and tender?

yes



**SEEK
MEDICAL
CARE TODAY**

Are the swollen glands located between the jaw and ear?

yes

**See: Mumps,
p. 190**

Are the swollen glands located behind the ears?

yes

Is there a scalp infection?

yes



**CALL
MEDICAL
ADVISOR**

Is there an accompanying sore throat?

yes

**See: Sore Throat,
p. 106**

Are the swollen glands in the groin?

yes

Are they associated with minor injury or infection in the leg?

yes

See: Cuts, p. 68

Is swollen gland smaller after 3 weeks?

yes



**USE HOME
TREATMENT**



**CALL
MEDICAL
ADVISOR**

Nosebleeds

The blood vessels within the nose lie very near the surface, and bleeding may occur with the slightest injury. In children, picking the nose is a common cause. Keeping their fingernails cut and discouraging the habit are good preventive medicine.

Nosebleeds are frequently due to irritation by a cold virus or to vigorous nose blowing. The main problem in this case is the cold, and treatment of cold symptoms will reduce the probability of a nosebleed. If the mucous membrane of the nose is dry, cracking and bleeding are more likely.

Remember these key points:

- You can almost always stop the bleeding yourself.
- The majority of nosebleeds are associated with colds or minor injury to the nose.
- Treatment such as packing the nose with gauze has significant drawbacks and should be avoided if possible.
- Investigation into the cause of recurrent nosebleeds is not urgent and is best accomplished when the nose isn't bleeding.

HOME TREATMENT

The nose consists of a bony part and a cartilaginous part: a "hard" portion and a "soft" portion. The area of the nose that usually bleeds lies within the soft portion, and compression will control the nosebleed.

Simply squeeze the nose between thumb and forefinger just below the hard portion of the nose. Pressure should be applied for at least

five minutes. The patient should be seated. Holding the head back isn't necessary. It merely directs the blood flow backward rather than forward. Cold compresses or ice applied across the bridge of the nose may help. Almost all nosebleeds can be controlled in this manner if sufficient time is allowed for the bleeding to stop. If it just won't stop and bleeding is major, of course you should go to the emergency room.

Nosebleeds are more common in the winter when viruses and dry, heated interiors are common. A cooler house and a vaporizer to return humidity to the air help many people.

If nosebleeds are a recurrent problem, are becoming more frequent, and aren't associated with a cold or other minor irritation, a doctor should be consulted. A doctor need not be seen immediately after the nosebleed because examination at that time may simply restart the nosebleed.



To stop a nosebleed. Sit down and squeeze just below the hard portion of the nose. Hold for five minutes. It isn't necessary to tilt the head back.

NOSEBLEEDS

Is the bleeding very heavy, and does it continue after home treatment?

no

yes



Are nosebleeds recurrent and becoming more frequent?

no

yes



Is the nosebleed associated with symptoms of a cold?

no

yes

Apply home treatment.
See: Colds and Flu, p. 104



**USE HOME
TREATMENT**

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

To stop the bleeding, the doctor will seat the patient and compress the nostrils. This will be done even if the patient has tried this at home, and it will usually work.

If the nosebleed can't be stopped, the doctor will try to find the bleeding point in the nose. If a bleeding point is visible, the doctor may try to make the blood clot by searing the bleeding point with either electrical or chemical cauterization. If this isn't successful, packing of the nose may be unavoidable. Such packing is uncomfortable and may lead to infection; thus, the patient must be carefully observed.

If a doctor is visited because of recurrent nosebleeds, questions about events preceding the nosebleeds and a careful examination of the nose itself should be expected. Depending on the history and the physical examination, blood-clotting tests may be ordered on rare occasions.

HIGH BLOOD PRESSURE

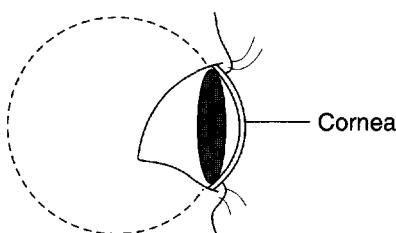
Medical opinion is divided about whether high blood pressure causes nosebleeds, but most doctors believe that the two conditions are seldom related. As a precaution, an individual with high blood pressure who experiences a nosebleed may want to have his or her blood pressure taken within a few days.

Foreign Body in Eye

Eye injuries must be taken seriously. If there's any question, visit the doctor. A foreign body in the eye must be removed to avoid the threat of infection and loss of sight. Be particularly careful if the foreign body was caused by metal striking metal; a small metal particle can strike the eye with great force and penetrate the eyeball.

Under certain circumstances, you may treat this problem at home. If the foreign body was minor, such as sand, and didn't strike the eye with great velocity, it is easily removed. Small round particles like sand rarely stick behind the upper eyelid for long.

In fact, the foreign body may not even be in the eye anymore; it may simply feel as if it is. This feeling indicates that there has been a scrape or cut on the cornea, the clear membrane that covers the colored portion of the eye. A minor corneal injury will usually heal quickly without problems, but a major one requires medical attention.



Even if you think the injury is minor, run through the decision chart daily. If any symptoms at all are present after 48 hours and

aren't clearly resolving, see a doctor. Minor problems will heal within 48 hours; the eye repairs injury quickly.

HOME TREATMENT

Be gentle. Wash the eye out. Water is good; a weak solution of boric acid is better, if available (follow label directions).

Inspect the eye yourself and have someone else check it as well. Use a good light and shine it from both the front and the side. Pay particular attention to the cornea.

Don't rub the eye; if a foreign body is present, you will scratch the cornea.

An eye patch will relieve pain. Take it off each day to recheck the eye; it is usually needed for 24 hours or less. Make the patch with several layers of gauze and tape it firmly in place; you want some gentle pressure on the eye.

Check vision each day; compare the two eyes by reading different sizes of newspaper type from across the room, first with one eye, then with the other. If you aren't sure all is going well, see a doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will check your vision and inspect the eye, including under the upper lid—this isn't painful. Usually he or she will drop a fluorescent stain into the eye and then examine it under ultraviolet light—this isn't painful or hazardous. An ophthalmologist (surgeon specializing in diseases of the eye) will examine the eye with a special microscope.

The doctor will remove any foreign body in the eye. In the office, the doctor may use a cotton swab, an eyewash solution, or a small needle or "eye spud." He or she sometimes

FOREIGN BODY IN EYE

Do any of the following apply?

- Can the foreign body be seen, and does it remain after gentle washing?
- Could the injury have penetrated the globe of the eye?
- Can you see blood in the eye?

yes



SEEK
MEDICAL
CARE NOW

no

Is there any problem with vision, or does it feel as if a foreign body might be trapped behind the upper lid?

yes



SEEK
MEDICAL
CARE NOW

no



USE HOME
TREATMENT

will apply an antibiotic ointment or provide an eye patch. Eye drops that dilate the pupil may be employed. The doctor may have X-rays taken if a foreign body may be inside the globe of the eye.

BLOOD IN THE EYE

Sometimes a blood vessel in the white of the eye will break, causing an ugly red spot. This blood in the eye is called a subconjunctival hemorrhage and will go away in a few weeks. If you have no visual problems or pain and the problem is only in the white part of the eye, you can wait it out without a doctor. If you're taking blood-thinning medications, call your doctor and report the problem.

Eye Pain

Pain in the eye can be an important symptom and can't be safely ignored for long. Fortunately it is an unusual complaint. Itching and burning (page 134) are more common. Eye pain may be due to injury, infection, or an underlying disease.

An important disease that can cause eye pain is glaucoma. Glaucoma may slowly lead to blindness if not treated. In glaucoma, the fluid inside the eye is under abnormally high pressure, and the globe of the eye is tense, causing discomfort. Vision to the sides is the first to be lost. Gradually and almost imperceptibly, the field of vision narrows until the individual has "tunnel vision." In addition, a person often will see "halos" around lights. Unfortunately, this sequence can occur even when there is no associated pain.

Eye pain is a nonspecific complaint, and questions relating to the pain are often better answered under the more specific headings in this chapter.

A feeling of tiredness in the eyes or some discomfort after a long period of fine work (eyestrain) is generally a minor problem and doesn't really qualify as eye pain. Severe pain behind the eye may result from migraine headaches, and pain either above or below the eye may suggest sinus problems.

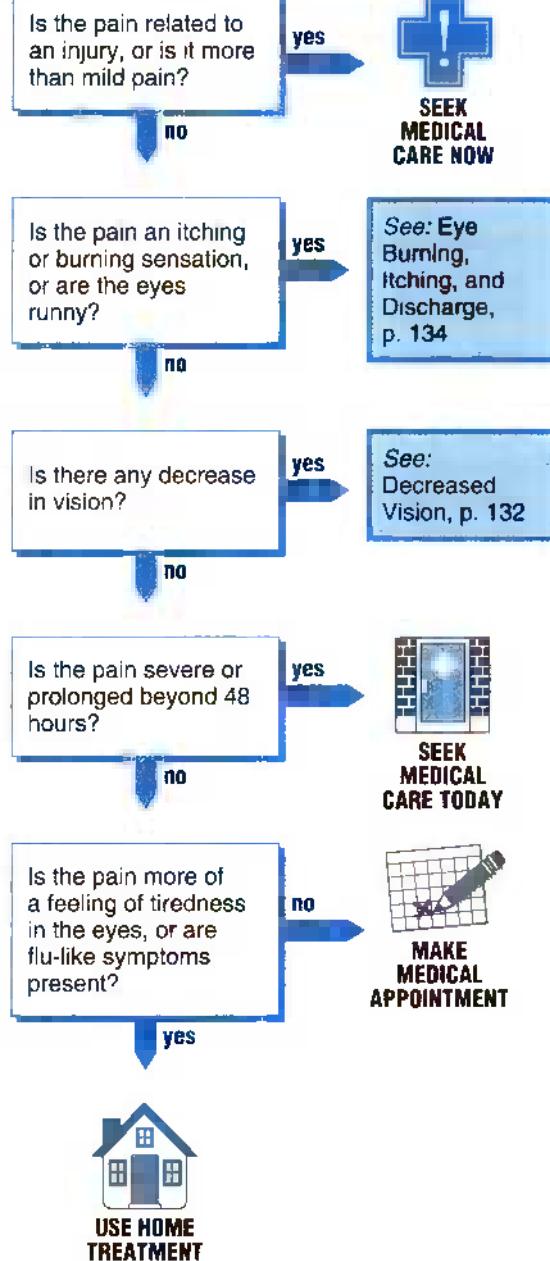
Pain in both eyes, particularly upon exposure to bright light, "photophobia," is common with many viral infections such as the flu and will go away as the infection improves. More severe photophobia, particularly when only one eye is involved, may indicate inflammation of the deeper layers of the eye and requires a doctor.

HOME TREATMENT

Except for eye pain associated with a viral illness or eyestrain, or minor discomfort that is more tiredness than pain, we don't recommend home treatment. In these instances, resting the eyes, taking a few acetaminophen, and avoiding bright light may help. Follow the decision chart to the discussion of other problems where appropriate. When symptoms persist, check them out in a routine appointment with your doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will check vision, eye movements, and the back of the eye with an ophthalmoscope. An ophthalmologist (surgeon specializing in diseases of the eye) may look at the eye through a microscope or a device called a slit lamp. If glaucoma is possible, the doctor may check the pressure of the globe. This is simple, quick, and painless. Many doctors commonly refer patients with eye symptoms to an ophthalmologist. You may wish to go directly to an ophthalmologist if you have a major concern.

EYE PAIN**COMPUTER PROBLEMS**

Staring at a computer screen for a long time can cause eyestrain, irritation, blurred vision, and headaches. However, several studies conclude that these problems are temporary. To make them less likely:

- Blink often, rest your eyes with momentary glances away from the screen, and use eye drops if necessary. Staring at the screen tends to reduce your blinking and thus dry out your eyes.
- Avoid glare from the screen by using indirect lighting, repositioning the screen, or using an antiglare filter over it.
- Make sure your monitor produces sharp, crisp images. Fuzzy screen images increase eyestrain.
- Get special glasses for your computer work if necessary. If you wear bifocals, you may be tilting your head at an uncomfortable angle to see the screen through the lower portion of your glasses.

For more information about working at your computer, see Wrist Pain (page 214).

Decreased Vision

Few people need urging to protect their sight. Decreased vision is a major threat to the quality of life. Usually, professional help is needed.

A few situations don't require a visit to a health professional. When small, single "floaters" drift across the eye from time to time and don't affect vision, they aren't a matter for concern. Slight, reversible blurring of vision may occur after outdoor exposure or with overall fatigue. In young people, sudden blindness in both eyes is commonly a hysterical reaction and isn't a permanent threat to sight; such patients need a doctor but not necessarily an eye doctor.

Usually the question is not whether to see a health professional but, rather, which one to see. Opticians dispense glasses; they aren't medical doctors and don't diagnose eye problems.

The optometrist evaluates the need for glasses, screens for eye diseases, and determines what prescription lens gives the best vision. Conditions usually treated by an optometrist are nearsightedness (myopia), farsightedness (hyperopia), and crooked-sightedness (astigmatism). Although optometrists aren't medical doctors, in some states they can prescribe medicine.

If another problem is suspected, the optometrist may refer you to an ophthalmologist, who is a medical doctor and a surgical specialist. The ophthalmologist is the final authority on eye diseases. Sometimes an eye problem is part of a general health problem; in these cases, the primary physician may be appropriate.

Try to find the right health professional on the first attempt; this will save you time and money. The following examples may help you in your decision making:

- **School nurse detects decreased vision in child.** Visit ophthalmologist or optometrist—possible myopia (nearsightedness).
- **Sudden blindness in one eye in an elderly person.** Visit ophthalmologist or internist—possible stroke or temporal arteritis.
- **Halos around lights and eye pain.** Visit ophthalmologist—possible acute glaucoma (increased pressure in the eye).
- **Gradual decrease in vision in an adult who wears glasses.** Visit ophthalmologist or optometrist—change in refraction of the eye.
- **Sudden blindness in both eyes in a healthy young person.** Visit internist or ophthalmologist—possible hysterical reaction.
- **Gradual blurring of vision in an older person, with no improvement by moving closer or farther away.** Visit ophthalmologist—possible cataract (scar tissue forming in the lens of the eye).
- **Older person who sees far objects best.** Visit optometrist or ophthalmologist—possible presbyopia (condition that diminishes the eye's ability to focus on near objects).
- **Visual change while taking a medicine.** Call the prescribing doctor—the drug may be responsible.
- **Decreased vision in one eye, with a "shadow" or "flap" in the visual field.** Visit ophthalmologist—possible retinal detachment.

DECREASED VISION

Did blindness (partial or complete) occur suddenly in one or both eyes, or has the vision loss been severe?

yes



Do you have trouble seeing objects to either side, or do you see halos around lights?

yes



Has the vision loss occurred very slowly over a long period?

yes

See ophthalmologist or optometrist

no



**MAKE
MEDICAL
APPOINTMENT**

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will check vision, eye movements, pupils, back of the eye, and eye pressure when appropriate; a slit-lamp examination may be done. A general medical evaluation will be done as required. Testing for eyeglasses may be needed; busy ophthalmologists will sometimes refer this procedure to an optometrist. Surgery may be recommended for some conditions. Laser surgery is increasingly an option instead of changing glasses or contact lens prescriptions.

Eye Burning, Itching, and Discharge

These symptoms usually mean conjunctivitis, or "pinkeye," with inflammation of the membrane that lines the eye and the inner surface of the eyelids. The inflammation may be due to an irritant in the air, an allergy to something in the air, a viral infection, or a bacterial infection. The bacterial infections and some of the viral infections (particularly herpes) are potentially serious but are least common.

Chemicals and particles in smog can produce burning and itching that sometimes seem as severe as the symptoms experienced in a tear-gas attack. These symptoms represent a chemical conjunctivitis and affect anyone exposed to enough of the chemical. The smoke-filled room, the chlorinated swimming pool, the desert sandstorm, sun glare on a ski slope, or exposure to a welder's arc can provoke similar physical or chemical irritation.

In contrast, allergic conjunctivitis affects only those people who have allergies. Almost always the allergen (what causes the body's reaction) is in the air. This problem may occur in spring, summer, or fall, depending on the offending pollen, and usually lasts two to three weeks. Grass pollens are probably the most frequent offenders.

A minor conjunctivitis frequently accompanies a viral cold, triggering the well-known symptoms and lasting only a few days. Some viruses, such as herpes, cause deep ulcers in the cornea and interfere with vision.

Bacterial infections cause pus to form, and a thick, plentiful discharge runs from the eyes.

Often the eyelids are crusted over and "glued" shut upon wakening. These infections can cause ulceration of the cornea and are serious.

Some major diseases affect the deeper layers of the eye, those layers that control the operation of the lens and the size of the pupil. This condition is termed "iritis" or "uveitis" and may cause irregularity of the pupil or pain when the pupil reacts to light. Medical attention is required. For Eye Pain, see page 130.

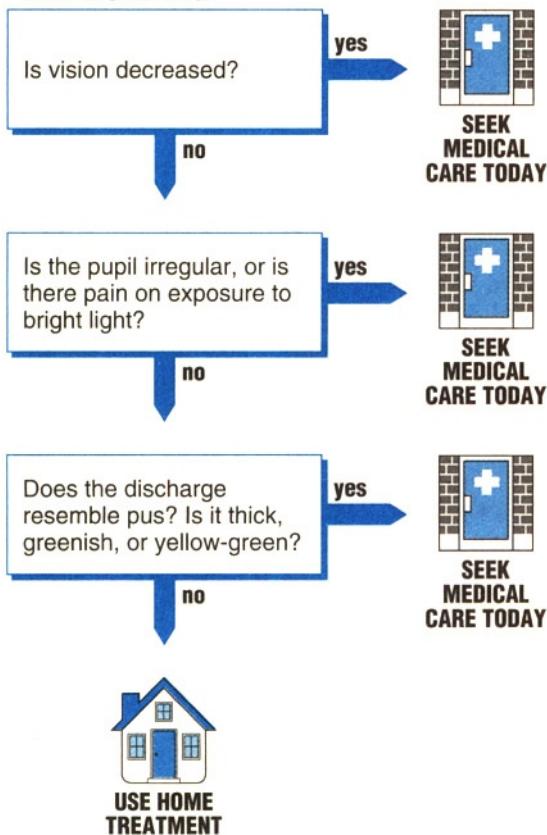
HOME TREATMENT

If a physical, chemical, or allergic exposure is the cause of the symptoms, the most important thing is avoiding exposure. Dark glasses, goggles at work, houses and cars with air-conditioning to filter the air, avoidance of chlorinated swimming pools, and other such measures are appropriate.

Antihistamines, either over the counter or by prescription, may help slightly if the problem is an allergy, but don't expect total relief without a good deal of drowsiness from the medication. Similarly, a viral infection related to a cold or flu will run its course in a few days, and it is best to be patient.

If the eye irritation doesn't clear up, if the discharge gets thicker, or if you have eye pain or a problem with vision, see your doctor. Don't expect a fever with a bacterial infection of the eye; it may be absent. Because the infection is superficial, washing the eye gently with a boric acid solution (follow directions on the label) will help remove some of the bacteria, but you should still see a doctor. Eye drops (Murine, Visine, etc.) may soothe minor conjunctivitis but won't cure it (page 50).

Burning eyes may be a call to social action. If the smoking of others around you is

EYE BURNING

annoying, say so. If an industrial plant in your area is polluting, get the company to clean up its act.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will check vision, eye motion, eyelids, and the reaction of the pupil to light. An ophthalmologist (surgeon specializing in eye diseases) may perform a slit-lamp examination. Antihistamines may be prescribed, and general advice may be given. Antibiotic eye drops or ointments are frequently given. Cortisone-like eye ointments should be prescribed infrequently; certain infections (herpes) may get worse with these medicines. If herpes is diagnosed—usually by an ophthalmologist—special eye drops and other medicines will be needed.

Styes and Blocked Tear Ducts

We might have called this problem "bumps around the eyes" because that is how they appear.

Styes are infections (usually with staphylococcal bacteria) of the tiny glands in the eyelids. They are really small abscesses, and the bumps are red and tender. They grow to full size over a day or so.

Another type of bump in the eyelid, called a chalazion, appears over many days or even weeks and isn't red or tender. A chalazion often requires drainage by a doctor, whereas most styes will respond to home treatment. However, there is no urgency in the treatment of a chalazion.

Tear Ducts

Tears are the lubricating system of the eye. They are continually produced by the tear glands and then drained away into the nose by the tear ducts. These tear ducts are often incompletely developed at birth so that the drainage of tears is blocked. When this happens, the tears may collect in the tear duct and cause it to swell, appearing as a bump along the side of the nose just below the inner corner of the eye. This bump isn't red or tender unless it has become infected. Most blocked tear ducts will open by themselves in the first month of life, and most of the remainder will respond to home treatment. Tears running down the cheek are seldom noted in the first month of life because the infant produces only a small volume of tears.

The eyeball itself isn't involved in a stye or a blocked tear duct. Problems with the eyeball, and especially with vision, should not be attributed to these two relatively minor problems.

HOME TREATMENT

For styes, apply warm, moist compresses for 10 to 15 minutes at least three times a day. As with all abscesses, the objective is to drain the abscess. The compresses help the abscess to "point." This means that the tissue over the abscess becomes quite thin and the pus in the abscess is very close to the surface. After an abscess points, it often will drain spontaneously. If this doesn't happen, the abscess may need to be lanced by the doctor. Most styes will drain spontaneously even without home treatment. They may drain inward toward the eye or outward onto the skin. Sometimes the stye goes away without coming to a point and draining.

Chalazions usually don't respond to warm compresses, but they won't be harmed by them. If no improvement is noted with home treatment after 48 hours, see the doctor.

For blockage of the tear ducts, simply massage the bump downward with warm, moist compresses several times a day. If the bump is not red and tender (indicating infection), this may be continued for up to several months. If the problem exists for this long, discuss it with your doctor. If the bump becomes red and swollen, antibiotic drops will be needed.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If the stye is pointing and ready to be drained, the doctor will open it with a small needle. If it isn't pointing, compresses will usually be

STYES, ETC.

Is the problem confined to the eyelids or the area of the tear duct (see drawing)?

yes

no

Suspect... problem other than stye or tear duct blockage. See: Foreign Body in Eye, p. 128; and Eye Burning, Itching, and Discharge, p. 134

Is there difficulty with vision?

yes

no



Is there swelling or redness over the tear duct?

yes

no



Chalazion

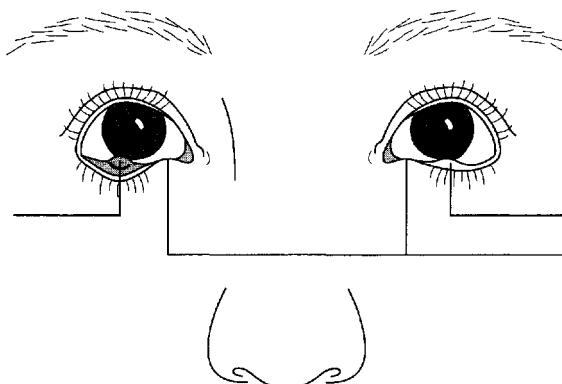
Stye

Sites of blocked
tear ducts

advised, and antibiotic eye drops sometimes will be added. Trying to drain a stye that isn't pointing is usually not very satisfactory.

A chalazion may be removed with minor surgery. Whether to have the surgery will be up to you. Chalazions aren't dangerous and usually don't require removal.

If a child is over six months of age and is still having problems with blocked tear ducts, the ducts can be opened in almost all cases with a very fine probe. This probing is successful on the first try in about 75% of all cases and on subsequent attempts in the remainder. Only rarely is a surgical procedure necessary to open a tear duct. For red and swollen ducts, antibiotic drops as well as warm compresses will usually be recommended.



Bad Breath

Poor dental hygiene and smoking cause most cases of bad breath in adults. Infections of the mouth and sore throat infections may also cause bad breath. Recently it has been suggested that bad breath is occasionally due to gases absorbed from the intestine and released through the lungs. Unfortunately, even if this is correct, it isn't clear what can be done about it.

Finally, unusual problems such as abscesses of the lung or heavy worm infestations have been reported to cause bad breath, although we haven't seen these in our practices.

Smoker's Breath

The bad breath of smoking comes from the lungs as well as the mouth. Thus, mouthwashes and breath fresheners do little to help smoker's breath. Getting rid of this problem is another benefit of giving up cigarettes.

Morning Breath

Bad breath in the morning is very common in adults. Flossing and regular toothbrushing should eliminate this problem.

In Children

A rare cause of prolonged bad breath in a child is a foreign body in the nose. This is especially common in toddlers who have inserted some small object that remains unnoticed. Often, but not always, there is a white, yellowish, or bloody discharge from one nostril.

HOME TREATMENT

Proper dental hygiene, especially flossing, and avoiding smoking will prevent most cases of bad breath. If this doesn't eliminate the odor, a visit to the doctor or dentist may be helpful.

Mouthwashes are of questionable value. Don't use mouthwashes that simply perfume the breath. These cover up but don't treat the underlying problem. If you smoke, bad breath is another good reason to quit.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will thoroughly examine the mouth and the nose. A culture may be taken if the patient has a sore throat or mouth sores. Antibiotics may be prescribed. If there is an object in the nose, the doctor will use a special instrument to remove it.

BAD BREATH

Does the person have mouth sores or a sore throat?

yes

See: Mouth Sores, p. 140; or Sore Throat, p. 106

no

Is there a white, yellow, or bloody discharge from one nostril?

yes



MAKE MEDICAL APPOINTMENT

no

Is there a decaying tooth?

yes



MAKE MEDICAL APPOINTMENT

no



USE HOME TREATMENT

Mouth Sores

Fever blisters or cold sores are a familiar problem caused by the herpes virus (page 306). They are usually found on the lips, although they can sometimes appear inside the mouth. Often the blisters have ruptured and only the remaining sore is seen. Fever is usually but not always present. Herpes viruses often live in the body for years, causing trouble only when another illness causes a rise in body temperature. Generally, fever blisters heal by themselves several days after the fever diminishes.

A canker sore is a painful ulcer that often follows an injury, such as accidentally biting the inside of the lip or the tongue, or it may appear without obvious cause. Eventually, it heals by itself.

In Children

Large white spots on the roof of the mouth are a sign of thrush, a yeast infection. It often disappears without treatment.

A virus that can cause mouth lesions in children is the Coxsackie virus. These lesions are often accompanied by spots on the hands and feet—hence the name “hand-foot-mouth syndrome.” The child feels well and there is no fever. Again, this problem will go away by itself.

Other Causes

Drugs sometimes cause mouth ulcers. In such cases a skin rash may be present on other parts of the body as well, and a doctor must be contacted.

A cancer of the lip or gum is rare, except in smokers. It must be treated but is not an

emergency. Syphilis transmitted by oral sexual contact may produce a mouth sore. Both of these problems are usually painless. Other conditions that may cause mouth ulcers may involve eyes, joints, or other organs.

HOME TREATMENT

Mouth sores caused by viruses heal by themselves. The goal of treatment is to reduce fever, relieve pain, and maintain adequate fluid intake.

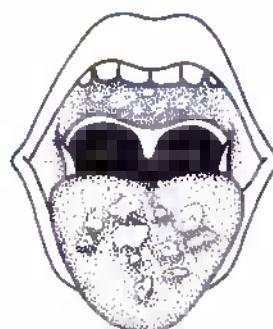
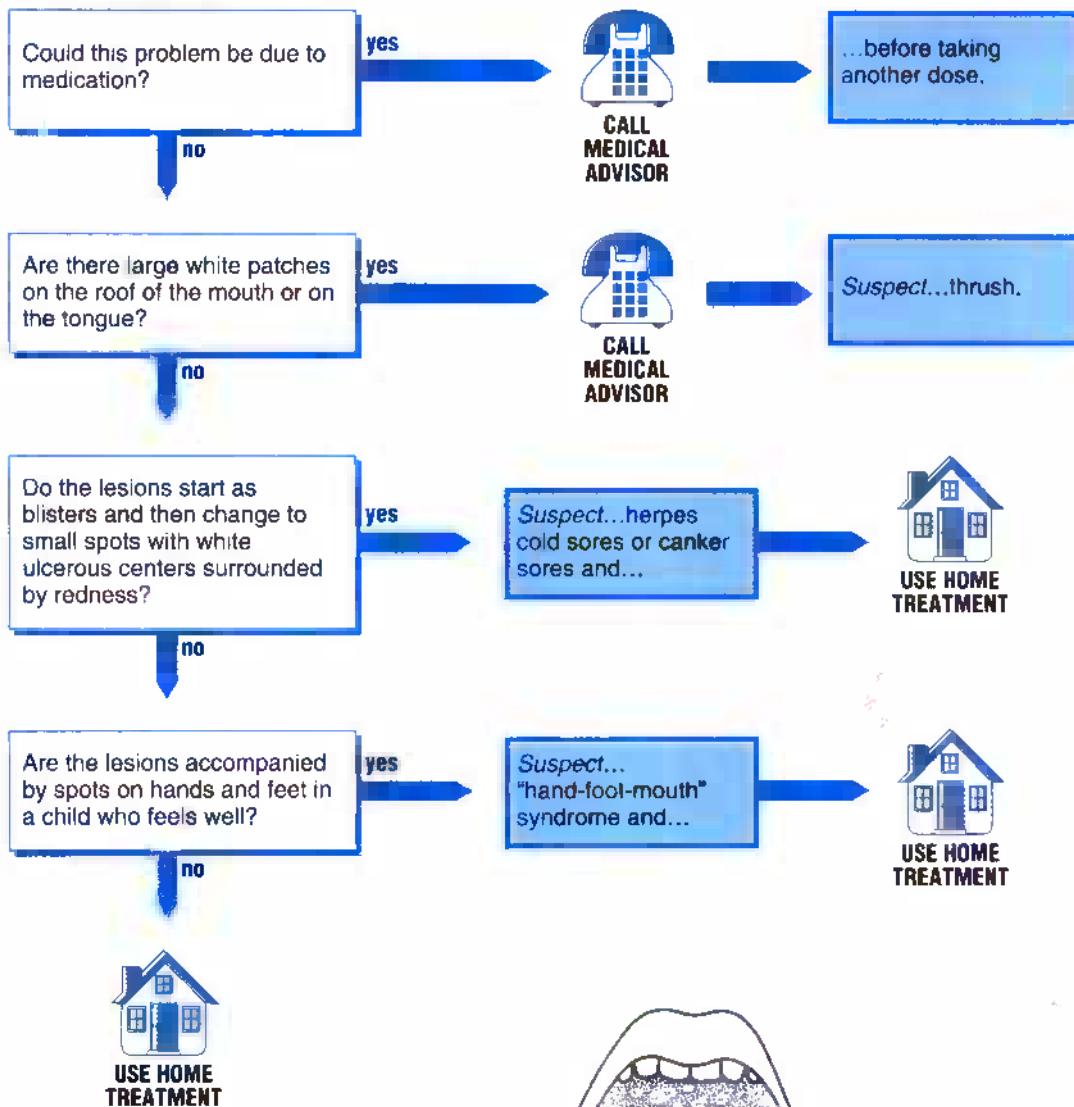
Children will seldom want to eat when they have painful mouth lesions. Although children can go several days without taking solid foods, it is very important that they maintain an adequate liquid diet. Cold liquids are the most soothing, and Popsicles or iced frozen juices are often helpful.

For sores inside the lip and on the gums, a nonprescription preparation called Orabase may be applied for protection. For canker sores and fever blisters, one of the phenol and camphor preparations (Blistex, Campho-Phenique, etc.) may provide relief, especially if applied early. If one of these preparations appears to cause further irritation, discontinue its use.

Mouth sores usually resolve in one to two weeks. Any sore that persists beyond three weeks should be examined by the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A thorough examination of the mouth will be carried out. A prescription will usually be given for thrush. For viral infections, doctors have no more to offer than home remedies. We caution against the use of oral anesthetics, such as viscous Xylocaine, for children. This anesthetic can interfere with proper swallowing and can lead to inhalation of food into the lungs.

MOUTH SORES

Thrush. Suspect thrush if there are large white patches on the roof of the mouth or on the tongue.

Toothaches

A toothache is often the sad result of poor dental hygiene. Although resistance to tooth decay is partly inherited, the majority of dental problems are preventable through flossing, brushing with a fluoride toothpaste, and professional cleaning. Sealants and fluoride applications by the dentist may be especially important for children.

Certainly, if you can see a decayed tooth or an area of redness surrounding a tooth, a diseased tooth is most likely the cause of pain. Tapping an infected tooth will often accentuate the pain, even though the tooth appears normal.

If the person appears ill, has a fever, and has swelling of the jaw or redness surrounding the tooth, a tooth abscess—a pocket of pus inside the gum—is likely. The person will need antibiotics in addition to proper dental care.

Other Possibilities

Occasionally it is difficult to distinguish a toothache from other sources of pain. Earaches, sore throats, mumps, sinusitis, and

injury to the joint that attaches the jaw to the skull (temporomandibular joint, or TMJ) may all be confused with a toothache. A call to the doctor may clarify the situation.

If pain occurs every time the patient opens his or her mouth wide, it is likely that the joint of the jaw has been injured. This can occur from a blow or just by trying to eat too big a sandwich. A call to the doctor will help you decide what, if anything, should be done.

HOME TREATMENT

Acetaminophen, aspirin, ibuprofen, or naproxen may be used for pain when a toothache is suspected and while the dental appointment is being arranged. They are also helpful for problems in the joint of the jaw. We recommend acetaminophen for children and teenagers.

WHAT TO EXPECT AT THE DENTIST'S OFFICE

The dentist will fill cavities, extract teeth, or do other procedures. For problems with baby teeth, an extraction will be the most likely course. Root canals are generally performed on permanent teeth if the problem is severe. If there is fever or swelling of the jaw, the dentist will usually prescribe an antibiotic.

TOOTHACHES

Are any of the following present?

- Fever
- Earache
- Pain upon opening the mouth wide

yes



CALL
MEDICAL
ADVISOR

no

See
dentist
today

CHAPTER 6

Skin Problems

APPROACHING SKIN PROBLEMS

Skin problems must be approached somewhat differently from other medical problems. Decision charts that proceed from complaints such as "red bumps" are complicated and somewhat unsatisfactory, because most people, including doctors, identify skin diseases by recognizing a particular pattern. This pattern is composed of not only what the skin problem looks like at a particular time but also how it began, where it spread, and whether it is associated with other symptoms such as itching or fever. Also important are elements of the medical history that may suggest an illness to which the patient has been exposed.

Fortunately, many times the patient already has a good idea how the problem developed, and it is possible to proceed immediately with the question of whether this is poison ivy, ringworm, or something else.

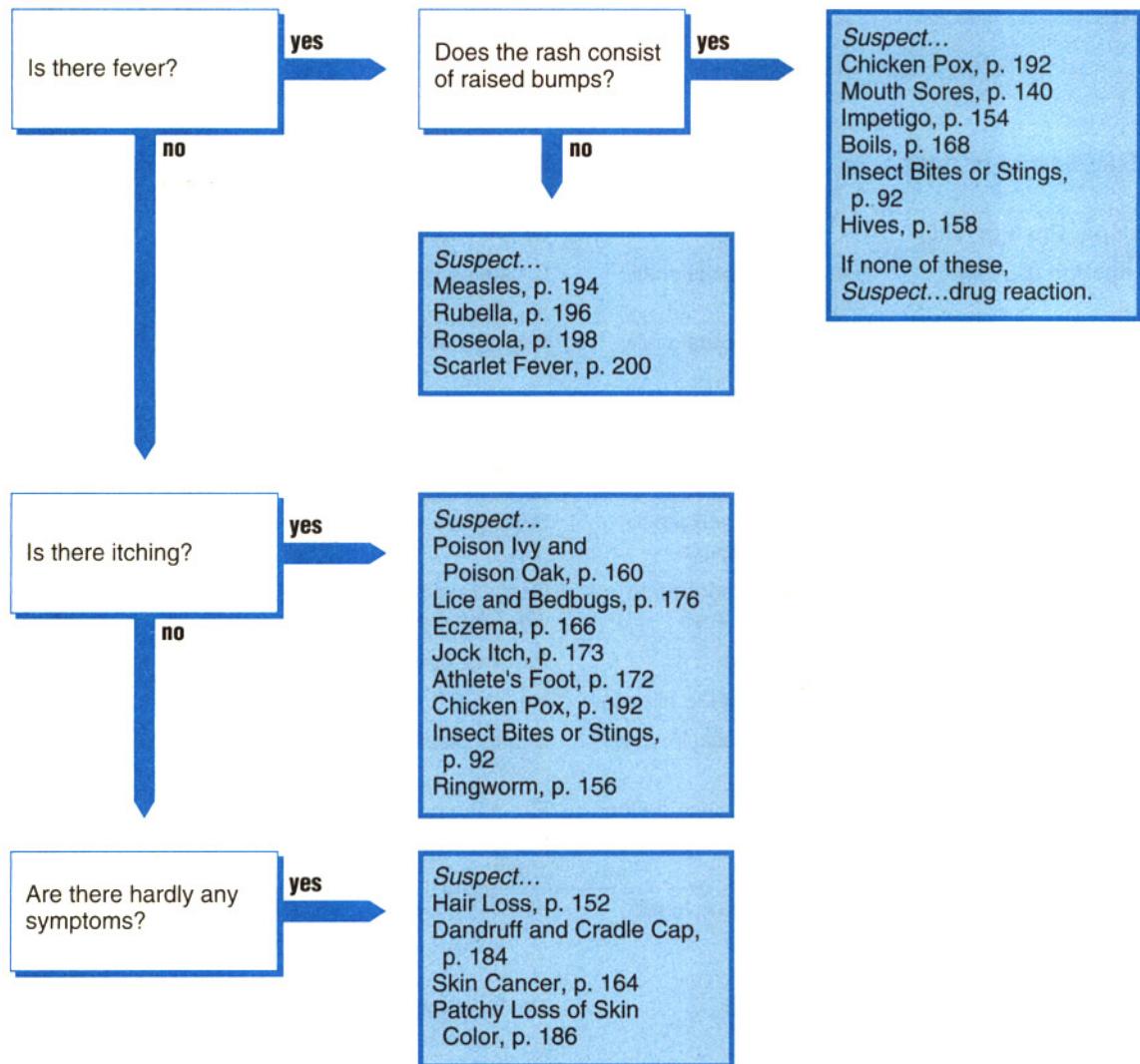
The decision chart for each section in this chapter begins with the question of whether the problem follows the pattern for the skin disease being discussed. (A longer description of the pattern is given in the text that accompanies each decision chart.) If it doesn't, the chart often directs you to reconsider the problem and to consult Table 7 on pages 146-147.

Most cases of a particular skin disease do not look exactly as a textbook says they should. We have tried to allow for a reasonable amount of variation in the descriptions. Don't be afraid to ask for other opinions. Grandparents and others have seen a lot of

skin problems over the years and know what they look like. We have listed some of the more common problems, but by no means all. If your problem doesn't seem to fit any of the descriptions and you think the problem could be serious, call the doctor.

Finally, because every case is at least a little bit different, even the best doctors won't be able to identify all skin problems immediately. Simple office laboratory methods can help sort out the possibilities. Fortunately, the vast majority of skin problems are minor, get better by themselves, and pose no major threat to health. Usually it is reasonable for you to wait quite some time to see if the problem goes away by itself.

If you are confused about where to start, we have provided a decision chart on the facing page to help point you in the right direction. This chart and Table 7 on pages 146-147 allow you to quickly review the major symptoms of common skin problems.

SKIN PROBLEMS

SKIN PROBLEMS

TABLE 7 *Skin Problems and Childhood Diseases Table*

| | <i>Fever</i> | <i>Itching</i> | <i>Elevation</i> | <i>Color</i> |
|--|--------------|-------------------------------|---|--|
| Baby Rashes (p. 148) | No | Sometimes | Slightly raised dots | White or red dots; surrounding skin may be red |
| Diaper Rash (p. 150) | No | No | Only if infected | Red |
| Impetigo (p. 154) | Sometimes | Occasionally | Crusts on sores | Golden crusts on red sores |
| Ringworm (p. 156) | No | Occasionally | Slightly raised rings | Red |
| Hives (p. 158) | No | Intense | Raised with flat tops | Pale raised lesions surrounded by red |
| Poison Ivy (p. 160) | No | Intense | Blisters are elevated | Red |
| Rashes Caused by Chemicals (p. 162) | No | Moderate to intense | Sometimes blisters | Red |
| Eczema (p. 166) | No | Moderate to intense | Occasional blisters when infected | Red |
| Acne (p. 170) | No | No | Pimples, cysts | Red |
| Athlete's Foot (p. 172) | No | Mild to intense | No | Colorless to red |
| Dandruff and Cradle Cap (p. 184) | No | Occasionally | Some crusting | White to yellow to red |
| Chicken Pox (p. 192) | Yes | Intense during pustular stage | Flat, then raised, then blisters, then crusts | Red |
| Measles (p. 194) | Yes | None to mild | Flat | Pink, then red |
| Rubella (p. 196) | Yes | No | Flat or slightly raised | Red |
| Roseola (p. 198) | Yes | No | Flat, occasionally with a few bumps | Pink |
| Scarlet Fever (p. 200) | Yes | No | Flat, feels like sandpaper | Red |
| Fifth Disease (p. 202) | No | No | Flat, lacy appearance | Red |

TABLE 7

Skin Problems and Childhood Diseases Table

| | <i>Location</i> | <i>Duration of Problem</i> | <i>Other Symptoms</i> |
|--|---|------------------------------------|---|
| Baby Rashes (p. 148) | Trunk, neck, skin folds on arms and legs | Until controlled | |
| Diaper Rash (p. 150) | Under diaper | Until controlled | |
| Impetigo (p. 154) | Arms, legs, face first, then most of body | Until controlled | |
| Ringworm (p. 156) | Anywhere, including scalp and nails | Until controlled | Flaking or scaling |
| Hives (p. 158) | Anywhere | | Minutes to days |
| Poison Ivy (p. 160) | Exposed areas | 7 to 14 days | Oozing; some swelling |
| Rashes Caused by Chemicals (p. 162) | Areas exposed to chemicals | Until exposure to chemical stopped | Some oozing and/or swelling |
| Eczema (p. 166) | Elbows, wrists, knees, cheeks | Until controlled | Moist; oozing |
| Acne (p. 170) | Face, back, chest | Until controlled | Blackheads |
| Athlete's Foot (p. 172) | Between toes | Until controlled | Cracks; scaling; oozing blisters |
| Dandruff and Cradle Cap (p. 184) | Scalp, eyebrows, behind ears, groin | Until controlled | Fine, oily scales |
| Chicken Pox (p. 192) | May start anywhere; most prominent on trunk and face | 4 to 10 days | Lesions progress from flat to tiny blisters, then become crusted |
| Measles (p. 194) | First face, then chest and abdomen, then arms and legs | 4 to 7 days | Preceded by fever, cough, red eyes |
| Rubella (p. 196) | First face, then trunk, then extremities | 2 to 4 days | Swollen glands behind ears; occasional joint pains in older children and adults |
| Roseola (p. 198) | First trunk, then arms and neck; very little on face and legs | 1 to 2 days | High fever for 3 days that disappears with rash |
| Scarlet Fever (p. 200) | First face, then elbows; spreads rapidly to entire body in 24 hours | 5 to 7 days | Sore throat; skin peeling afterward, especially palms |
| Fifth Disease (p. 202) | First face, then arms and legs, then rest of body | 3 to 7 days | "Slapped-cheek" appearance, rash comes and goes |

Baby Rashes

The skin of the newborn child may exhibit a wide variety of bumps and blotches. Fortunately almost all of these are harmless and clear up by themselves. Only one, heat rash, requires any treatment. If the baby was delivered in a hospital, many of these conditions may occur before discharge so that advice will be readily available from nurses or doctors.

Heat Rash

Heat rash is caused by blockage of the pores that lead to the sweat glands. It actually can occur at any age but is most common in the very young child whose sweat glands are still developing. When heat and humidity rise, these glands attempt to secrete sweat as they would normally. But because of the blockage, sweat is held within the skin and forms little red bumps. It is also known as "prickly heat" or "miliaria."

Milia

The little white bumps of milia appear when too many normal skin cells accumulate in spots. As many as 40% of children have these bumps at birth. Eventually the bumps break open, the trapped material escapes, and the bumps disappear without treatment.

Erythema Toxicum

Erythema toxicum is an unnecessarily long and frightening term for the flat red splotches that appear in up to 50% of all babies. These seldom appear after five days of age and usually disappear by seven days. Children who exhibit these splotches are otherwise normal.

Acne

Because the baby is exposed to the mother's adult hormones, a mild case of acne may develop. (The little white dots often seen on a newborn's nose represent "sebaceous gland hyperplasia," an excess amount of normal skin oil that has been produced by the hormones.) Acne usually becomes evident at between two and four weeks of age and clears up within six months to a year. It virtually never requires treatment.

HOME TREATMENT

Heat Rash

Heat rash is effectively treated simply by providing a cooler and less humid environment. Powders carefully applied do no harm but are unlikely to help. Avoid ointments and creams because they tend to keep the skin warmer and block the pores.

Milia, Erythema Toxicum, and Acne

Milia and erythema toxicum should require no treatment and will go away by themselves.

Acne in babies should not be treated with the medicines used by adolescents and adults. Normal washing is usually all that is required.

These problems are not associated with fever and, with the exception of minor discomfort in heat rash, should be painless. If any questions arise about these conditions, a telephone call to the doctor's office will often provide answers.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Discussion of these problems can usually wait until the regularly scheduled well-baby visit. The doctor then can confirm your diagnosis.

BABY RASHES

Are these small white bumps scattered over the forehead, nose, and cheeks?

yes

*Suspect...
milia and...*



...for milia.

**USE HOME
TREATMENT**

Are these small red bumps in skin folds, especially on the neck and upper chest?

yes

*Suspect...
heat rash
and...*



...for heat rash.

**USE HOME
TREATMENT**

Are these red splotches on the chest, back, face, and extremities appearing before 5 days of age?

yes

*Suspect...
erythema
toxicum and...*



...for erythema
toxicum.

**USE HOME
TREATMENT**

Does this appear to be acne on the forehead, cheeks, and chin appearing at 2 to 4 weeks of age?

yes

*Suspect...
acne and...*



...for acne

**USE HOME
TREATMENT**

*Suspect...
problem other
than those listed.
Call physician.*

Diaper Rash

The only children who never have diaper rash are those who never wear diapers. An infant's skin is particularly sensitive and likely to develop diaper rash. Diaper rash is basically an irritation caused by dampness and the interaction of urine, feces, and skin. An additional factor is thought to be the ammonia produced from urine, and often its odor is unmistakably present. Factors that tend to keep the baby's skin wet and exposed to the irritant promote diaper rash. These are:

- Constantly wet or infrequently changed diapers
- Using plastic pants

For the most part, treatment consists of reversing these factors.

The irritation of simple diaper rash may become complicated by an infection due to yeast (*candida*) or bacteria. When yeast is the culprit, small red spots may be seen. Also, small patches of the rash may appear outside the area covered by the diaper, as far away as the chest. Infection with bacteria leads to development of large fluid-filled blisters. If the rash is worse in the skin creases (a condition called intertrigo), a mild underlying skin problem known as seborrhea may be present. This skin condition is also responsible for dandruff and cradle cap (page 184).

Occasionally parents may notice blood or what appears to be blood spots when boys have diaper rash. This is due to a rash at the urinary opening at the end of the penis. This problem will clear up with the diaper rash.

HOME TREATMENT

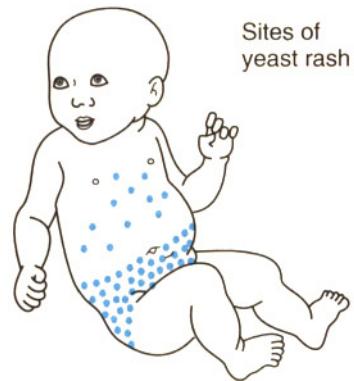
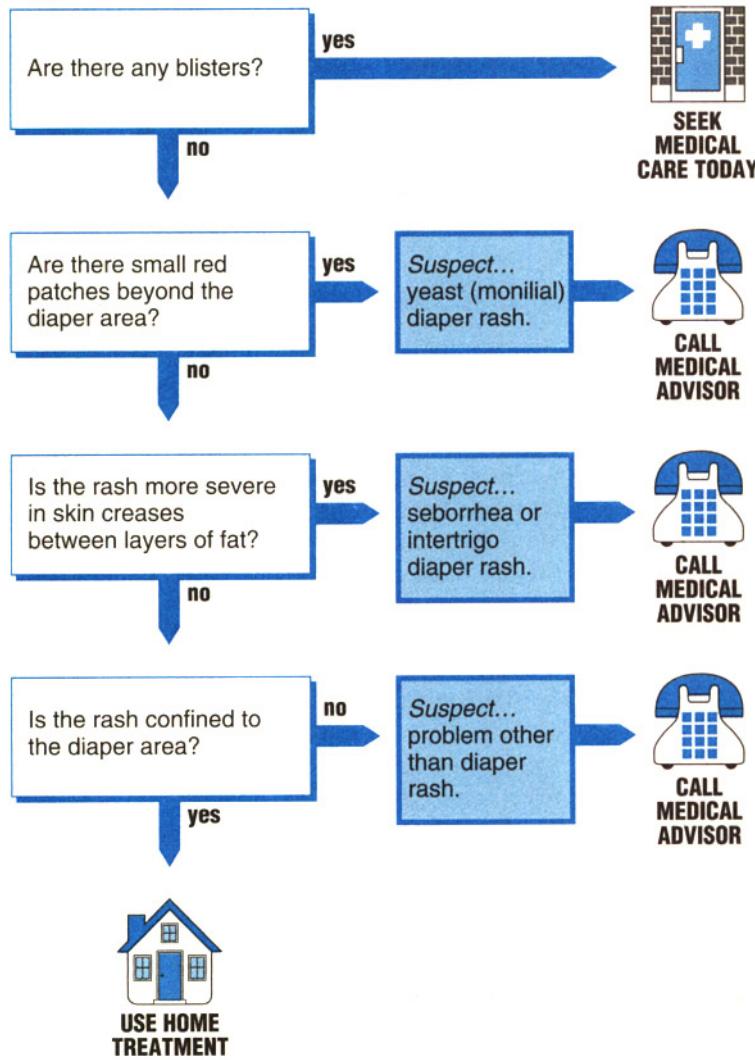
Treatment of diaper rash is aimed at keeping the skin dry and exposed to air. As implied above, the first things to do are change diapers frequently and stop using plastic pants. Leaving diapers off altogether for as long as possible will also help. Cloth diapers should be washed in a mild soap and rinsed thoroughly. Occasionally the soap residues left in diapers will act as an irritant. Adding a half cup (120 ml) of vinegar to the last rinse cycle may help counter the irritating ammonia.

While the rash will take at least several days to completely clear, you should see definite improvement within the first 48 to 72 hours. If the rash does not start clearing up by that time or if it is extraordinarily severe, consult your doctor.

To prevent diaper rash, some parents use zinc oxide ointments, petroleum jelly, or other protective ointments. Others use baby powders. (**Caution:** Talc dust can injure babies' lungs if they breathe it in.) Always place powder in your hand first and then pat on the baby's bottom. Caldesene powder is helpful in preventing seborrhea and monilial rashes. We do not feel that all babies need powders and creams. If a rash has begun, avoid ointments and creams because they may delay healing.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

All of the baby's skin should be inspected to determine the true extent of the rash. Occasionally a scraping from the involved skin will be examined under the microscope. If a yeast (monilial) infection has complicated a simple diaper rash, the doctor will prescribe home treatment plus a medication to kill the yeast. If a bacterial infection has occurred, then an antibiotic to be taken orally will be

DIAPER RASH

Sites of yeast rash



Sites of seborrhea rash

recommended. If the rash is very severe or seborrhea is suspected, then a steroid cream (sometimes stronger than the 1% hydrocortisone available without prescription) may be advised. In any case, home therapy may be safely started before seeing the doctor.

Hair Loss

This section is not about the normal hair loss that most men and many women experience as they get older. (See Aging Spots, Wrinkles, and Baldness, page 188.) Baldness isn't the only kind of hair loss.

Sometimes all the hair in one small area is lost, but the scalp is normal. This problem is called alopecia areata, and its cause is unknown. Usually the hair will come back completely within 12 months, although about 40% of patients will have a similar loss within the next four to five years. This problem also resolves by itself. Corticosteroid (cortisone) creams will make the hair grow back faster, but the new hair falls out again when the treatment is stopped, so these creams are of little use.

Hair loss that may require a doctor's treatment is characterized by abnormalities in the scalp skin or the hairs themselves. The most frequent problem in this category is ringworm (page 156). Ringworm may be red and scaly, or there may be oozing pustules. The ringworm fungus infects the hairs so they become thickened and break easily. Whenever the scalp skin or hairs appear abnormal, the doctor may be able to help.

Hair pulling by children is often responsible for hair loss. Tight braids or ponytails may also cause some hair loss. If a child constantly pulls out his or her hair, you should discuss the problem with a doctor.

HOME TREATMENT

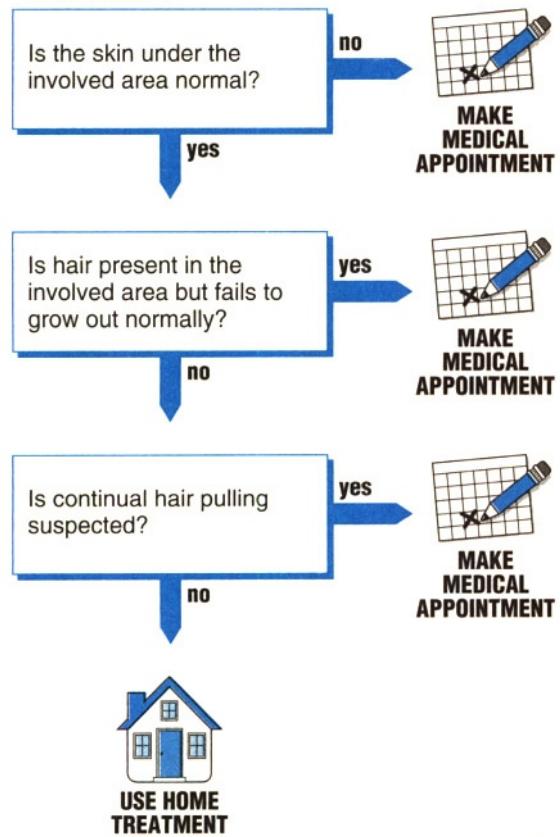
In this instance, home treatment is reserved for presumed alopecia areata and consists of watchful waiting. The skin in the area involved must be completely normal for a diagnosis of alopecia areata. If the appearance of scalp or hairs becomes abnormal, the doctor should be consulted.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

An examination of the hair and scalp is usually sufficient to determine the nature of the problem. Occasionally the hairs may be examined under the microscope. Certain types of ringworm of the scalp can be identified because they fluoresce (glow) under an ultraviolet lamp. Ringworm of the scalp will require the use of an oral drug, griseofulvin, because creams and lotions applied to the affected area won't penetrate the hair follicles to kill the fungus.

We hope that no doctor would recommend the use of X-rays today as some did decades ago. If an X-ray is offered, you should flatly reject it and find another doctor.

There has been much discussion about medical treatments to prevent baldness. Hair transplants can help in some instances but are usually not fully satisfactory. The creams (minoxidil) work only a little and only early on; a lot of people are disappointed by this treatment.

HAIR LOSS

Impetigo

Impetigo can be recognized by the characteristic rash that begins as small red spots and progresses to tiny blisters that eventually rupture, producing an oozing, sticky, honey-colored crust. This rash usually spreads very quickly with scratching and is particularly troublesome in the summer, especially in warm, moist climates.

Impetigo is a skin infection caused by streptococcal bacteria; occasionally other bacteria may also be found. If it spreads, impetigo can be a very uncomfortable problem. There is usually a great deal of itching. After the sores heal, there may be a slight decrease in skin color at the site. Skin color usually returns to normal, so this need not concern you.

Complication in the Kidneys

Of greatest concern is a rare reaction to streptococcal infection, a kidney problem known as glomerulonephritis. Glomerulonephritis will cause the urine to turn a dark brown (cola) color and is often accompanied by headache and elevated blood pressure. Although this complication has a formidable name it is short-lived and heals completely in most people.

Unfortunately, antibiotics won't prevent glomerulonephritis but may help prevent the impetigo from spreading to other people, thus protecting them from both conditions. Antibiotics are effective in healing the impetigo.

Although there is some debate on this matter, many doctors believe that if only one or two lesions are present and the lesions are not progressing, home treatment may be used

for impetigo. The exception to this rule is if an epidemic of glomerulonephritis is occurring within your community.

HOME TREATMENT

Crusts may be soaked off with either warm water or Burow's solution (Domeboro, Bluboro, etc.). Antibiotic ointments often are no more effective than soap and water. The lesions should be scrubbed with soap and water after the crusts have been soaked off. An antibiotic ointment (Bacitracin, Neosporin, etc.) may prevent the spread of impetigo to others. If lesions do not show prompt improvement or if they seem to be spreading, see the doctor without delay.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

After examining the sores and taking an appropriate medical history, the doctor will usually prescribe an antibiotic to be taken by mouth. The drug of choice is penicillin unless there is penicillin allergy, in which case erythromycin is usually prescribed. Some doctors may check the blood pressure or urine in order to look for early signs of glomerulonephritis.

IMPETIGO

Does the person have small, crusted, yellow sores with or without a tiny surrounding area of redness?

no

Suspect...
problem other
than impetigo.
Check Table 7
on pages
146–147.

yes

Has anyone in your family or neighborhood had glomerulonephritis recently?

yes



no

Is there fever?

yes



no

Are there only 1 or 2 lesions?

no



yes

Are the lesions healing and not spreading to other family members?

no



yes



USE HOME TREATMENT

Ringworm

Worms have nothing whatsoever to do with this condition. Ringworm is a shallow fungal infection of the skin. The designation "ringworm" is derived from the characteristic red ring that appears on the skin.

Ringworm can generally be recognized by its pattern of development. The lesions begin as small, round, red spots and get progressively larger. When they are about the size of a pea, the center begins to clear. When the lesions are about the size of a dime, they will have the appearance of a ring. The border will be red, elevated, and scaly. Often there are groups of infections so close to one another that it is difficult to recognize them as individual rings.

Ringworm may also affect the scalp or nails. These infections are more difficult to treat but, fortunately, are not seen very often. Ringworm epidemics of the scalp were common many years ago.

Ringworm. Lesions begin as small, round, red spots. When they are about the size of a dime, they will have the appearance of a ring.

HOME TREATMENT

Tolnaftate (Tinactin, etc.), miconazole (Micatin, etc.), and clotrimazole (Lotrimin, etc.) applied to the skin are effective treatments for ringworm. They are available in cream, solution, and powder and can be purchased over the counter. Either the cream or the solution should be applied two or three times a day. Only a small amount is required for each application. Selsun Blue shampoo, applied as a cream several times a day, will often do the job and is less expensive (page 52).

Resolving this problem may take several weeks, but you should see improvement within one week. Ringworm that either shows no improvement after a week of therapy or continues to spread should be checked by a doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The diagnosis of ringworm can be confirmed by scraping the scales, soaking them in a potassium hydroxide solution, and viewing them under the microscope. Some doctors may culture the scrapings. One of two agents usually will be prescribed if home treatment has failed: haloprogin (Halotex, etc.) or ciclopirox (Loprox, etc.).

In infections involving the scalp, an ultraviolet light (called a Wood's lamp) will cause affected hairs to become fluorescent. The Wood's lamp is used to make the diagnosis; it does not treat ringworm. Ringworm of the scalp must be treated by griseofulvin, taken orally, usually for at least a month. This medication is also effective for fungal infections of the nails. Ringworm of the scalp should never be treated with X-rays.

RINGWORM

Are all of the following conditions present?

- Rash begins as a small red, colorless, or depigmented circle that becomes progressively larger.
- The circular border is elevated and perhaps scaly.
- The center of the circle begins healing as the circle becomes larger.

no

Suspect...
problem other
than ringworm.
Check Table 7
on pages
146–147.

yes

Is the scalp infected?

yes



no



**USE HOME
TREATMENT**

Hives

Hives, also called urticaria, are an allergic reaction. Unfortunately, the reaction can be to almost anything, including cold, heat, and even emotional tension. Unless you already have a good idea what is causing the hives or you have just taken a new drug, the doctor is unlikely to be able to determine the cause. Most often, searching for a cause is fruitless.

Here is a list of some of the things that are frequently mentioned as causes:

- Drugs
- Eggs
- Milk
- Wheat
- Pork
- Shellfish
- Freshwater fish
- Berries
- Cheese
- Nuts
- Pollen
- Animal dander
- Insect bites

The only sure way to know whether one of these is the culprit is to expose the patient to it. The problem with this approach is that if an allergy does exist, the allergic reaction may include not only hives but also a general reaction causing difficulty with breathing or circulation.

As indicated by the decision chart, a systemic reaction is a potentially dangerous situation, and a doctor should be consulted

immediately. This is an **emergency**. Avoid exposure to a suspected cause to see if the attacks cease. Such a test is difficult to interpret because attacks of hives are often separated by long periods of time. Actually, most people suffer only one attack, lasting from a period of minutes to weeks.

Finally, an occasional single hive on the arm or trunk is so common that it's considered normal and of no significance.

HOME TREATMENT

Determine whether there has been any pattern to the appearance of the hives. Do they appear after meals? After exposure to cold? During a particular season of the year? If there seem to be likely causes, eliminate them and see what happens.

If the reactions seem to be related to foods, an alternative is available. Lamb and rice virtually never cause allergic reactions. The person with hives may be placed on a diet consisting only of lamb and rice until completely free of hives. Foods are then added back to the diet one at a time, and the person is observed for a recurrence of hives. This is referred to as an elimination diet.

Itching may be relieved by applying cold compresses, taking acetaminophen (page 38), or trying antihistamines such as diphenhydramine or chlorpheniramine (page 44).

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If the patient is suffering a systemic reaction with difficulty breathing or dizziness, injections of adrenalin and other drugs may be given. In the more usual case of hives alone, the doctor may do two things. First, the doctor may prescribe an antihistamine or use adrenalin injections to relieve swelling and itching. Second, the doctor can review the history of

HIVES

Are both of the following conditions present?

- Raised, flat lesions surrounded by redness
- Itching

no

Suspect...
problem other than hives.
Check Table 7 on pages 146–147.

yes

Is there shortness of breath, wheezing, or dizziness?

yes



**SEEK
MEDICAL
CARE NOW**

no

Did hives appear following use of medication?

yes



**CALL
MEDICAL
ADVISOR**

...before taking another dose.

no

Is itching severe, prolonged, or accompanied by fever?

yes



**CALL
MEDICAL
ADVISOR**

no



**USE HOME
TREATMENT**

the reaction to try to find an offending agent and advise home treatment. Remember that most often the cause of hives goes undetected, and they stop occurring without any therapy.

If the problem is severe and chronic, the doctor may prescribe strong medicines such as corticosteroids (prednisone), but only very rarely is this required. If the problem is severe or systemic, the doctor may prescribe an emergency kit so that you can inject yourself if you have another attack.

Poison Ivy and Poison Oak

Poison ivy and poison oak need little introduction. The itching skin lesions that follow contact with the plant oil of these and other members of the *Rhus* plant category are the most common example of a larger category of skin problems known as contact dermatitis. Contact dermatitis simply means that something that has touched the skin has caused the skin to react. An initial exposure is necessary to "sensitize" the person; a subsequent exposure will result in an allergic reaction if the plant oil remains in contact with skin for several hours. The resulting rash begins after a delay of 12 to 48 hours and persists for about two weeks.

You do not have to come into direct contact with plants to get poison ivy. The plant oil may be spread by pets, contaminated clothing, or the smoke from burning *Rhus* plants. It can occur during any season.

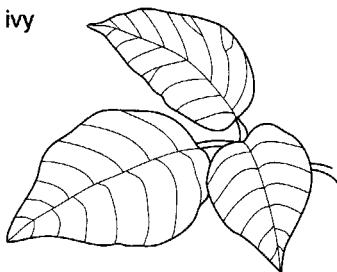
HOME TREATMENT

The best approach is learning to recognize and avoid these plants, which are hazardous even in the winter when they have dropped their leaves.

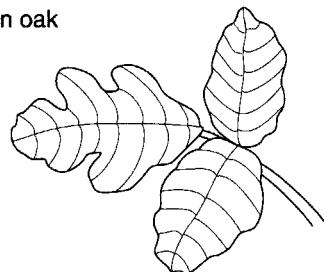
Next best is to remove the plant oil from the skin as soon as possible. If the oil has been on the skin for less than six hours, thorough cleansing with ordinary soap, repeated three times, will often prevent a reaction. Alcohol-based cleansing tissues, available in prepackaged form (such as Alco-wipes), are much more effective. Rubbing alcohol on a washcloth is even better and is our favorite remedy. Recently a new solvent (Tecnu) has been shown to be effective in removing the oil and preventing the rash. Rubbing alcohol is a lot less expensive, however.

To relieve itching, many doctors recommend cool compresses of Burow's solution (Domeboro, BurVeen, Bluboro) or baths with Aveeno or oatmeal (one cup to a tub full of water). Acetaminophen, aspirin, ibuprofen, and naproxen are also effective in reducing itching. The old standby, calamine lotion, sometimes helps for early lesions but may spread the plant oil. (Caution: Caladryl and

Poison ivy



Poison oak



POISON IVY

Are all of the following conditions present?

- Itching
- Redness, minor swelling, blisters, or oozing
- Probable exposure to poison ivy, poison oak, or poison sumac

no

Suspect...
problem other
than poison ivy
or poison oak.
Check Table 7
on pages
146–147.

yes



**USE HOME
TREATMENT**

The itching may be treated with either an antihistamine (Benadryl or Vistaril, for example) or acetaminophen, aspirin, ibuprofen, and naproxen (page 38). The antihistamines may cause drowsiness and interfere with sleep (page 44).

One-half percent hydrocortisone creams (Cortaid or Lanacort, for example) are available without a prescription. They will decrease inflammation and itching, but relief is not immediate. The cream must be applied often (four to six times a day). Do not use these creams for more than a week or two (page 52).

Poison ivy and poison oak will persist for the same length of time with or without medication. If secondary bacterial infection occurs, healing will be delayed; hence, scratching is not helpful. (Just in case you can't avoid the urge to scratch, cut your nails to avoid damage to the skin.)

Poison ivy is not contagious. It can't be spread once the oil has been either absorbed by the skin or removed.

If the lesions are too extensive to be easily treated, if home treatment is ineffective, or if the itching is so severe that it can't be tolerated, a call to the doctor may be necessary.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

After a history and physical examination, the doctor may prescribe a corticosteroid cream stronger than 1.0% hydrocortisone to be applied to the lesions four to six times a day. This often helps only moderately. An alternative is to give a steroid (such as prednisone) by mouth for a short period. A rather large dose is given the first day, and the dose is then gradually reduced. We don't recommend oral steroids except when there have been previous severe reactions or extensive exposure to poison ivy or poison oak.

Ziradryl are reported to cause allergic reactions in some people. Plain calamine lotion may be best.) Be sure to cleanse the skin, as above, even if you are too late to prevent the rash entirely.

Another method of obtaining symptomatic relief is a hot bath or shower. Heat releases histamine, the substance in skin cells that causes the intense itching. A hot shower or bath will cause intense itching as the histamine is released. The heat should be gradually increased to the maximum tolerable and continued until the itching has subsided, in just a few minutes. This process will deplete the cells of histamine, and the person will obtain up to eight hours of relief from the itching. This method has the advantage of not requiring frequent applications of ointments to the lesions and is a good way to get some sleep at night.

Rashes Caused by Chemicals

Chemicals may cause a rash in two ways. The chemical may have a direct caustic effect that irritates the skin—a minor “chemical burn.” Or, more often, the chemical may cause an allergic reaction of the skin, resulting in a rash.

The most common allergic skin irritation is poison ivy (page 160). If you see a rash that looks like poison ivy, but contact with poison ivy or poison oak seems impossible, consider other chemicals that might cause “contact dermatitis” and produce an identical rash.

The chemicals most frequently found to cause contact dermatitis are dyes and other chemicals found in clothing, chemicals used in elastic and rubber products, cosmetics, and deodorants (including “feminine” deodorants).

Usually the tip-off to the cause of the rash is its location and shape. Sometimes this is very striking, as when the rash leaves a perfect outline of a bra or the elastic bands of underwear or some other article of clothing. More often the rash is not so distinct, but its location suggests the possible cause.

HOME TREATMENT

If you have had difficulty with particular types of clothing, cosmetics, deodorants, and so on, then avoiding contact is the best way to avoid a problem. Changing brands may also help. For example, some cosmetics are

manufactured so that they are less likely to cause an allergic reaction (hypoallergenic products). Rashes caused by deodorants are often relieved by using a milder preparation less often.

Once the rash has occurred, eliminating contact with the chemical is essential. Washing thoroughly with soap and water may remove chemicals on the skin and is especially important with materials such as cement dust. Oily substances may best be removed with rubbing alcohol, or use paint thinner quickly followed by soap and water to prevent contact dermatitis from the thinner itself.

The rest of the home treatment is identical to that for poison ivy (page 160) and consists of using Burow's solution, hot water, and 0.5% hydrocortisone cream to achieve relief from itching. If the lesions are too extensive to be treated easily, if home treatment is ineffective, or if the itching is so severe that it can't be tolerated, a call to the doctor may be necessary.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the rash. A review of the patient's history will focus on possible exposure to substances such as those mentioned above. A corticosteroid cream stronger than 0.5% hydrocortisone may be prescribed. Another alternative is to give a corticosteroid (such as prednisone) for a short time; a rather large dose is given the first day, and the dose is then gradually reduced.

Itching may be treated with either an antihistamine (Benadryl, Vistaril, etc.—see page 44) and/or pain relievers (acetaminophen, aspirin, ibuprofen, or naproxen—see page 38). Antihistamines may cause drowsiness or interfere with sleep.

RASHES CAUSED BY CHEMICALS

Is this a red rash (sometimes with bumps or blisters and usually itchy or burning) that by its shape and location suggests contact with articles of clothing, cosmetics, deodorant, or other chemicals?

no

Suspect...
problem other
than contact
dermatitis.
Check Table 7
on pages
146–147.

yes



USE HOME
TREATMENT

Skin Cancer

There is no easy, sure way to identify skin cancer. The guidelines here are those that doctors use in confronting this dilemma. When in doubt, they will remove the lesion for testing (biopsy). You can do no better, so when in doubt, see a doctor.

Decisions will be easier if you are familiar with common noncancerous skin lesions:

- Plain old freckles (flat, uniform, tan to dark brown color, regular border, usually less than one-quarter inch, or 6 mm, in diameter)
- Warts (skin-colored, raised, rounded, rough or flat surface)
- Skin tags (wobbly tags of skin on a stalk)
- Seborrheic keratoses (greasy, dirty tan to brown, raised, flat lesions that first appear in midlife on face, chest, and back and increase in number with the passing years)

Types of Skin Cancer

The vast majority of skin cancers fall into three categories.

Malignant Melanoma. Malignant melanoma is by far the most dangerous. Though described as moles that have undergone cancerous change, melanomas often do not look like moles—they may be flat.

Doctors look for three characteristics in judging the likelihood of a melanoma:

- Changes in size, color, surface, shape, or border appear. The more rapid, unusual, and irregular these changes are, the higher suspicion is raised.

- Variation in color (tans, browns, or blacks) is unusual for a benign lesion. Hues of red, white, and blue may signal melanomas.
- An irregular border suggests the spread of abnormal cells; a benign lesion usually has a regular border.

Squamous Cell Cancers. Squamous cell cancers are raised, usually somewhat bumpy lesions with rough, scaly surfaces on a reddish base, and they often bleed. The border is usually irregular. These lesions grow slowly and usually do not spread to other parts of the body. Most often they are recognized as sores that don't heal. Solar keratoses appear similar to squamous cell carcinoma, but they are not bumps and rarely bleed. Although solar keratoses are not malignant, they are considered to be a precursor of cancer and are often treated to avoid the development of cancer.

Basal Cell Cancers. Basal cell cancers appear as pearly or waxy nodules with central depressions or craters. As this cancer enlarges, the center usually becomes more ulcerated, giving it the appearance of having been gnawed. Hence, the term "rodent ulcer" is sometimes applied. This type of cancer grows

Characteristics of skin cancer. Look for changes in size, color, surface, or border. It is not necessary for all of these characteristics to be present for a spot to be regarded as suspicious.

SKIN CANCER

Is there either of the following?

- Variation in color, especially the appearance of red, white, or blue
- Irregularity (notching, streaking) in the border

yes



no

Has there been a change in any of the following?

- Size (sudden increase in diameter)
- Color (streaking, mottling)
- Surface (irregular, ulcerated, bleeding)
- Shape (flat to raised, nodular)
- Border (notching, "leaking" of pigment)

yes



no



**USE HOME
TREATMENT**

slowly and only by direct extension so that it never spreads (metastasizes) to other organs of the body.

All these cancers are related to sun exposure. Squamous cell and basal cell cancers appear almost exclusively on the areas of skin most exposed to sun (head, neck, hands). Melanoma is also common in these areas but

WARTS

Warts can be treated successfully at home using nonprescription preparations such as Compound W and Vergo (page 53). They usually go away by themselves anyway. You should see a doctor only for plantar warts appearing on the sole of the foot (see Foot Pain, page 235).

may appear on the chest or back. Melanoma is most common in people who have had one or more severe blistering sunburns before the age of 18.

HOME TREATMENT

Home treatment consists of watchful waiting and prevention. If the lesion has none of the characteristics that raise suspicion, then closely watching for change makes sense. But if you are in doubt, see the doctor or ask questions at your next visit.

Let's face it, sun is no good for your skin. Sunscreens, hats with wide brims, long sleeves, and pants will lower the risk of skin cancer and keep your skin younger looking. Use a good sunscreen (page 53).

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Dermatologists (skin specialists) can usually offer the best advice about skin lesions. Successful treatment can be done on the initial visit and often doesn't require surgery.

A reminder: If you get one of these cancers, you are likely to get another. So, once you've had the first one cured, it is a good idea to have regular examinations to make sure that nothing new has developed. Avoid further damage to the skin from the sun.

Eczema

Eczema, or atopic dermatitis, is commonly found in people with a family history of eczema, hay fever, or asthma. As with asthma, a variety of conditions can aggravate eczema: infection, emotional stress, food allergy, and sweating.

The underlying problem is the inability of the skin to retain adequate amounts of water. The skin of people with eczema is consequently very dry, which causes the skin to itch. Most of the manifestations of eczema are a result of scratching. The scratching produces weeping, infected skin. Dried weepings lead to crusting. Sufficient scratching will produce a thickened, rough skin, which is characteristic of long-standing atopic dermatitis.

In young infants who can't scratch, the most common manifestation is red, dry, mildly scaling cheeks, caused when the child rubs them against the sheets. In infants eczema may also be found in the area where plastic pants meet the skin. The tightness of the elastic produces the characteristic red, scaling lesion. In older children it's very common for eczema to involve the area behind the knees and inside the elbows. Adults often have problems with their hands, especially if they're in frequent contact with water.

If there's a large amount of weeping or crusting, the eczema may be infected with bacteria, and a call to the doctor will most likely be required.

The course of eczema is quite variable. Some people will have only a brief, mild problem; others have mild-to-severe manifestations throughout life. Bouts of eczema are often

related to emotional factors; identifying and dealing with such emotional triggers may be the key to successful therapy.

HOME TREATMENT

Therapy is based on good skin care and, if the eczema is allergic in nature, avoiding allergens.

Try to keep the skin from becoming too dry. Frequent bathing actually makes the skin drier. Although the person will feel comfortable in the bath, the itching will become more intense afterward. Avoid bathing with soap and water because these tend to dry the skin. Instead use "nonlipid" cleansers, such as those with cetyl alcohol (Cetaphil, etc.). Use rubber gloves to protect the hands when washing dishes or the car. Freshwater or pool swimming can aggravate eczema, but ocean swimming doesn't.

Sweating aggravates eczema. Avoid over-dressing. Light night clothing is important. Cotton clothing is suggested; contact with wool and silk seems to aggravate eczema and should be avoided. Avoid synthetic fabrics that don't "breathe."

Avoid all oil or grease preparations; they clog the skin, increasing sweat retention and itching. Keep nails trimmed short to minimize the effects of scratching, especially with children.

Itching is often worse at bedtime. Acetaminophen, aspirin, ibuprofen, and naproxen are effective and inexpensive pain medications that reduce itching (page 38). Antihistamines may also reduce itching but should be used only if necessary (page 44).

Avoiding cow's milk is often suggested, particularly for children. Make sure this really works for your child before permanently changing to more expensive foods. When trying any milk-avoidance diet, make no other

ECZEMA

Are at least 2 of the following conditions present?

- Itching
- Flat red areas on cheeks, behind ears, on wrists, behind knees, or in front of elbows
- Family history of allergy

no

Suspect...
problem other
than eczema.
Check Table 7
on pages
146–147.

yes

Is there any crusting of lesions?

yes



**CALL
MEDICAL
ADVISOR**

no



**USE HOME
TREATMENT**



Sites of
eczema
rash

changes in food or other care for a full two weeks unless absolutely necessary, in order to see if it works.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

By gathering the patient's history and examination of the lesions, the doctor can determine whether the problem is eczema. If crusted or weeping lesions are present, bacterial infection is likely and an oral antibiotic will

be prescribed. There has been no benefit demonstrated from either skin testing or hyposensitization (allergy shots).

If home treatment hasn't improved the problem, the doctor may prescribe corticosteroid creams and lotions. While these are effective, they aren't curative; eczema is characterized by repeated occurrences. Furthermore, because of their potential side effects, corticosteroid creams should be used only for a short period.

Boils

A familiar term, "painful as a boil," emphasizes the severe discomfort that can arise from this common skin problem. A boil is a localized infection, usually due to staphylococcus bacteria. Often a particularly savage strain of the bacteria is responsible. When this particular germ inhabits the skin, recurrent problems with boils may persist for months or years. Often several family members will be affected at about the same time.

Boils may be single or multiple, and they may occur anywhere on the body. They range from the size of a pea to the size of a walnut or larger. The surrounding red, thickened, and tender tissue increases the problem even further. The infection begins in the tissues beneath the skin and develops into an abscess—a pocket filled with pus. Eventually the pus pocket "points" toward the skin surface and finally ruptures and drains. Then it heals.

Boils often begin as infections around hair follicles; hence the term folliculitis for minor infections. Areas under pressure (such as the buttocks) are often likely spots for boils to begin. A boil that extends into the deeper layers of the skin is called a carbuncle.

Special consideration should be given to boils on the face because they are more likely to lead to serious complicating infections.

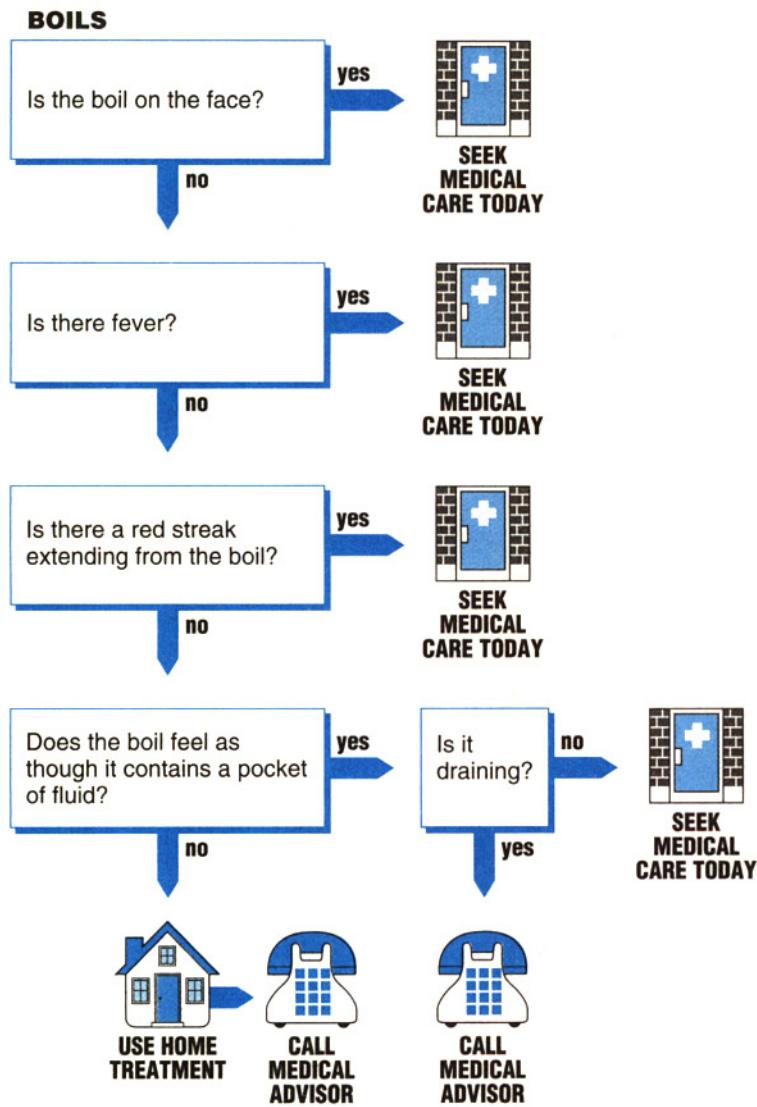
HOME TREATMENT

The goal of treatment is to let it all out—the pus, that is. Boils are handled gently, because rough treatment can force the infection deeper inside the body. Warm, moist compresses are applied gently several times each day to speed the development of a pocket of pus and to soften the skin for the eventual rupture and drainage. Once drainage begins, the compresses will help keep the opening in the skin clear. The more drainage, the better. Frequent, thorough soaping of the entire skin helps prevent reinfection. Ignore all temptation to squeeze the boil.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If there is fever or a facial boil, the doctor will usually prescribe an antibiotic. Otherwise antibiotics may not be used. They are of limited help in abscesslike infections.

If the boil feels as if fluid is contained in a pocket but has not yet drained, the doctor may lance the boil. In this procedure a small incision is made to allow the pus to drain. After drainage the pain is reduced, and healing is quite prompt. While this is not a complicated procedure, it is tricky enough that you should not attempt it yourself.



Acne

Acne is a superficial skin eruption caused by a combination of factors. It is triggered by the hormonal changes of puberty and is most common in children with oily skin. When oil plugs the openings of the hair follicles and oil glands, increased skin oils accumulate and bacteria grow. These bacteria cause changes in the oil secretions that make them irritating to the surrounding skin. The result is usually a pimple or sometimes a cyst, a larger pocket of secretions.

Blackheads are formed when air causes a chemical change—oxidation—of the plugs, called keratin plugs. Blackheads cause minimal skin irritation.

HOME TREATMENT

While excessive dirt will certainly aggravate acne, careful cleaning won't always prevent it. Nevertheless, the face should be scrubbed several times daily with a warm washcloth to remove skin oils and keratin plugs. The rubbing and heat of the washcloth help dislodge keratin plugs. Soap will help remove skin oil and will decrease the number of bacteria living on the skin. If there are pimples on the back, a backbrush or washcloth should be used. Greases and creams on the skin may aggravate the problem.

Diet isn't an important factor in most cases, but if certain foods tend to aggravate the problem, avoid them. There is little evidence that chocolate aggravates acne, despite popular belief.

Several further steps may be taken at home. An abrasive soap (Pernox, Brasivol, etc.) may be used one to three times daily to further reduce the oiliness of the skin and to remove the keratin plugs from the follicles.

Medications containing benzoyl peroxide are now widely available without a prescription. Used as directed, these are effective in mild cases.

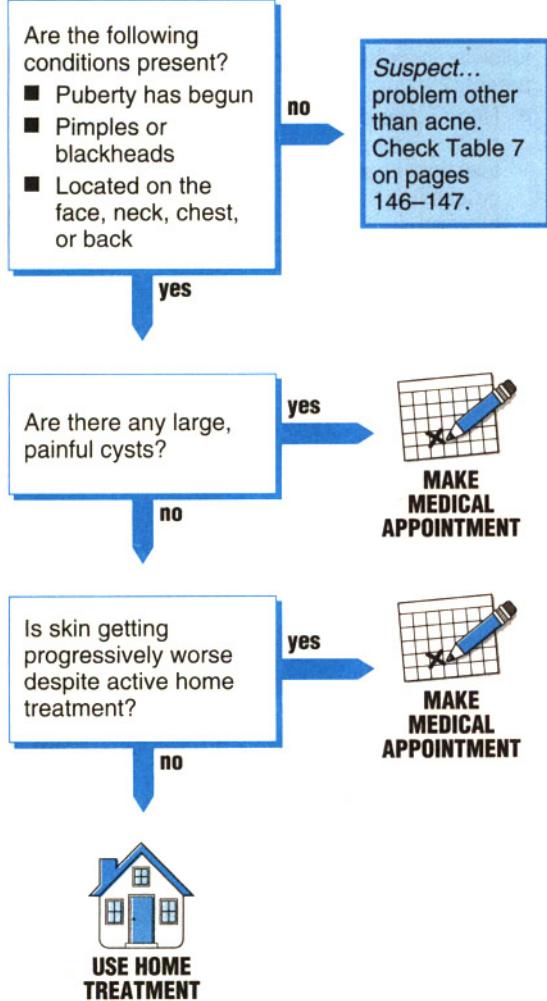
Steam may help open clogged pores, so hot compresses are sometimes helpful. Some dermatologists recommend Vlemasque as a hot drying compress. A drying agent such as Fostex may be used, but irritation may occur if it is used too often.

Should these measures fail to control the problem, make an appointment with the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will advise about hygiene and the use of medications. Topical preparations such as retinoic acid (Retin-A) and benzoyl peroxide have been found helpful; they act by fostering skin peeling or eliminating bacteria. The peeling isn't noticeable if the medication is used properly. Ultraviolet (UV) light treatments may also be helpful.

In resistant cases an antibiotic (tetracycline or erythromycin) may be prescribed to be taken by mouth. Some doctors prescribe these antibiotics for application to the skin as well. Isotretinoin (Accutane) is another drug taken by mouth that can be very helpful in severe cases of acne, but it is a powerful drug that can cause serious side effects. If taken by a pregnant woman, there is a very high risk that the baby will be harmed. Women who might be pregnant shouldn't take isotretinoin.

ACNE

“Acne surgery” is a term generally applied to the doctor’s removal of blackheads with a suction device and an eyedropper. Large developing cysts are sometimes arrested with the injection of corticosteroids. Such procedures should be required only in severe cases and are more often performed on the back than on the face.

Athlete's Foot

Athlete's foot is very common during and after adolescence, and relatively uncommon before. It is the most common of the fungal infections and is often persistent. When it involves toenails, it can be difficult to treat.

Moisture contributes significantly to the development of this problem. Some doctors believe bacteria and moisture cause most of the problem and that the fungus is responsible only for keeping things going. When many people share locker room and shower facilities, exposure to this fungus is impossible to prevent; infection is the rule rather than the exception. But you don't have to participate in sports to contract this fungus; it's all around.

HOME TREATMENT

Scrupulous hygiene, without resorting to drugs, is often effective. Twice a day, wash the space between the toes with soap, water, and a cloth. Dry the entire area carefully with a towel, particularly between the toes (despite the pain) and put on clean socks.

Use shoes that allow evaporation of moisture. Avoid shoes with plastic linings. Sandals or canvas sneakers are best. Changing shoes every other day to allow them to dry out is a good idea.

Keeping the feet dry with the use of a powder is helpful in preventing reinfection. Over-the-counter drugs such as Desenex powder or cream may be used. The powder has the virtue of helping keep the toes dry. Tolnaftate (Tinactin, etc.), miconazole (Micatin, etc.), and clotrimazole (Lotrimin, etc.) are effective (page 52). The twice-daily application

ATHLETE'S FOOT

Are both of the following conditions present?

- Redness and scaling between toes (may have cracks and small blisters)
- Itching

no

Suspect... problem other than athlete's foot. Check Table 7 on pages 146-147.

yes



USE HOME
TREATMENT

of a 30% aluminum chloride solution has been recommended for its drying and antibacterial properties. You will have to ask your pharmacist to make up the solution, but it is inexpensive.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Through history, physical examination, and, possibly, microscopic examination of a skin scraping, the doctor will establish the diagnosis. Several other problems, notably a condition called dyshydrosis, may mimic athlete's foot. Haloprogin (Halotex) and ciclopirox (Loprox) are prescription creams and ointments that work against fungal infections of the skin but not against fungal infections of nails (ciclopirox seems to work on nails occasionally). Oral drugs may be used for the nails but aren't recommended otherwise; they cure the problem only about 30% of the time.

Jock Itch

We might wish for a less picturesque name for this condition, but the medical term, *tinea cruris*, is understood by few. Jock itch is a fungal infection of the pubic region. It is aggravated by friction and moisture. It usually doesn't involve the scrotum or penis, nor does it spread beyond the groin area. (For the most part, this is a male disease.) Frequently the fungus grows in an athletic supporter turned old and moldy in a locker room far from a washing machine. The preventive measure for such a problem is obvious.

HOME TREATMENT

The problem should be treated by removing the contributing factors: friction and moisture. This is done by wearing boxer shorts rather than closer-fitting shorts or jockey briefs, by applying a powder to dry the area after bathing, and by frequently changing soiled or sweaty underclothes. It may take up to two weeks to completely clear up the problem, and it may recur. The "powder-air-and-clean-shorts" treatment will usually be successful without any medication. Tolnaftate (Tinactin, etc.), miconazole (Micatin, etc.), or clotrimazole (Lotrimin, etc.) will usually eliminate the fungus if the problem persists (page 52).

JOCK ITCH

Are all of the following conditions present?

- Involves only the groin and thighs
- Redness, oozing, or some peripheral scaling
- Itching

no

Suspect...
problem other
than jock itch.
Check Table 7
on pages
146-147.

yes



WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Occasionally a yeast infection will mimic jock itch. By examining the area and asking questions, the doctor will try to establish the diagnosis and may also make a scraping in order to identify yeast. Medicines for this problem are virtually always applied to the affected skin; oral drugs or injections are rarely used. Halopropgin (Halotex) and ciclopirox (Loprox) are prescription creams and lotions that are effective against both fungi and certain yeast infections.

Sunburn

Sunburn is common, painful, and avoidable. It is better prevented than treated. Effective sunscreens are available in a wide variety of strengths, as indicated by their sun protection factor, or SPF. An SPF of 4 offers little protection, whereas 15 or above offers substantial protection. Use a waterproof product if you are going to get wet.

Regardless of what you have heard, there are no sun rays that tan but don't burn. Tanning salons can fry you just as surely as the sun can.

The pain of sunburn is worst between 6 and 48 hours after sun exposure. Peeling of injured layers of skin occurs later—between 3 and 10 days after the burn.

Very rarely, people with sunburn have difficulty with vision. If so, they should see a doctor. Otherwise a visit to the doctor is unnecessary unless the pain is extraordinarily severe or extensive blistering (not peeling) has occurred. Blistering indicates a second-degree burn and only rarely follows sun exposure.

HOME TREATMENT

Cool compresses or cool oatmeal baths (Aveeno, etc.) may be useful. Ordinary baking soda (one-half cup to a tub) is nearly as effective. Lubricants such as Vaseline feel good to some people, but they retain heat and shouldn't be used the first day. Be careful with products that contain benzocaine. These may give temporary relief but can irritate the skin and may actually delay healing. Pain-relieving medication such as acetaminophen may ease pain and thus help the person sleep (page 38).

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will direct the history and physical examination toward determining the extent of the burn and the possibility of other heat-related injuries like sunstroke. If only first-degree burns are found, a prescription corticosteroid lotion may be prescribed. This isn't particularly beneficial. The rare second-degree burns may be treated with antibiotics in addition to analgesics (pain relievers).

FROSTBITE

Minor frostbite is surprisingly common among skiers and others indulging in winter sports. Prevention is the key. Wear warm clothing. When your torso is warm, the blood flow to the fingers and toes is better. Don't forget a face mask. Use mittens instead of gloves when it is very cold. If there is wind, be sure that you have windproof outer garments.

If your fingers or nose or toes start to hurt despite these precautions, it's a warning to get out of the cold. If they begin to numb, you are starting to get frostbite. It used to be said that you should warm up a frostbitten limb slowly. Not so. Warm it up as quickly as possible. Dip the limb in warm water—100° to 104°F (38° to 40°C)—if you can. Do not rub the affected area. As the blood flow resumes, the frostbitten part will begin to hurt, sometimes a lot. This is a good sign, since the tissues are obviously still alive.

You may have leftover numbness for several months after minor frostbite, but this doesn't require medical attention. However, if tissues turn black, see a doctor so that the threatened tissues can be preserved.

SUNBURN

Are any of these conditions present following prolonged exposure to sun?

- Fever
- Fluid-filled blisters
- Dizziness
- Visual difficulties

yes

**CALL
MEDICAL
ADVISOR**

no

**USE HOME
TREATMENT**

Lice and Bedbugs

Lice and bedbugs are found in the best of families. Lack of prejudice with respect to social class is as close as these insects come to having a virtue. At best they are a nuisance, and at worst they can cause real disability.

Lice

Lice themselves are very small and are seldom seen without the aid of a magnifying glass. Usually it is easier to find the "nits," which are clusters of louse eggs. Without magnification, nits will appear as tiny white lumps on hair strands.

The louse bite leaves only a pinpoint red spot, but scratching makes things worse. Itching and occasional small, shallow sores at the bases of hairs are clues to the disease.

Pubic lice aren't a venereal disease, although they may be spread from person to person during sexual contact. Unlike syphilis and gonorrhea, lice may be spread by toilet seats, infected linen, and other sources. Pubic lice bear some resemblance to crabs. Hence, the term "crabs" is used to indicate a lice infestation of the pubic hair. A different species of louse may inhabit the scalp or other body hair.

Lice like to be close to a warm body all the time and won't stay for long in clothing that isn't being worn, bedding, or other places.

Bedbugs

Although related to lice, bedbugs present a considerably different picture. The adult is flat, wingless, reddish in color, oval in shape,

and about one-quarter inch (6 mm) in length. Like lice, they stay alive by sucking blood. Unlike lice, they feed for only 10 to 15 minutes at a time and spend the rest of the time hiding in crevices and crannies.

Bedbugs feed almost entirely at night, because that is when bodies are in bed and because bedbugs strongly dislike light. They have such a keen sense of the nearness of a warm body that the army has used them to detect the approach of an enemy at ranges of several hundred feet! Catching these pests out in the open is very difficult and may require some curious behavior. One technique is to dash into the bedroom at bedtime, flip on the lights, and pull back the bedcovers in an effort to catch them anticipating their next meal.

The bite of the bedbug leaves a firm bump. Usually there are two or three bumps clustered together. Occasionally sensitivity develops to these bites, in which case itching may be severe and blisters may form.

HOME TREATMENT

Over-the-counter preparations are effective against lice; these include A200, Cuprex, and RID. RID has the advantage of supplying a fine-tooth comb, a rare item these days. Instructions that come with these drugs must be followed carefully. Linen and clothing must be changed simultaneously. Sexual partners should be treated at the same time.

Because bedbugs don't hide on the body or in clothes, it is the bed and the room that should be treated. Contact your local health department for information and help in doing this. Chemical sprays may be useful, but simply getting the infested bedding outdoors and exposed to sun and air for several days works too.

LICE AND BEDBUGS

Is either of the following conditions present?

- Lice seen on the skin or in clothing
- Nits seen on hair shafts

yes



no

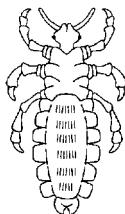
Have bedbugs been seen on or near the bed?

yes



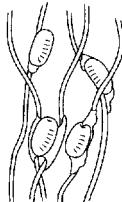
no

Consider a problem other than lice or bedbugs. Check Table 7 on pages 146–147.

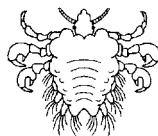


Head louse
(approx. 10x)

Head louse
(approx. size)



Louse eggs
on hair



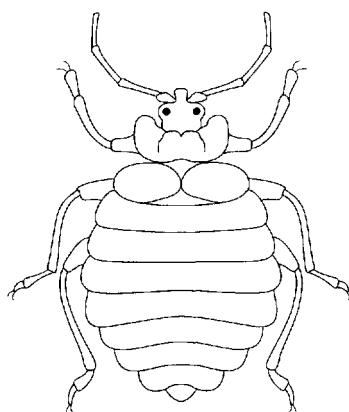
Pubic louse
(approx. 10x)

Pubic louse
(approx. size)

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If lice are the suspected problem, the doctor will make a careful inspection to find nits or the lice themselves. Doctors almost always use lindane (Kwell, Scabene) for lice. It may be somewhat more effective than the over-the-counter preparations. It is also more expensive, has more side effects, and is too strong to be used more than two times, a week apart.

The doctor will be hard-pressed to make a certain diagnosis of bedbug bites without information from you that bedbugs have been seen in the house. However, the bumps may be suggestive, and initially it may be decided to assume that the problem is bedbugs. If this is the case, treatment with an insecticide as discussed under Home Treatment will be recommended.



Bedbug
(approx. 10x)



Bedbug
(approx. size)

Ticks

Outdoor living has its dangers. While bears, mountain lions, and steep cliffs can usually be avoided, shrubs and tall grasses hide tiny insects eager for a blood meal from a passing animal or person. Ticks are the most common of these small hazards.

Ticks are about one-quarter inch (6 mm) long and are easily seen. The creature that made the tick bite can usually be found sticking out of it.

In some areas ticks carry diseases, such as Rocky Mountain spotted fever and Lyme disease. If a fever, rash, joint pains, or headache follows a tick bite by a few days or weeks, a doctor should be consulted.

If a pregnant female tick is allowed to remain feeding for several days, under certain circumstances a peculiar condition called tick paralysis may develop. The female tick secretes a toxin that can cause temporary paralysis, which clears up shortly after the tick is removed. This complication is quite rare and can happen only if the tick stays in place many days.

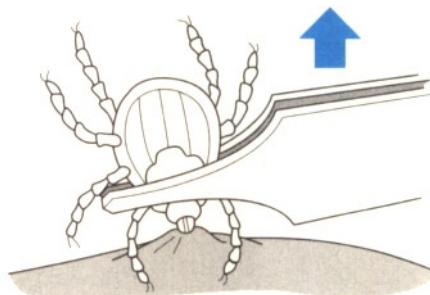
In tick-infested areas, check yourself, your children, and your pets several times a day. You may be able to catch the ticks before they become embedded.

HOME TREATMENT

Ticks should be removed, although they will eventually "fester out"; complications are unusual. The trick is to get the tick to "let go" and not to squeeze the tick before getting it out. If the mouthparts and the pincers remain

under the skin, healing may require several weeks. Rocky Mountain spotted fever and Lyme disease are somewhat more likely if mouthparts are left in or the tick is squeezed during removal. Make the tick uncomfortable. Grasp the tick with tweezers or with gloved fingers as close to the skin as possible, then pull straight out with slow, even pressure. If the head is inadvertently left under the skin, soak gently with warm water twice daily until healing is complete. Call the doctor at once if the person gets a fever, rash, or headache within three weeks.

Corticosteroid creams (Cortaid, Lanacort, etc.) may be tried but are usually not much help; don't use these creams for a long time without a doctor's advice (page 52).



Removing a tick

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor can remove the tick but can't prevent any illness that might have been transmitted. You can do just as well. Ticks are often removed from unusual places, such as arm-pits and belly buttons, but the scalp is the most common location. The technique is exactly the same no matter where the tick is.

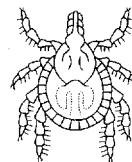
TICKS

Is or was a tick seen buried in skin or attached to skin?

no

Suspect...
problem other
than ticks.
Check Table 7
on pages
146–147.

yes



*

approx. size

Has fever, rash, joint
pains, or headache
followed a possible
tick bite by a few days
or weeks?

yes



no



Chiggers

Chiggers, like ticks, are a small hazard of nature. Anyone who grew up in areas where they are common can testify to how excruciating the itch from chiggers' bites can be.

Chiggers are small red mites, sometimes called "redbugs," that live on grasses and shrubs. Their bite contains a chemical that eats away at the skin, causing a tremendous itch. Usually the small red sores are around the belt line or other openings in clothes. Careful inspection may reveal the tiny red larvae in the center of the itching sore.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Doctors will usually prescribe lindane (Kwell, Scabene, etc.), which is perhaps somewhat more effective than A200, RID, or Cuprex but doesn't stop the itching either. Lindane is too strong to be used more than two times, a week apart.

HOME TREATMENT

Chiggers are better avoided than treated. Using insect repellents, wearing appropriate clothing, and bathing after exposure help to cut down on the frequency of bites. Once you get them, they itch, often for several weeks. Keep the sores clean and soak them with warm water twice daily. Cuprex, RID, and A200 applied immediately may help kill the larvae, but the itch will persist.

Corticosteroid creams (Cortaid, Lanacort, etc.) may be tried but are usually not much help; don't use these creams for more than a week or two without a doctor's advice (page 52).

Nail polish is said to give relief from itching, but we aren't aware of scientific evaluations of its effect.

Antihistamines (page 44) can make you drowsy and aren't often used unless intense itching persists despite home treatment with pain relievers (page 38), warm baths, oatmeal soaks (Aveeno, etc.), and calamine lotion.

CHIGGERS

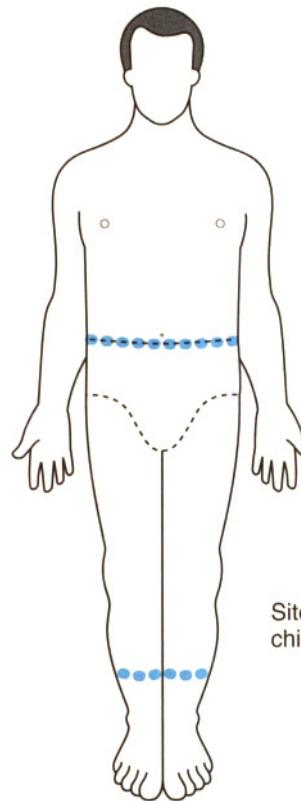
Are any of the following present?

- Itching red sores around the belt line or other opening in clothes
- Itching red sores following contact with grass or shrubs
- Small red mites seen on the skin or red spot in center of sore

no

Suspect...
problem other than chiggers.
Check Table 7
on pages
146–147.

yes



Sites of chigger bites

Scabies

Scabies is an irritation of the skin caused by a tiny mite related to the chigger. No one knows why, but scabies seems to be on the rise in this country. As with lice, it is no longer true that scabies is related to hygiene. It occurs in the best of families and in the cleanest of neighborhoods. The mite easily spreads from person to person or by contact with items such as clothing and bedding that may harbor the mite. Epidemics often spread through schools despite strict precautions against contact with known cases.

The mite burrows into the skin to lay eggs; its favorite locations are given in the decision chart. These burrows may be evident, especially at the beginning of the problem. However, the mite soon causes the skin to have a reaction so that redness, swelling, and blisters follow within a short period. Intense itching causes scratching so that there are plenty of scratch marks. These may become infected from the bacteria on the skin. Thus, the telltale burrows are often obscured by scratch marks, blisters, and secondary infection.

If you can locate something that looks like a burrow, you might be able to see the mite with the aid of a magnifying lens. This is the only way to be absolutely sure that the problem is scabies, but it is often not possible. The diagnosis is most often made based on symptoms and history that are consistent with scabies, as well as the fact that scabies is known to be in the community.

HOME TREATMENT

Benzyl benzoate (25% solution) is effective against scabies and doesn't require a prescription. Unfortunately it isn't widely available. If you are able to find it, apply it once to the entire body except for the face and around the urinary opening of the penis or the vaginal opening. Wash it off 24 hours later. This medicine does have an odor that some find unpleasant. If you can't find benzyl benzoate, you'll have to get a prescription for lindane from your doctor.

For itching, we recommend cool soaks, calamine lotion, and/or pain medicines (acetaminophen, aspirin, ibuprofen, or naproxen—see page 38). Antihistamines may help but often cause drowsiness (page 44); follow the directions on the package. As in the case of poison ivy, warmth makes the itching worse by releasing histamine, but if all the histamine is released, relief may be obtained for several hours (see Poison Ivy and Poison Oak, page 160).

It will take some time before the skin becomes normal, even with effective treatment, but at least some improvement should be noted within 72 hours. If this isn't the case, visit the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor should examine the entire skin surface for signs of the problem and may examine an area with a magnifying lens in an attempt to identify the mite. A scraping of a lesion may be taken for examination under the microscope. Most of the time the doctor will be forced to make a decision based on the probability of various kinds of diseases and

SCABIES

Are all of the following conditions present?

- Intense itching
- Raised red skin in a line (represents a burrow) and possibly blisters or pustules
- Located on the hands, especially between the fingers, in the elbow crease, armpit, groin crease, or behind the knees
- Exposure to scabies

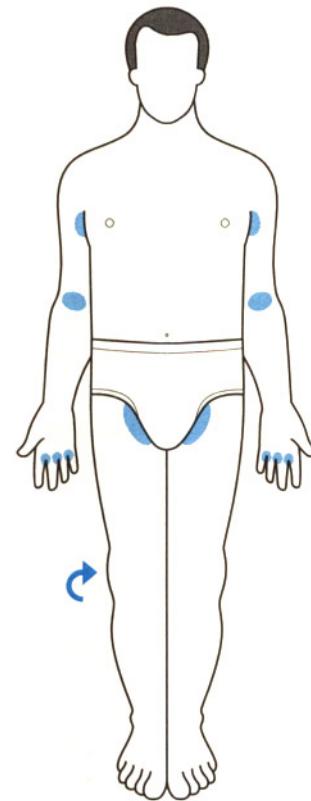
no

Suspect...
problem other
than scabies.
Check Table 7
on pages
146–147.

yes



**USE HOME
TREATMENT**



Sites of scabies bites

then treat it much as you would at home. The proof will be whether or not the treatment is successful.

Lindane (Kwell, Scabene, etc.) will often be prescribed. Because of the potency of this medication it shouldn't be used more than two times, a week apart.



Scabies mite,
greatly enlarged
(approx. size: ·)

Dandruff and Cradle Cap

Although they look different, cradle cap and dandruff are really part of the same problem; its medical term is seborrhea. Oil glands in the skin become stimulated by adult hormones, leading to oiliness and flaking of the scalp. This occurs in infants because of exposure to the mother's hormones and in older children when they begin to make their own adult hormones. The problem also occurs between infancy and puberty, and once a child has the problem, it tends to recur.

Seborrhea itself is a somewhat ugly but relatively harmless condition. However, it may make the skin more susceptible to infection with yeast or bacteria. Children with seborrhea frequently have redness and scaling of the eyebrows and behind the ears as well.

Look-alike Problems

Occasionally this condition is mistaken for ringworm of the scalp. Careful attention to the conditions listed in the decision chart will usually avoid this confusion. Remember also that ringworm would be unusual in the newborn and very young child. See Ringworm (page 156).

Another potentially confusing problem is psoriasis. This condition resembles seborrhea somewhat but often stops at the hairline. The scales of psoriasis are on top of raised lesions called "plaques," which isn't the case in seborrhea. Home treatment is unlikely to be helpful for psoriasis, so the help of a doctor is needed.

HOME TREATMENT

Many widely available antidandruff shampoos are helpful in mild to moderate cases of dandruff. For severe and more stubborn cases there are some less well-known but effective over-the-counter shampoos that contain selenium sulfide. Selsun (available by prescription only) and Selsun Blue are examples of such shampoos. Over-the-counter preparations, while weaker, are just as good if you apply them more liberally and frequently. When using these shampoos, it is important that you follow the directions carefully, because oiliness and yellowish discoloration of the hair may occur. Sebulex, Sebucare, Ionil, and DHS are effective and must be used strictly according to directions also. Unfortunately, none of these shampoos is effective at making it easier to get a date.

Cradle cap is best treated with a soft scrub brush. If it is thick, rub in warm baby oil, cover with a warm towel, and soak for 15 minutes. Use a fine-tooth comb or scrub brush to help remove the scales. Then shampoo with Sebulex or one of the other preparations listed above. Be careful to avoid getting shampoo in the eyes.

No matter what you do, the problem will often return, and you may have to repeat the treatment. If the problem gets worse despite home treatment over several weeks, see the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Severe cases of seborrhea may require more than the medications mentioned above; a cortisone cream is most often prescribed. Usually a trip to the doctor clears up any question concerning the diagnosis. The doctor generally makes the diagnosis on the basis of the appearance of the rash.

DANDRUFF

In an infant, are all of the following conditions present?

- Thick, adherent, oily, yellowish scaling or crusting patches
- Located on the scalp, behind the ears, in the eyebrows, or (less frequently) in the skin creases of the groin
- Only mild redness in involved areas

no

Suspect...
problem other than cradle cap.
Check Table 7
on pages
146–147.

In an older child (or adult), are all of the following conditions present?

- Fine, white, oily scales
- Confined to scalp and/or eyebrows
- Only mild redness in involved areas

no

Suspect...
problem other than dandruff.
Check Table 7
on pages
146–147.

yes



**USE HOME
TREATMENT**

Occasionally scrapings from the involved areas will be looked at under the microscope. Drugs by mouth or by injection aren't indicated for seborrhea unless bacterial infection has complicated the problem.

Patchy Loss of Skin Color

Seeing patches of paler skin on yourself or your child can be unnerving. Luckily, this condition is usually temporary and harmless.

Children are constantly getting minor cuts, scrapes, insect bites, and minor skin infections. During the healing process it is common for the skin to lose some of its color. With time, the skin coloring generally returns.

Occasionally ringworm, a fungal infection, will begin as a small round area of scaling with associated loss of skin color (page 156).

In the summertime, many children have small round spots on the face in which there is little color. The spots have probably been present for some time, but skin doesn't tan in these areas, thus making them visible. This condition is known as pityriasis alba. The cause is unknown, but it is a mild condition of cosmetic concern only. It may take many months to disappear and may recur, but there are virtually never any long-term effects.

If there are slightly scaly, tan, pink, or white patches on the neck or back, the problem is most likely due to a fungal infection known as tinea versicolor. This is a very minor and superficial fungal infection.

HOME TREATMENT

Waiting is the most effective home treatment for loss of skin color. Tinea versicolor can be treated by applying Selsun Blue shampoo to the affected area once every day or so until the lesions are gone.

Tolnaftate (Tinactin, etc.), miconazole (Micatin, etc.), and clotrimazole (Lotrimin, etc.) lotions or creams are also effective (page 52). Unfortunately, tinea versicolor often comes back no matter what type of treatment is used.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A history and careful examination of the skin will be performed. Scrapings of the lesions may be taken because tinea versicolor can be identified from them. Pityriasis alba should be distinguished from more severe fungal infections that may occur on the face. Again, scrapings will help to identify the fungus.

PATCHY SKIN COLOR

Are the following conditions present?

- Scaling edges
- Circular enlarging areas
- Clearing of center

yes

See:
Ringworm,
p. 156

no

Are the following conditions present?

- Lightly scaled, tan, pink, or white confluent patches
- Confined to the neck and upper back

yes

Suspect...
tinea
versicolor
and...



USE HOME
TREATMENT

no

Are the following conditions present?

- White scaly patches on face
- More noticeable with suntan
- No signs of infection (crusting, redness, oozing, or fever)

yes

Suspect...
 pityriasis
alba and...



USE HOME
TREATMENT

no

Does loss of skin color follow cut or infection?

yes



USE HOME
TREATMENT

no



CALL
MEDICAL
ADVISOR

Aging Spots, Wrinkles, and Baldness

Our aging skin presents a lot of superficial problems. The problems result from a combination of two factors:

- As we age the skin loses its elasticity. It develops more scar tissue and doesn't spring back as quickly into a smooth contour.
- Damage from the sun accumulates over a lifetime and causes additional problems in the sun-exposed areas of the body.

The aging skin lets air leak into the hair follicles so that the hair turns white. Some or all hair follicles lose the ability to produce hairs at all, and the hair thins or disappears. The loss of elasticity means that skin tends to sag, and crinkles in the face turn into deeper, fixed wrinkles.

In general, don't worry about these problems. The aging face is expressive of character. Thinning hair and baldness aren't diseases, nor are aging spots.

Aging spots are pigmentary changes in the skin without any medical significance. Some cells lose the ability to produce the pigment melanin, whereas others produce a bit too much of it. These changes can be thought of as an adult form of freckles. As such, they are flat, are uniformly brown or tan in color, and have regular borders. If they are raised, are irregular in outline, or have multiple colors in one spot (especially shades of red, white, and blue), see Skin Cancer (page 164).

HOME TREATMENT

Stay out of the sun and use a sunscreen. This is particularly important if you are fair-skinned because such skin is far more prone to sun damage. Outside of these precautions there isn't much you can do at home for these problems except not to worry about them. And that is all that is really needed.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

There are good medical approaches to these "problems," but they are entirely optional. Many people prefer their natural aging appearance to artificial cosmetic devices. Others, who can afford it, elect to fight the aging stereotype by a variety of measures that preserve a more youthful appearance. Alternatives currently available have low risk but high cost. The choices range all the way from wrinkle creams to an elaborate series of plastic surgical operations.

If you want to go the expensive route, you probably should see a dermatologist first and then, perhaps, a plastic surgeon. The dermatologist is likely to be more familiar with the effective cosmetic interventions than a family physician or internist. The dermatologist is also the key person to take care of any lumps and bumps about which you are concerned.

The most effective approaches to these conditions, among a huge variety of not-so-good treatments, are Retin-A for wrinkles and minoxidil (Rogaine) for hair growth. Retin-A is the first wrinkle cream that actually works, and minoxidil does cause new hair to grow over previously bald spots. Unfortunately, Retin-A doesn't seem to work very well with old, fixed wrinkles, it may cause heat rashes in skin exposed to the sun, and it dries the skin out. The new minoxidil hair isn't usually

AGING SPOTS

Is this spot any of the following?

- Variable in color
- Irregular in outline
- Raised

yes

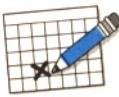
See: Skin
Cancer, p. 164

no

Are you ready to try
any of the following?

- Retin-A for wrinkles
- Minoxidil for baldness
- Plastic surgery

yes



**MAKE
MEDICAL
APPOINTMENT**

no



**USE HOME
TREATMENT**

everything that you would want; it is unusual that very much hair grows back, and the older you are, the less effective this treatment is.

Plastic Surgery

The plastic surgeon can take out wrinkles by removing skin and stretching the remaining skin tighter. Many procedures are available. Wrinkles around the eyes can be taken out, as can bags under the eyes. A full face-lift tightens the skin over the entire face. Sagging breasts can be reduced in size and lifted. Tucks can be taken in the tummy. Liposuction can remove fat, although the result is usually a little lumpy. Hair transplants can be partially effective in some people. Again, in good hands, done by a surgeon who performs the procedure often, these operations have low risk. However, they are expensive. There is pain and discomfort involved. There is an occasional serious complication. With some of the procedures you won't want to be seen in public for a week or so after the operation.

CHAPTER 7*Childhood Diseases***Mumps**

Mumps is a viral infection of the salivary glands. The major salivary glands are located directly below and in front of the ear. Before any swelling is noticeable, there may be a low fever, headache, earache, or weakness. Fever is variable. It may be only slightly above normal or as high as 104°F (40°C). After several days of these symptoms, one or both salivary glands (parotid glands) may swell.

It is sometimes difficult to distinguish mumps from swollen lymph glands in the neck (page 124). In mumps you won't be able to feel the edge of the jaw that is located beneath the ear. Chewing and swallowing



Sites of swelling in mumps

may produce pain behind the ear. Sour substances such as lemons and pickles may make the pain worse. When swelling occurs on both sides, people take on the appearance of chipmunks! Other salivary glands besides the parotid may be involved, including those under the jaw and tongue. The openings of these glands into the mouth may become red and puffy.

Approximately one-third of all patients who have mumps don't demonstrate any swelling of glands whatsoever. Therefore, many people concerned about exposure to mumps will already have had the disease without realizing it.

Mumps is quite contagious during the period from two days before the first symptoms to the complete disappearance of the parotid gland swelling, usually about a week after the swelling has begun. Mumps will develop in a susceptible exposed person approximately 16 to 18 days after exposure to the virus. In children it is generally a mild illness.

The decision chart is directed toward detection of rare complications. These include encephalitis (viral infection of the brain), pancreatitis (viral infection of the pancreas), kidney disease, deafness, and involvement of the testicles or the ovaries. Complications are more frequent in adults than in children.

HOME TREATMENT

The pain may be reduced with acetaminophen, aspirin, ibuprofen, or naproxen (page 38). (**Caution:** Aspirin or other NSAIDs never should be given to children or teenagers if the possibility of a viral infection exists.) There may be difficulty in eating, but adequate fluid intake is important. Sour foods should be avoided, including orange juice.

MUMPS

Is there lethargy, convulsions, or stiff neck?

no

yes



Are any of the following present?

- Pain and swelling of one or both testicles
- Abdominal pain and vomiting
- Dizziness and difficulty in hearing

no

yes



**USE HOME
TREATMENT**

Adults who haven't had mumps should avoid exposure to the patient until the swelling disappears completely.

Many adults who don't recall having mumps as a child may have had an extremely mild case and consequently aren't at risk of developing mumps.

If swelling hasn't gone down within three weeks, call the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If a complication is suspected, a visit to the doctor's office may be necessary. The history and physical examination will be directed at confirming the diagnosis or the presence of a complication. The rare complication of an ovarian mumps infection on the right side may be confused with appendicitis, and blood tests may be required. Because mumps is a viral disease, there is no medicine that will directly kill the virus. Supportive measures may be necessary for some of the complications. Fortunately, complications are rare, and permanent damage to hearing or other functions is unusual. Mumps very rarely produces sterility in men or women even when the testes or ovaries are involved.

Mumps vaccination is listed on page 25. Infants should be immunized at 15 months. Adolescents who have never had mumps or the immunization should be vaccinated because of the potential for testicular or ovarian inflammation.

Chicken Pox

Because chicken pox spreads quickly, and because taking aspirin during this disease is associated with Reye syndrome, it is valuable to know its signs.

Signs of Chicken Pox

Before the Rash. Occasionally there is fatigue and some fever 24 hours before.

The Rash. The typical rash goes through the following stages:

1. It appears as flat red splotches.
2. The splotches become raised and may resemble small pimples.
3. They develop into small fragile blisters, called vesicles. They may look like drops of water on a red base. The tops are easily scratched off.
4. As the vesicles break, the sores become pustular and form a crust. This is dried serum and not true pus. Itching is often severe. This stage may be reached in the first several hours of the rash.
5. The crust falls away between the ninth and thirteenth day.

The vesicles tend to appear in crops (multiple sores appearing at the same time), with two to four crops appearing within two to six days. The rashes often appear first on the scalp and then spread to the rest of the body, but they may begin anywhere. They are most numerous over the shoulders, chest, and back. They are seldom found on the palms of the hands or the soles of the feet. There may be only a few sores, or there may be hundreds.

Fever. After most of the sores have formed crusts, the fever usually subsides.

How Chicken Pox Spreads

Chicken pox spreads very easily—over 90% of brothers and sisters catch it. It may be transmitted from 24 hours before the rash up to about 6 days after. It is spread by droplets from the mouth or throat or by direct contact with contaminated articles of clothing. It isn't spread by dry scabs. The incubation period is from 14 to 17 days. Having chicken pox once leads to lifelong immunity, with rare exceptions.

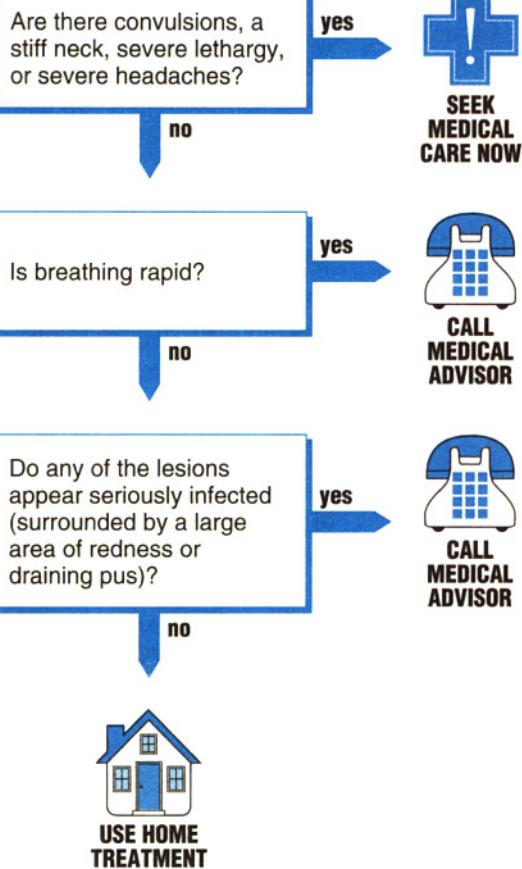
Most of the time chicken pox should be treated at home. Complications are rare. Two severe complications may require medical treatment: encephalitis (viral infection of the brain) and bacterial infection of the lesions. Encephalitis is rare.

HOME TREATMENT

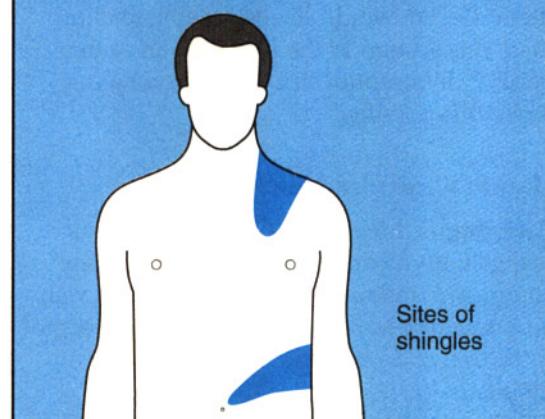
The major problems in dealing with chicken pox are control of the intense itching and reduction of the fever. Warm baths containing baking soda (one-half cup to a tubful of water) frequently help. Antihistamines may help (page 44). Acetaminophen, ibuprofen, and naproxen are effective itch relievers (page 38) for adults.

Caution: Because recent information indicates an association among aspirin, chicken pox, and a rare but serious problem of the liver and brain known as Reye syndrome, aspirin and other NSAIDs should never be given to children or teenagers who may have chicken pox or influenza.

Cut the fingernails or use gloves to prevent skin damage from intense scratching. When lesions occur in the mouth, gargling with salt water may help give comfort: add one-half teaspoon (3 ml) salt to an eight-ounce

CHICKEN POX**SHINGLES**

The same herpes virus that causes chicken pox also causes shingles, and the individual who has had chicken pox may develop shingles (herpes zoster) later in life. Shingles is usually limited to one side of the body in a broad stripe, representing the skin area of a single nerve. Because it is limited to the nerve in which the virus is living, there is seldom fever although there may be pain. Follow the same treatment as you do for chicken pox.



(150 ml) glass of water. Hands should be washed three times a day, and all of the skin should be kept gently but scrupulously clean. Scratching and infection can result in permanent scars.

If itching can't be controlled or the problem persists beyond three weeks, call the doctor. Using the phone for questions to the doctor will avoid exposing others to the disease. Call the doctor if a child has been exposed who has an immunity problem or is taking steroids, or if a woman is pregnant.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Don't be surprised if the doctor is willing and even anxious to treat the case over the phone. If it is necessary to go to the doctor's office, attempts should be made to keep the patient separate from others. In healthy children chicken pox has few lasting ill effects, but in people with other serious illnesses, it can be a devastating or even fatal disease. A visit to the doctor's office may not be necessary unless a complication seems possible.

Measles

This type of measles is also called red measles, seven-day measles, and ten-day measles, as opposed to rubella, also called German or three-day measles (page 196). It is a preventable disease but, unlike some of the other childhood illnesses, can be quite severe. It is tragic that decades after the licensing of the measles vaccine thousands of people still contract this disease annually, and some of them die. We would like to be able to eliminate this section in the next edition of this book. Only immunization of everyone can make this possible.

How to Recognize Measles

Early Signs. Measles is a viral illness that begins with fever, weakness, a dry "brassy" cough, and inflamed eyes that are itchy, red, and sensitive to light. These symptoms begin three to five days before the appearance of the rash.

Another early sign of measles is the appearance of fine white spots on a red base inside the mouth opposite the molar teeth (Koplik's spots). These fade as the skin rash appears.

The Rash. The rash begins on about the fifth day as a pink, blotchy, flat rash. The rash first appears around the hairline, on the face, on the neck, and behind the ears. The spots, which fade early in the illness when pressure is applied, become somewhat darker and tend to merge into larger red patches as they mature.

The rash spreads from head to chest to abdomen and finally to the arms and legs. It lasts from four to seven days and may be accompanied by mild itching. There may be some light brown coloring to the skin lesions as the illness progresses.

How Measles Spreads

Measles is a highly contagious viral disease. It is spread by droplets from the mouth or throat and by direct contact with articles freshly soiled by nose and throat secretions. It may be spread during the period from three to six days before the appearance of the rash to several days after. Symptoms begin in a susceptible person approximately eight to twelve days after exposure to the virus.

There are a number of complications of measles: sore throats, ear infections, and pneumonia are all common. Many of these complicating infections are due to bacteria and will require antibiotic treatment. The pneumonias can be life threatening. A very serious problem that can lead to permanent damage is measles encephalitis (infection of the brain); life-support measures and treatment of seizures may be necessary when this rare complication occurs.

HOME TREATMENT

Treatment of symptoms is all that is needed for uncomplicated measles. Acetaminophen (page 38) should be used to keep the fever down, and a vaporizer can be used for the cough. Avoid aspirin and NSAIDs in children and teenagers because of the rare possibility of Reye syndrome. Dim lighting in the room is often more comfortable because of the eyes' sensitivity to light. In general, the person feels "measley." The patient should be isolated until the end of the contagious period. All

MEASLES

Is there severe lethargy, headache, vomiting, or convulsions?

no

yes



SEEK MEDICAL CARE NOW

Is there any bleeding from nose, mouth, or rectum, or bleeding into the skin?

no

yes



SEEK MEDICAL CARE NOW

Is there any difficulty in breathing or very rapid breathing?

no

yes



SEEK MEDICAL CARE NOW

Are either of the following present?

- Earache
- Sore throat

no

yes

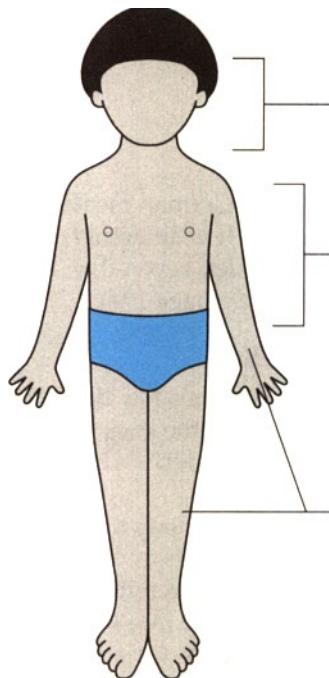


CALL MEDICAL ADVISOR



USE HOME TREATMENT

unimmunized people in contact with the patient should be immunized immediately. (People who have had the measles are considered immunized.)



Rash begins around hairline, on face and neck, behind ears

Rash spreads downward to chest and abdomen

Rash affects arms and legs last

Measles. Early signs include red, itchy eyes; "brassy" cough; and Koplik's spots inside mouth.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The history and physical examination will be directed at determining the diagnosis of measles and the nature of any complications. Bacterial complications, such as ear infections and pneumonia, can usually be treated with antibiotics. The person with symptoms suggestive of encephalitis (lethargy, stiff neck, convulsions) will be hospitalized, and a spinal tap will be performed. Very rarely, there may be a problem with blood clotting so that bleeding occurs. Usually this is first apparent as dark purple splotches in the skin. It is best, however, to avoid all of the problems through measles immunization.

Rubella

Rubella is also known as German measles and three-day measles. It is different from the disease called red measles, seven-day measles, or ten-day measles (page 194).

How to Recognize Rubella

Before the Rash. There may be a few days of mild fatigue. Lymph nodes at the back of the neck may be enlarged and tender.

The Rash. The rash first appears on the face as flat or slightly raised red spots. It quickly spreads to the trunk and the extremities, and the discrete spots tend to merge into large patches. A rubella rash is highly variable and is difficult for even the most experienced parents and doctors to recognize. Often there is no rash.

Fever. The fever rarely goes above 101°F (38°C) and usually lasts less than two days.

Pain. Joint pain occurs in about 10 to 15% of older children and adults with rubella. The pain usually begins on the third day of illness.

How Rubella Spreads

Rubella is a mild viral infection that isn't as contagious as measles or chicken pox. It is usually spread by droplets from the mouth or throat. It can be spread from seven days before the rash appears until five days afterward.

The incubation period is from 12 to 21 days, with an average of 16 days.

The specific questions on the decision chart are addressed to possible complications,

which are extremely rare. The main concern with rubella is an infection in an unborn child. If three-day measles occurs during the first month of pregnancy, there is a 50% chance that the fetus will develop an abnormality such as cataracts, heart disease, deafness, or mental deficiency. By the third month of pregnancy, this risk decreases to less than 10%, and it continues to decrease throughout the pregnancy. Because of the problem of congenital defects, a vaccine for rubella has been developed.

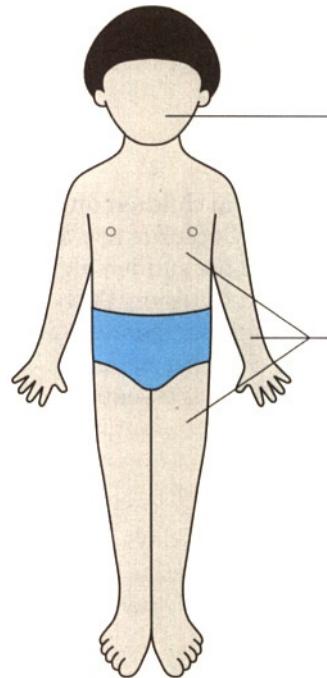
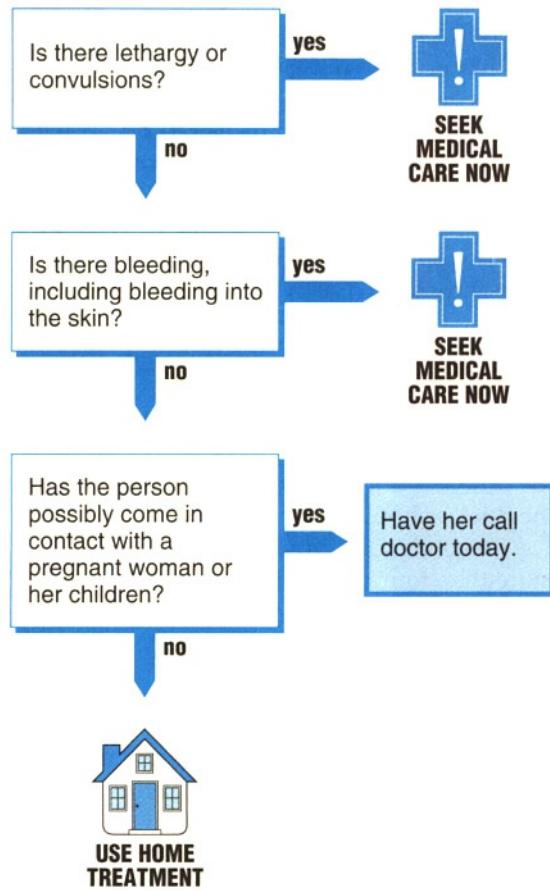
HOME TREATMENT

Usually no therapy is required. Occasionally fever will require the use of acetaminophen, aspirin, ibuprofen, or naproxen in adults (page 38). Isolation is usually not imposed. In children and teenagers use only acetaminophen.

Women who could possibly be pregnant should avoid any exposure to the person with rubella. If a question of such exposure arises, the pregnant woman should discuss the risk with her doctor. Blood tests are available that will indicate whether a pregnant woman has had rubella in the past and is immune, or whether problems with the pregnancy might be encountered. In most states these tests are required for a marriage license, and there are now few pregnant women who are at risk.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Visits to the doctor's office are seldom required for uncomplicated rubella. Questions about possible infection of pregnant women are more easily and economically discussed over the telephone. The question of immunization is complex, and we discuss it in detail in our book with Dr. Robert Pantell, *Taking Care of Your Child*.

RUBELLA

Rash begins as red spots on the face

Rash spreads quickly to trunk and extremities

Rash is highly variable; often there is no rash

Rubella. For a few days before the rash, the child may experience mild fatigue and have enlarged, tender lymph nodes at the back of the neck.

Roseola

Roseola is most common in children under the age of three but may occur at any age. Its main significance lies in the sudden high fever, which may cause a convulsion. Such a convulsion is due to the high temperature and doesn't indicate that the child has epilepsy. Prompt treatment of the fever is essential (page 262).

How to Recognize Roseola

Fever. There are usually several days of sustained high fever. Sometimes this fever can trigger a convulsion or seizure. Otherwise, the child appears well.

The Rash. The rash appears as the fever is decreasing or shortly after it is gone. It consists of pink, well-defined patches that turn white on pressure and first appear on the trunk. It may be slightly bumpy. It spreads to involve the arms, legs, and neck but is seldom prominent on the face or legs. The rash usually lasts less than 24 hours.

Other Symptoms. Occasionally there is a slight runny nose, red throat, or swollen glands at the back of the head, behind the ears, or in the neck. Most often there are no other symptoms.

This disease is probably caused by a virus and is contagious. Contact with others should be avoided until the fever has passed. The incubation period is from 7 to 17 days.

Encephalitis (infection of the brain) is a very rare complication of roseola. Roseola is basically a mild disease.

HOME TREATMENT

Home treatment is based on two principles. The first is effective treatment of the fever, usually acetaminophen. Avoid aspirin and NSAIDs in children and teenagers because of the rare possibility of Reye syndrome. The second is careful watching and waiting. The patient with roseola should appear well and have no other significant symptoms once the fever is controlled. If symptoms of ear infection (a complaint of ear pain or tugging at the ear—page 108) or cough (page 116) occur, then the appropriate sections of this book should be consulted. Lethargy can be a warning sign of meningitis or encephalitis. If the problem is still not clear, a phone call to the doctor should help.

Remember that roseola shouldn't last more than four or five days. You should call your doctor if the symptoms persist.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Patients are usually seen soon after the onset of the illness because of the high fever. As noted, at this stage there is little else to be found in roseola. The ears, nose, throat, and chest should be examined. If the fever remains the only finding, then the doctor will recommend home treatment (control of the fever with careful waiting and watching to see if a roseola rash appears). There is no medical treatment for roseola other than that available at home.

ROSEOLA

Has rash followed 3 days of high fever, and is fever gone?

no

Suspect...
problem other
than roseola.
Check Table 7
on pages
146–147.

yes

Are there convulsions
or severe lethargy?

yes



**SEEK
MEDICAL
CARE NOW**

no

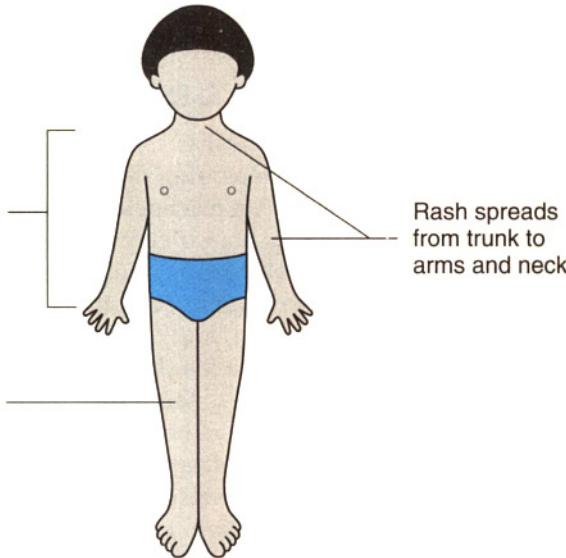


**USE HOME
TREATMENT**

Rash appears first
on trunk

Rash spreads
from trunk to
arms and neck

Rash spreads
from trunk to legs
but is seldom
prominent either
there or on face



Roseola. Several days of sustained high fever
may trigger a convulsion or seizure before the
onset of the rash.

Scarlet Fever

Scarlet fever derived its name over 300 years ago from its characteristic red rash. The illness is caused by a streptococcal infection, usually of the throat. Strep throats are discussed in Sore Throat (page 106).

You can recognize the illness by its characteristic features.

1. The rash appears 12 to 48 hours after the illness begins. It begins on the face, trunk, and arms and generally covers the entire body by the end of 24 hours. It is red, is very fine, and covers most of the skin surface. The area around the mouth is pale. The rash feels like fine sandpaper. Skin creases, such as in front of the elbow and the armpit, are more deeply red. Pressing on the rash will produce a white spot lasting several seconds.
2. Fever and weakness are often accompanied by a headache, stomachache, and vomiting. A sore throat is usually but not always present.
3. The intense redness of the rash lasts for about five days, although peeling of skin can go on for weeks. It isn't unusual for peeling, especially of the palms, to last for more than a month.

Examination often reveals a red throat, spots on the roof of the mouth (soft palate), and a fuzzy, white tongue that later becomes swollen and red. There may be swollen glands in the neck.

As with other streptococcal infections, the significance of scarlet fever is its connection with rheumatic fever (see Sore Throat, page 106).

HOME TREATMENT

You can't treat scarlet fever yourself at home; you must see your doctor. Because scarlet fever is due to a streptococcal infection, a medical visit is required for antibiotic treatment. Streptococcal infections are quite contagious, and other members of the family should also be tested.

You can treat some of the disease's symptoms at home. To go along with the antibiotics, you should reduce the fever with acetaminophen or other medications (page 38), keep up with fluid requirements, and give plenty of cold liquids to help soothe the throat. (Caution: Aspirin and other NSAIDs never should be given to children or teenagers if the possibility of a viral infection exists.)

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Several rashes can be confused with scarlet fever, including those associated with measles and drug reactions. If the rash is sufficiently typical of scarlet fever, the doctor will probably begin antibiotics, usually penicillin (or erythromycin if the patient is allergic to penicillin) and take throat cultures from the rest of the family. If the doctor is uncertain of the cause of the rash, a throat culture may be taken before beginning treatment. Treatment that is delayed by a day or two while waiting for culture results will still prevent the complication that causes the greatest concern, rheumatic fever.

SCARLET FEVER

Are both of the following present?

- Fever
- Fine, red rash on trunk and extremities that feels like sandpaper

no

Suspect...
problem other
than scarlet
fever. Check
Table 7 on
pages 146–147.

yes

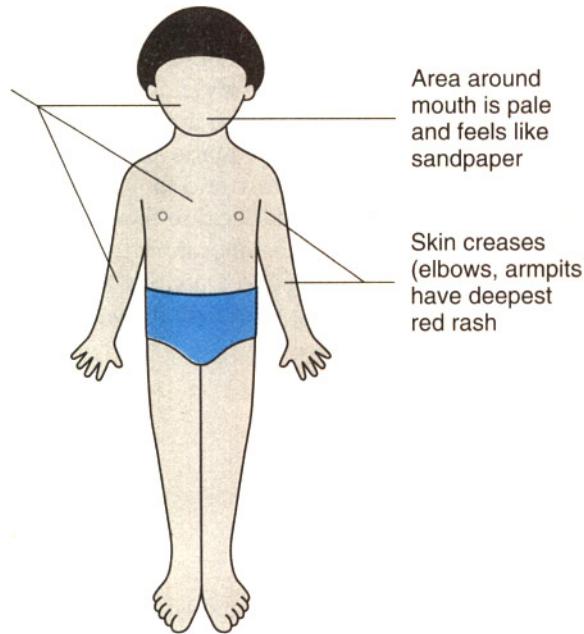


**CALL
MEDICAL
ADVISOR**

Rash begins on
face, trunk, and
arms

Area around
mouth is pale
and feels like
sandpaper

Skin creases
(elbows, armpits
have deepest
red rash)



Scarlet fever. Fever and weakness are often accompanied by headache, stomachache, vomiting, and sore throat.

Fifth Disease

Consider the strange case of fifth disease, whose only claim to fame is that it might be mistaken for another disease. It is so named because it is always listed last (and least) among the five very common contagious rashes of childhood. Its medical name, *erythema infectiosum*, is easily forgotten.

It comes very close to not being a disease at all. It has no symptoms other than a rash, has no complications, and needs no treatment. It can be recognized because it causes a characteristic "slapped cheek" appearance in children. The rash often begins on the cheeks and is later found on the backs of the arms and legs. It often is very fine, lacy, and pink. It tends to come and go and may be present one moment and absent the next. It is prone to recur for days or even weeks, especially as a response to heat (such as a warm bath or shower) or irritation. In general, however, the rash around the face will fade within four days of its appearance, and the rash on the rest of the body will fade within three to seven days.

The only significance of fifth disease is that it could worry you or have you make an avoidable trip to the doctor's office.

Its recent resurgence makes this more likely. It is very contagious. Epidemics of fifth disease have resulted in unnecessary school closings. Fifth disease is caused by parvovirus B19; the incubation period is thought to be from 4 to 14 days.

HOME TREATMENT

There is no treatment. Just watch and wait to make sure you are dealing with fifth disease. Check that there is no fever. Fever is very unusual with fifth disease. No restrictions on activities are necessary.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor may be able to distinguish fifth disease from other rashes. If the rash fits the description given in this section, the doctor is going to make the same diagnosis that you might have made. Checking the child's temperature and looking at the rash can be expected. Because there are no tests currently available, laboratory tests are unlikely. Waiting and watching are the means of dealing with fifth disease.

FIFTH DISEASE

Are all of the following present?

- No fever
- "Slapped cheek" rash is the first and only symptom
- Palms and soles are not involved

no

Suspect...
problem other
than fifth
disease. Check
Table 7 on
pages 146–147.

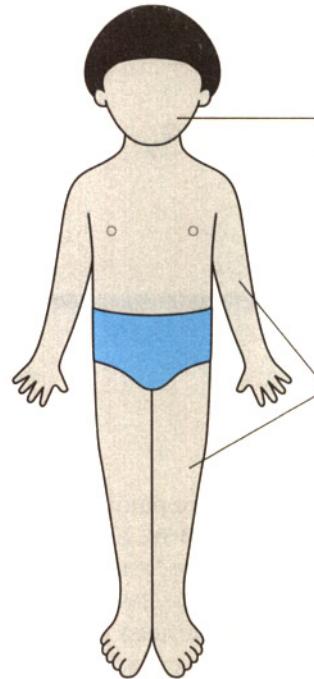
yes

Has a pregnant
woman been
exposed?

yes

Have her call
doctor today.

no



Rash begins
on the cheeks
and causes
"slapped cheek"
appearance

Rash spreads to
backs of arms
and legs

Rash tends to
come and go,
and may recur
over a period of
weeks

Fifth disease. Apart from the rash, there are no symptoms.

CHAPTER 8

Bones, Muscles, and Joints

Arthritis

Arthritis means joints that are painful to move. They may be red, warm, or swollen as well. Many people use the "arthritis" label for pain that is really in muscles, tendons, ligaments, or bones; we discuss this sort of musculoskeletal pain on page 206.

There are more than a hundred types of arthritis. The most common are:

- Osteoarthritis can cause knobby swelling of finger joints. More seriously, it can affect knees, hips, neck, or spine. Some osteoarthritis happens to almost everyone in later life but is usually not too serious.
- Rheumatoid arthritis can cause you to feel sick and stiff all over, in addition to causing joint problems. It usually starts in midlife.
- Gout mostly affects men. It causes severe attacks of pain and swelling in one joint at a time, often the big toe, ankle, or knee.
- Ankylosing spondylitis affects the back. It causes chronic sore back and morning stiffness. A person with ankylosing spondylitis may be unable to touch the toes.

The complications of arthritis usually develop slowly. You can prevent these prob-

lems more easily than you can correct them, so you should manage the condition correctly and carefully.

When to See the Doctor

Few people with arthritis need to see a doctor right away. Urgent problems are:

- Infection
- Nerve damage
- Fractures near a joint
- Gout

The first three could result in serious joint damage. Gout can be so painful that the victim needs immediate help.

HOME TREATMENT

You can reduce pain and swelling in the joints by taking aspirin, ibuprofen, naproxen, or ketoprofen (page 38). Although acetaminophen can relieve pain it doesn't reduce inflammation, so doctors seldom use it to treat

LYME DISEASE

Lyme disease is an infection spread by ticks, usually deer ticks. An oval "bull's-eye" skin rash is a distinctive sign of the infection. The rash appears 3 to 20 days after the bite of an infected tick. The person with Lyme disease may also have fever, headache, stiff neck, and backache. Some people with the illness then develop arthritis within 1 to 22 weeks. A few get heart or neurological problems. Call your doctor if you see the "bull's-eye" rash on your skin. (See Insect Bites or Stings, page 92.)

ARTHRITIS

- Are any of the following present?
- Swelling of a joint
 - Redness or heat in a single joint
 - Painful movement of joint

no

See: Musculoskeletal Pain, p. 206

yes

- Did the problem begin after injury?

yes

See: Arm Injuries, p. 84; or Broken Bone?, p. 78

no

- Are any of the following present?
- Fever
 - Severe swelling in 1 or 2 joints only
 - Inability to use affected joint
 - Rash

yes



no

- Has the problem persisted for more than 6 weeks?

yes



no

**USE HOME TREATMENT**

arthritis other than osteoarthritis. Stomach irritation is the major concern. Bleeding from the stomach is a serious concern. Do not use these drugs for more than six weeks without talking with the doctor. Talk with the doctor if you are over 65 years of age.

Glucosamine and chondroitin sulphate are popular alternative treatments. They are safe and seem to help some people.

Resting an inflamed joint can speed healing. Heat can also help. Working a painful joint through its range of motion twice a day will help prevent stiffness.

If pain, swelling, or stiffness persists for six weeks, see a doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the joints and may have blood tests and X-rays done. He or she may use a needle to sample fluid from an affected joint.

The doctor may prescribe a nonsteroidal anti-inflammatory drug (NSAID), such as Celebrex, Mobic, or Vioxx. Their effects are very similar to those of aspirin, ibuprofen, naproxen, or ketoprofen, but they may be less hazardous. Lower the risk of upset stomach by taking the tablets after meals or with an antacid.

Corticosteroid drugs such as prednisone can reduce inflammation but cause serious side effects after long-term use. Talk to your doctor if you take them for more than a few weeks. The doctor may inject a corticosteroid drug into a painful joint. This usually shouldn't be done more than three times.

Rheumatoid arthritis usually requires strong drugs such as methotrexate, gold salts, or hydroxychloroquine, or even stronger new drugs. Patients should be seen early by a specialist (rheumatologist) and should have periodic follow-ups.

Musculoskeletal Pain

Pain in a muscle or joint with no swelling or redness can be caused by tension, viral infection, or unusual physical activity. Sometimes joint or muscle pain has no obvious cause. These pains aren't arthritis, and they rarely suggest a serious disease. Muscle or joint pain usually goes away by itself.

Muscle or joint pain may be caused by thyroid disease, cancer, polymyositis (inflammation of the muscles), or polymyalgia rheumatica (aching in the neck, shoulder, and hip muscles that can affect the elderly). Pain in the upper neck and at the base of the skull is usually minor.

Fibromyalgia is marked by muscle pain, fatigue, and difficulty getting restful sleep. The person with fibromyalgia may also have irritable bowel syndrome, morning stiffness, anxiety, memory loss, and other symptoms.

Make an appointment if you have fever, weight loss, or severe fatigue. Otherwise, try home treatment for several weeks.

HOME TREATMENT

Rest and exercise and good sleep habits are important for musculoskeletal disorders. A program of slowly increasing exercise can help restore muscle tone. Walking, bicycling, and swimming are good activities. Use warm baths, massage, and stretching exercises as often as possible.

Poor work habits are a common cause of muscle and joint pain. If you work on hard

floors, try sponge-soled shoes. A better chair may help if you work at a desk. Many people feel better after a change in lifestyle, switching jobs, or moving. If your pain goes away on vacation, stress may be part of the problem.

Acetaminophen, aspirin, ibuprofen, naproxen, or ketoprofen may help relieve pain (page 38). Call the doctor if you don't feel better after three weeks.

Hot or Cold?

You should apply cold or heat to painful areas at different times:

- Use cold for new injury and within 24 hours of the first inflammation.
- Use heat after the first stages of inflammation.

Cold right after an injury reduces the fluid and blood that escape into joints or muscles; this helps reduce the pain and swelling. Later, heat increases blood flow during healing, makes joints more flexible, and can relieve muscle spasm.

Exercise is the most important part of fibromyalgia treatment. Start and increase your exercise slowly. Stretch for flexibility. Increase your physical activity toward full aerobic cardiovascular conditioning (page 4). Walking, hiking, swimming, and bicycling are good activities. Avoid impact exercises such as jogging or tennis.

If you start an exercise program, the pain of fibromyalgia may be worse before it gets better. You have to persevere. Relief may be months away. Varying degrees of pain can persist for many years. But it will get better.

If you are not feeling better within two weeks, see your doctor.

MUSCULOSKELETAL PAIN

Are any of the following present?

- Swelling of a joint
- Redness or heat in a joint
- Pain when a joint moves

yes

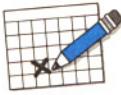
*See: Arthritis,
p. 204*

no

Are any of the following present?

- Fever without flu-like symptoms
- Weight loss of 10 pounds (5 kg) or more
- Widespread pain lasting more than 3 months

yes



**MAKE
MEDICAL
APPOINTMENT**

no



**USE HOME
TREATMENT**

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will do a physical exam and request blood tests. He or she will probably give advice similar to the home treatment described above.

If a specific joint in the body is causing the pain, a corticosteroid shot may help.

The doctor may manage fibromyalgia with drug regimens such as amitriptyline (Elavil) an hour or so before bedtime and an antidepressant (e.g., Prozac) in the morning. The goal of medication is to improve sleep without causing drowsiness during the day.

Neck Pain

Most neck pain, such as the common "stiff neck," is due to muscle strain or spasm. You can care for this kind of minor pain at home.

Neck pain can be part of a flu syndrome that includes fever, headache, and muscle aches. If the person with neck pain also has general muscle aches, a visit to the doctor probably won't help.

Causes of neck pain that require a doctor's attention are:

- **Meningitis.** Neck pain accompanied by fever and headache (but without general muscle aches) can signal this serious inflammation of the brain covering. With a very stiff neck, the person with meningitis may be unable to touch the chin to the chest. If you aren't sure, you're better off seeing the doctor for an ordinary muscle spasm than ignoring this **emergency** sign.
- **Pinched Nerve.** Arthritis or neck injury can result in a pinched nerve. You may feel pain running down one arm, or numbness or tingling in one arm or hand. The symptoms appear on only one side, and neck stiffness is not the main complaint.

HOME TREATMENT

Morning neck pain may be due to poor sleeping habits. Sleep on a firm mattress; a bed board will make a mattress firmer. Stop using a pillow or use special pillows that keep the head from twisting.

Warmth may help spasms and pain. You can use hot showers, hot compresses, or a heating pad. Be careful with heat—skin burns easily. Aspirin, ibuprofen, or naproxen will help relieve pain and inflammation (page 38).

Neck pain is slow to improve and may take several weeks to resolve. Call the doctor if you aren't better in a week.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If the doctor suspects meningitis, he or she will do a spinal tap and blood tests. You may have X-rays taken of the neck. The doctor may prescribe a neck collar. If he or she suspects nerve damage, the doctor may refer you to a neurologist or neurosurgeon.

The doctor may prescribe a muscle relaxer and perhaps a pain reliever. Prescription drugs aren't necessarily better than over-the-counter pain relievers. If you don't have infection or nerve damage, you're usually just as well off with home treatment.



Bedtime neck pain relief. An ordinary bath towel can relieve neck pain. Before going to bed, fold a bath towel into a long strip four inches (10 cm) wide. Wrap it around the neck and secure it with tape or a safety pin. A soft neck collar from the drugstore works the same way. You usually will not need to wear the towel or collar during the day.

NECK PAIN

Is neck pain accompanied by fever and headache, or is person unable to touch chin to chest?

no

yes



SEEK
MEDICAL
CARE NOW

Does pain travel down one arm, or is there tingling or numbness in the arm or hand?

no

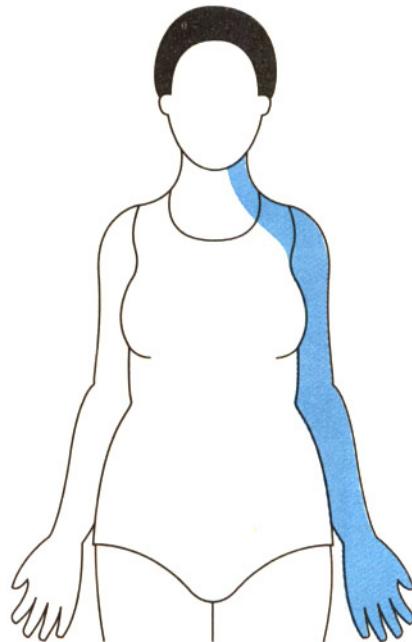
yes



SEEK
MEDICAL
CARE TODAY



USE HOME
TREATMENT



Sites of pinched nerve pain

Shoulder Pain

Pain located around the shoulder is common and almost never poses a serious threat to life. Nonetheless, it can persist for a long time and cause discomfort and disability. Most of the time the pain comes from the soft tissues near the joint and not from the bones or the joint itself. These soft tissues include the ligaments (which connect one bone to another), tendons (which connect bone to muscle), and bursae (little fluid-filled sacs at the joints).

Bursitis. This is an inflammation of the bursae that starts with an uneasy feeling in the shoulder and may progress to considerable pain within 6 to 12 hours. There may be swelling at the tip of the shoulder. It is often seen in persons who have been cutting hedges, painting the house, or playing sports.

Rotator Cuff Tendinitis. This is an irritation of the tendons and muscles around the shoulder and is most likely to be seen in baseball pitchers and racket sports enthusiasts. Unlike bursitis, it is difficult to detect even a small amount of swelling, and the pain seems to occur in only a few positions.

Bicep Tendinitis. Much less common, this occurs in gymnasts and players of baseball and racket sports. The tenderness and pain are located in the front of the shoulder.

Because these three common problems of the shoulder are treated the same initially, you need not worry about which condition you have. However, there are problems that

should be differentiated from these three conditions:

- **Injuries** require a slightly different approach (see Arm Injuries, page 84).
- **Infections** are quite unusual in the shoulder, but fever, swelling, and redness of the shoulder suggest the need for a doctor's help.
- **Complete inability to move the arm** suggests pain severe enough that consulting with a doctor is reasonable.

If none of these problems seems to fit your situation, give your doctor a call for advice. Often a visit will not be necessary.

HOME TREATMENT

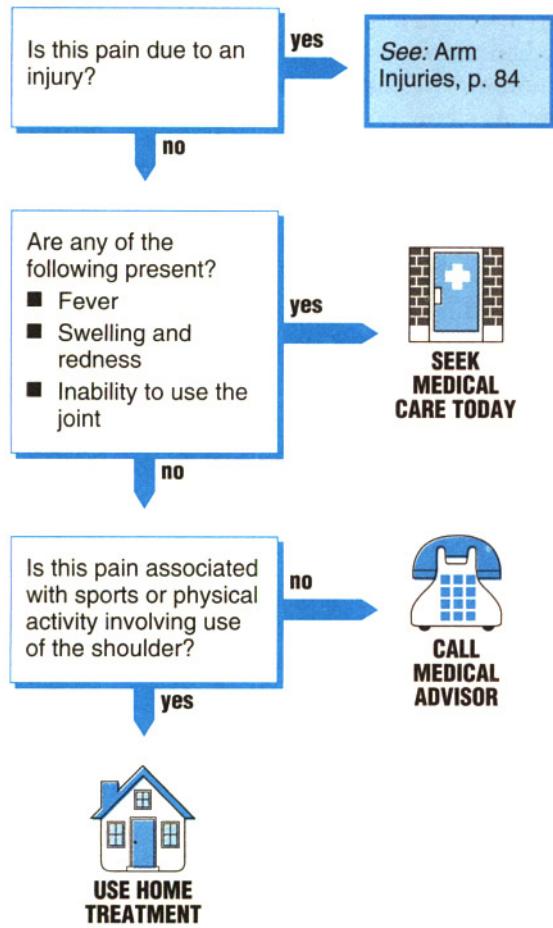
For bursitis, rotator cuff tendinitis, and bicep tendinitis, the key word is RIMS:

- Rest
- Ice
- Maintenance of mobility
- Strengthening

At the first sign of trouble, you should apply ice for 30 minutes, then let the shoulder rewarm for the next 15 minutes. Continue the cycle for the next one to two hours. Be careful not to freeze the skin.

Give the shoulder complete rest for the first 24 to 48 hours. You can use a sling if necessary (see Arm Injuries, page 84). After that time, gently put your arm through a full range of motion several times a day.

Complete immobilization of the arm may result in stiffness and loss of motion in the shoulder (frozen shoulder). Thus, maintenance of the shoulder's range of motion is an important part of the treatment. Wait three to

SHOULDER PAIN

six weeks before returning to the activity that caused the problem, depending on the problem's severity. Returning too soon will increase the probability of reinjury.

After the initial rest period, exercises should be started to gradually strengthen the muscles around the shoulder. This is especially important in rotator cuff tendinitis. At first the exercise need consist only of putting the arm through a full range of motion. Next a small amount of weight (1 to 1.5 pounds, or around half a kilogram) is held in the hand as the exercises are performed. Weight is gradually increased by a half pound (200 g) every ten days. Ice is recommended after exercise.

Acetaminophen, two tablets every three to four hours, may be taken as needed. Aspirin, ibuprofen, or naproxen may help decrease inflammation (page 38).

Call a doctor if the condition persists beyond six weeks.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the shoulder and prescribe a regimen similar to the one above, if one of the common causes of shoulder pain is diagnosed. If the problem is bursitis, a corticosteroid injection may be given. Such injections should be given only if home therapy doesn't work. There should be no more than two or three such injections.

Nonsteroidal anti-inflammatory drugs (NSAIDs) may be given. These prescription drugs are similar to aspirin, ibuprofen, naproxen, and ketoprofen. They may decrease pain but don't speed the healing process. Expect instruction in rehabilitation exercises.

Surgery is the last resort and is a gamble. Satisfaction isn't guaranteed.

SPORTS-RELATED PROBLEMS

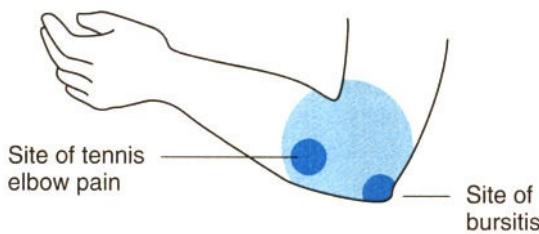
Some of the problems related specifically to racket sports, baseball pitching, or golf are due to poor technique. Coaching from a professional is well worth considering. It is less expensive than going to a doctor, and you will probably improve your game.

Elbow Pain

Aside from injuries, the main causes of elbow pain are bursitis and tennis elbow.

Bursitis

The elbow bursa is a fluid-filled sac located right at the tip of the elbow. When it is irritated, the amount of fluid increases, causing a swelling that looks very much like a small egg right at the end of the elbow. The swelling is the cause of discomfort. There should be no fever and only a little redness, if any.



Tennis Elbow

Of the cases of tennis elbow that reach the doctor's office, less than half are actually associated with playing tennis. The rest usually result from work that requires a twisting motion of the arm—such as using a screwdriver—or have no obvious cause. The doctor's help is needed only for prolonged cases that don't get better; perhaps 1 person in 1,000 needs such help.

The diagnosis of tennis elbow doesn't depend on tests or special examinations. Tennis elbow is simply defined as pain in the lateral (outer) portion of the elbow and upper forearm. The pain occurs after repeatedly rolling or twisting the forearm, wrist, and

hand. Tennis elbow is usually caused by the tremendous impact transmitted to the forearm when the tennis ball is hit with the backhand motion. The risk that this force will create tennis elbow is raised by:

- Hitting the ball with the elbow bent rather than locked in a position of strength
- Trying to put top spin on the ball by rolling the wrist on contact (this doesn't work)
- Holding the thumb behind the racket
- Using a racket that is head-heavy, especially a wood racket
- Switching to a faster court surface
- Using heavier balls, such as those of foreign make or the pressureless type
- Using a very stiff racket

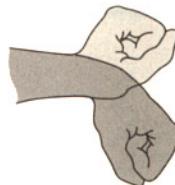
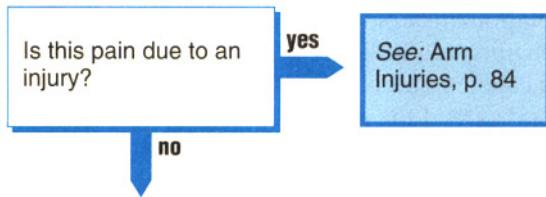
According to the experts, the most important preventive measure for tennis players is to use a two-handed backhand stroke.

HOME TREATMENT

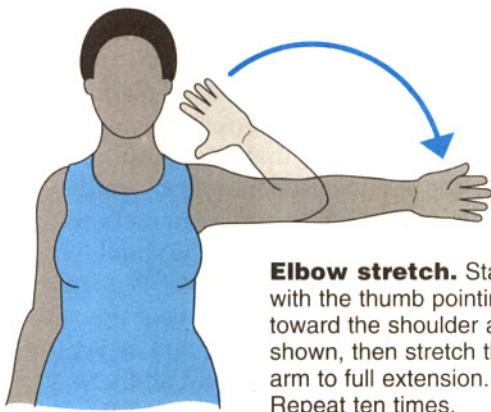
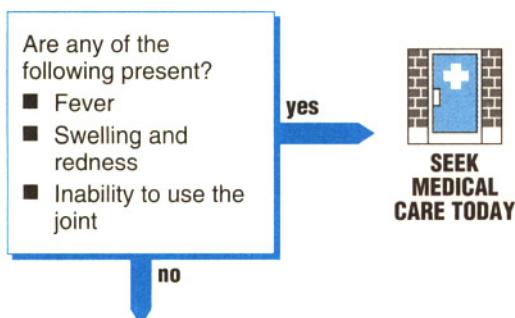
Bursitis of the elbow is treated very much like bursitis of the shoulder (page 210).

At the first sign of tennis elbow, you should, of course, take preventive measures. But suppose that you already use a two-handed backhand, have switched to a light and supple metal racket, and so on. Or suppose your job or favorite hobby requires repeated use of screwdrivers or other tools that aggravate the problem. What now? Resting the arm will surely make it hurt less, but most likely taking two weeks off won't cure it forever. Interestingly, most authorities now think that you can "play with pain" and not cause permanent injury.

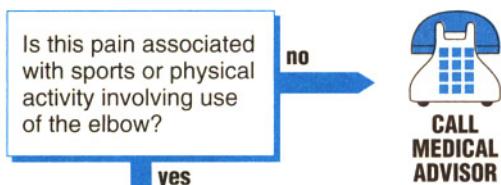
We advocate a commonsense approach to tennis elbow: cut down on your playing time. When you do play, warm up slowly and do

ELBOW PAIN

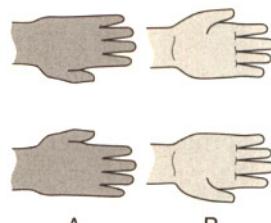
Wrist flap. Move the wrist from full flexion to full extension. Do a session of ten once daily.



Elbow stretch. Start with the thumb pointing toward the shoulder as shown, then stretch the arm to full extension. Repeat ten times.



USE HOME TREATMENT



Arm twist. With your arms straight out in front of you, rotate the hands from palms down (A) to palms up (B). Repeat ten times.

some stretching exercises of the wrist and elbow before you begin to hit the ball. Using a tennis elbow strap may help. Applying ice after playing may also help.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Bursitis of the elbow is treated by the doctor very much like bursitis of the shoulder. If

you're the rare person with tennis elbow who has severe persistent pain, the next step is to inject a pain reliever and corticosteroid (cortisone-like drug) into the painful area. Three such injections is the limit. Surgery should be a last resort—an act of desperation. If you get to this point, perhaps it's time to take up another game.

Wrist Pain

The wrist is an unusual joint because stiffness or even complete loss of motion causes relatively little difficulty; however, if the joint is wobbly and unstable, this can pose real problems. The wrist provides the platform from which the fine motions of the fingers operate. It is essential that this platform be stable. The eight wrist bones form a rather crude joint that is very limited in motion compared with, for example, the shoulder. But this joint is strong and stable. The wrist platform works best when it is bent upward just a little. Almost no normal human activities require the wrist to be bent all the way back or all the way forward, and the fingers don't operate as well when the wrist is fully flexed or fully extended.

Causes of Pain

Fever and/or rapid swelling accompanying the onset of pain suggests the possibility of an infection. This requires prompt medical attention.

The wrist is very frequently involved in rheumatoid arthritis, and the side of the wrist by the thumb is very commonly involved in osteoarthritis (see Arthritis, page 204).

Carpal tunnel syndrome can cause pain at the wrist. In addition, this syndrome can cause pains to shoot down into the fingers or up into the forearm. Usually there is a numb feeling in the fingers as if they were asleep. In this syndrome, the median nerve is trapped and squeezed as it passes through the fibrous carpal tunnel in the front of the wrist. Generally the squeezing results from too much

inflamed tissue. Some causes of this inflammation are a blow to the front of the wrist, rheumatoid arthritis, playing tennis, paddling a canoe, or other activities that repeatedly flex and extend the wrist.

You can diagnose carpal tunnel syndrome pretty well yourself. The numbness in the fingers doesn't involve the little finger and often doesn't involve the half of the ring finger nearest the little finger. If you tap with a finger on the front of the wrist, you may get a sudden tingling in the fingers, similar to the feeling of hitting your funny bone. Tingling and pain in carpal tunnel syndrome may be worse at night or when the wrists are cocked down (flexed).

HOME TREATMENT

The key to management of wrist pain is splinting. The strategy is to rest the joint in the position of best function. Wrist splints made of plastic or aluminum are available at hospital supply stores and many drugstores. Any that fit you are probably all right. The splint will cock your wrist back just a bit. You can put a cloth sleeve around the splint to make it more comfortable on your skin. Wrap the splint gently with an elastic bandage to keep it in place. That's all there is to it. Wear it all the time for a few days, then just at night for a few weeks. This simple treatment is all that is required for most wrist flare-ups.

No major pain medication should be necessary. Acetaminophen and similar medications are all right but probably won't help much. If you know what triggered the pain, work out a way to avoid that activity. Common sense means listening to the pain message.

If the problem persists after six weeks of home treatment, see the doctor.

WRIST PAIN

Is this pain due to an injury?

yes

See: Arm Injuries, p. 84

no

Is there either of the following?

- Fever
- Rapid swelling or severe pain at rest

yes



SEEK MEDICAL CARE TODAY

no

Is there numbness or tingling in the fingers?

yes



CALL MEDICAL ADVISOR

no

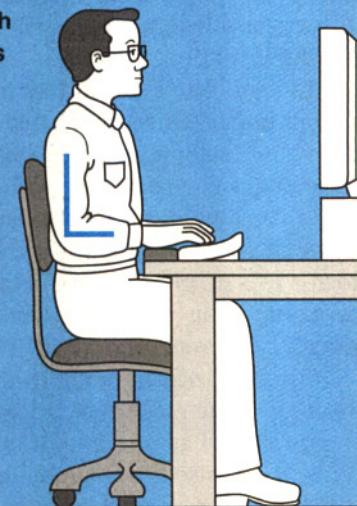


USE HOME TREATMENT

COMPUTER POSTURE

As more people type on computers, there have been more worries about carpal tunnel syndrome. Research continues, but there seem to be two important factors: stress, especially from pressure to type quickly or without interruption, and poor hand positioning. Take brief rests, and consider using a different keyboard to help avoid pain.

For proper typing position, keep your elbows at a 90° angle, with your forearms parallel to the floor; keep your wrists in a neutral position, and use a wrist rest for support; and keep your feet flat on the floor.

**WHAT TO EXPECT AT THE DOCTOR'S OFFICE**

The wrist will be examined and advice similar to that above will be given. X-rays may be required, but only rarely. Anti-inflammatory drugs may be prescribed. Injection with a corticosteroid medication may be performed on occasion and is likely to help if carpal tunnel syndrome hasn't responded to splinting.

Several different kinds of surgery are available, and one or another procedure may be recommended in difficult cases. Carpal tunnel nerve compression may be released surgically. In rheumatoid arthritis, the synovial tissue that lines the tendon sheaths on the back of the hand may be removed to protect the tendons that run through the inflamed area (synovectomy). The wrist may be casted or the bones fused.

Finger Pain

Each hand has 14 finger joints, each like a small hinge. These joints are operated by muscles in the forearm that control them through an intricate system of tendons that run through the wrist and hand. The small size and complex arrangement of these joints and tendons mean that any inflammation or damage to a joint is likely to result in some stiffness and lost motion. Even a small scar may limit motion.

You shouldn't expect that a problem with a small finger joint will resolve completely. Even after healing, some leftover stiffness and occasional twinges of discomfort are likely. Unrealistically high expectations lead to feelings that you did something wrong or that the doctor was no good. In fact, almost all of us have a few fingers that have been injured and remain a bit crooked or stiff.

Osteoarthritis frequently causes knobby swelling of the most distant joints of the fingers as well as swelling of the middle joints. It can also cause problems at the base of the thumb. If we live long enough, all of us get these knobby swellings. They cause most

of the changed appearance that we associate with the aging hand. As a rule, they cause relatively little pain or stiffness and don't need specific treatment other than exercise.

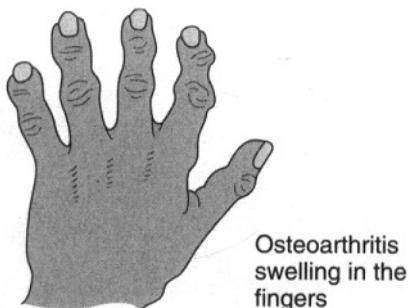
Numbness or tingling may indicate a problem with nerves or circulation. A call to the doctor will help you make a decision about what to do.

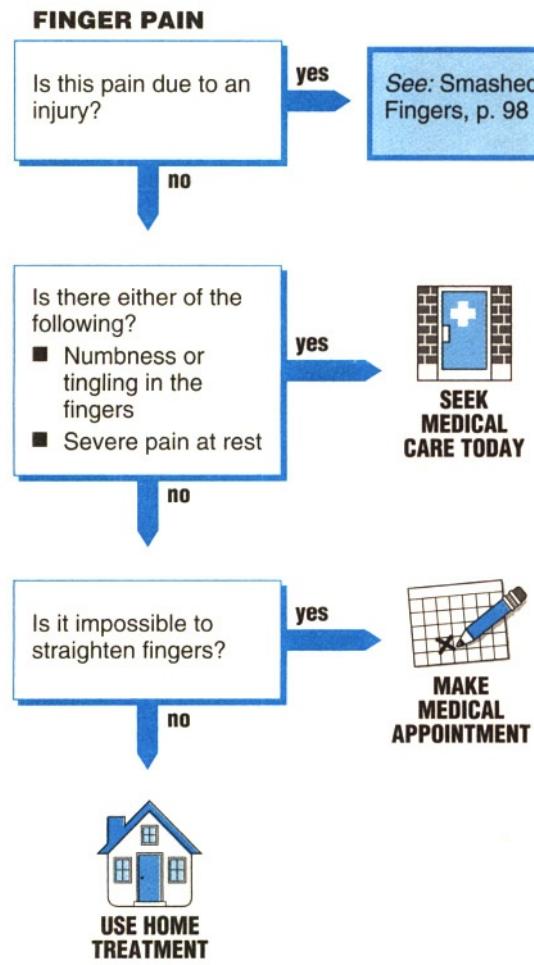
HOME TREATMENT

Listen to the pain message and avoid activities that aggravate pain *after* the exercise. Rest the finger joints so that they can heal, but use gentle stretching exercises to keep them limber and maintain motion. The key to managing finger problems is to use common sense. Exercise of all kinds is essential as long as it is relatively pain-free. Don't neglect the aerobics.

With a bit of ingenuity, you can find a less stressful way to do almost any activity that puts stress on the joints. Because everyone's activities are a bit different, you will have to invent some of these new methods yourself. Here are a few hints to get you going:

- A big handle can be gripped with less strain than a small handle. Wrap pens, knives, and other similar objects with tape.
- Lift smaller loads. Make more trips. Plan ahead rather than blundering through an activity.
- Find clothing that uses Velcro or large buttons instead of small buttons and snaps for fasteners.
- Use a gripper for opening tough jar lids or stop buying products that come in hard-to-open jars. When opening a tough lid, apply friction pressure on the top of the lid with your palm and twist with your whole hand, not with your grip.





- Don't put heavy objects too high or too low. Organize your kitchen, workshop, study, and bedroom.

Don't use strong medicines that mask your pain because these may lead you to overdo an activity. If the problem persists after six weeks of home treatment, see the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine your hands and the finger motions. Sometimes an X-ray is taken, but usually not more often than every two years. Anti-inflammatory medications such as aspirin, ibuprofen, naproxen, and ketoprofen can help (page 38), but doses should usually be low to moderate.

In rare cases, injecting corticosteroids into a particularly bad finger joint is helpful, but this is less effective with small joints such as fingers than with large ones. Surgery is also less effective with small joints and is often not appropriate. Operations such as replacement with plastic joints or removal of inflamed tissue usually succeed in making the hand look more normal and may decrease pain, but the hand often doesn't work much better than it did before the operation.

FINGER EXERCISES

Stretch your joints gently twice a day to maintain motion. Putting your hands in warm water before stretching may help you get more motion.

1. Straighten one hand out against the tabletop.
2. Make a fist and then cock the wrist to increase the stretch.
3. Use one hand to move each finger of the other hand through its full range of motion. Don't force, but stretch just to the edge of discomfort. If the motion of a joint is normal, one repetition is enough. If the motion is limited, do up to ten repetitions.

Low Back Pain

Low back pain is frustrating for doctors and patients alike. It's slow to heal and often comes back.

The cause of low back pain is usually an injury to the ligaments or other tissue, though it can be a herniated disk. The pain can be severe or moderate, or you can simply feel stiff. The pain is usually felt in the back, sometimes in the buttocks or upper leg as well.

Often the cause isn't clear. The pain may start immediately after a muscle strain or hours later. Severe pain usually lasts for 48 to 72 hours, followed by days or weeks of less severe pain.

Back pain that results from a severe blow or fall may require immediate attention.

Back pain may extend down the leg *below the knee* if a sciatic nerve is pinched. Doctors call this sciatica. This pain often responds to home treatment. You should see the doctor right away for sciatica, especially if there is:

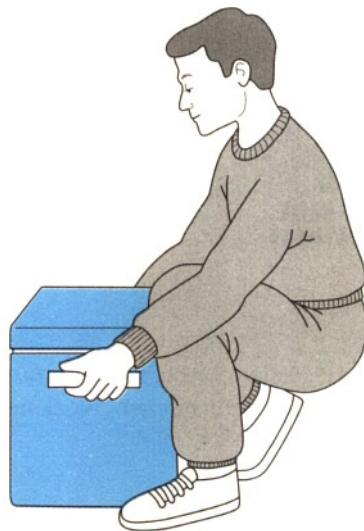
- Loss of bladder or bowel control
- Weakness in the leg

HOME TREATMENT

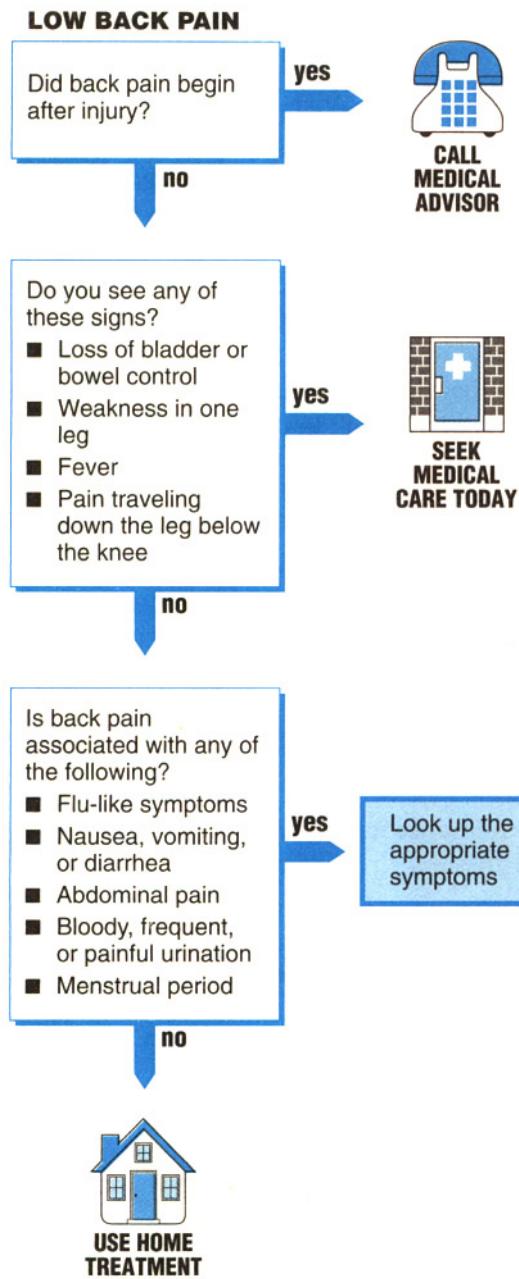
The low back pain syndrome is a vicious cycle: injury causes the pain of muscle spasm, and the spasm leads to more pain. To heal most rapidly, you must avoid reinjury and allow your back to recover.

- Avoid reinjury by limiting your physical activity. If necessary, rest flat on your back for the first 24 hours.

- After the first day, moderate activity—as much as the pain allows—is better than bed rest. Strenuous activity during the next six weeks can make the problem worse, however. After recovery, an exercise program will help prevent reinjury.
- If you suffer from low back pain, sleep without a pillow on a very firm mattress, a waterbed, or even the floor. A bed board under your mattress will make it firmer. You may find it more comfortable to sleep with a towel folded under the small of your back or a pillow beneath your knees.
- A heat pack applied to the back will help relieve pain.
- You can take acetaminophen, aspirin, ibuprofen, naproxen, or ketoprofen (page 38).



Lifting heavy objects. To avoid back strain, bend your knees but keep your back straight and erect.

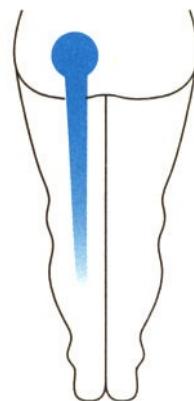


If there is no nerve damage, you don't gain anything by going to the doctor for low back pain. Being careful and easing the symptoms will help your back recover. If severe back pain lasts more than a week, call the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will ask questions and do a physical exam to look for causes of back pain. X-rays may be taken of the back, particularly if the pain is due to an injury. If the doctor suspects that nerves may have been hurt, special studies may be done, such as myelogram, computerized tomography (CT), or magnetic resonance imaging (MRI). In rare cases, when nerves are at risk, the doctor may hospitalize the person. Treatment may include traction or surgery.

Usually the doctor gives advice similar to the home treatment we describe above. He or she may prescribe a muscle relaxant or a pain reliever. Back exercises, relaxation, and biofeedback may help chronic low back pain.



Sciatica. Pain extending down the leg on the outer part of the leg *below the knee* may be sciatica. See the doctor.

Hip Pain

Because the hip joint is so deep inside the body, identifying the source of hip pain can be difficult. An injury or disease of the hip may be felt in the groin, in the outer thigh, or down the leg to the knee. Pain felt in the hip may actually start in the lower back.

Although the hip is one of the body's strongest and best-protected joints, it is still subject to dislocation, fracture, and soft-tissue injury. The narrow neck of the thigh bone (femur) can break easily, particularly among elderly people who slip or fall. The artery to the end of that bone can get blocked, leading to the death of bone tissue and a form of arthritis called aseptic necrosis.

Other causes of hip pain are:

- Infection
- Bursitis—inflammation of the fluid-filled sacs over the joint
- Rheumatoid arthritis and osteoarthritis (page 204)

A stiff hip may not be painful, but it can place extra strain on the lower back. The form of arthritis called ankylosing spondylitis can cause hip stiffness. Hip problems can lead to a flexion contracture, in which the hip joint becomes fixed in a slightly bent position, losing some range of motion.

HOME TREATMENT

Pay attention to pain. Avoid activities that make your hip worse. Rest the joint after painful activities. Avoid pain medication as much as possible.

Use a cane or crutches if needed. Hold the cane in the hand *opposite* the painful hip. This allows the large muscles around the sore hip joint to relax. Move the cane forward along with the affected hip.

As the hip pain lessens, gradually introduce exercise. Use gentle motion exercises at first to free the hip and reduce stiffness. Repeat these exercises two or three times a day:

- Stand with your good hip by a table. Lean on the table with your hand. Swing the leg with the bad hip from side to side and front and back.
- Spread your legs as far as you can and bend from side to side.
- With your legs together, turn your feet outward like a duck.
- Lie on your back on the edge of your bed with your bad hip and leg hanging just off the mattress. Stretch your leg toward the floor while keeping your knees as straight as you can.

Introduce more activity to strengthen the hip muscles:

- Lie on your back and raise your legs one at a time. Keep the leg straight and lift until you reach a 45° angle.
- Swim. This stretches muscles and builds good tone.
- Bicycle or walk. When walking, start with short strides and gradually lengthen them as you loosen up. Gradually increase your effort and distance, but not by more than 10% each day.

A good, firm bed will help. The best sleeping position is on your back. Avoid pillows beneath the knees or under the lower back. Make sure you take anti-inflammatory

HIP PAIN

Is hip pain due to injury?

yes

See: Broken Bone?, p. 78

no

Are there any of the following?

- Fever
- Severe pain when not bearing weight
- Inability to walk

yes



no



USE HOME TREATMENT

medication as prescribed, especially if you have rheumatoid arthritis or ankylosing spondylitis.

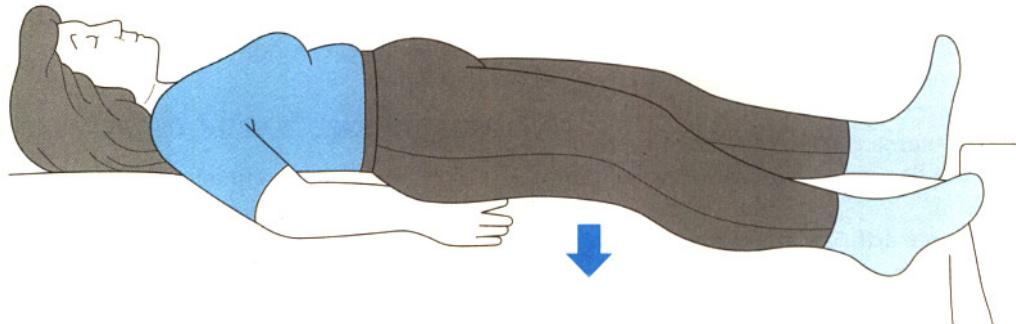
If pain persists after six weeks of home treatment, see the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the hip and its range of motion. You may have X-rays taken. The doctor may prescribe anti-inflammatory medication. Rarely, the doctor may give you a shot.

The doctor may recommend surgery if your pain is intense and persistent, or if you are having problems walking. Total hip replacement is usually successful. An artificial hip lasts at least 10 to 15 years. You will be able to get up and around soon after surgery. Complications of surgery are rare.

Hip exercise. With your shoulders, trunk, and one leg resting on the bed, allow the leg with the injured hip to dangle off the bed. Bend your knee as little as possible as you stretch the leg and hip backward, toward the floor.



Knee Pain

The knee is a large, strong joint, but it does not tolerate side stresses very well. The engineering of the knee makes it prone to both injury and degenerative disease. People are more likely to have these problems if they are overweight.

To work properly, the knee must bend and straighten while keeping stable support. The knee should not wobble from side to side. Make an appointment with the doctor if:

- Your knee is unstable or wobbles.
- You cannot completely straighten or bend the knee.

A knee that is red or feels hot may have an infection or gout. Pain or swelling in the calf below a sore knee suggests a blood clot or a cyst. See a doctor promptly if:

- You cannot walk.
- Your knee is very painful even when it's not bearing weight.
- You have pain or swelling in the calf or thigh.

HOME TREATMENT

Pay attention to your pain. Avoid activities that make pain worse. You can take acetaminophen, aspirin, ibuprofen, naproxen, or ketoprofen to ease pain (page 38), but don't use these medications to ignore what the pain is telling you.

If you have arthritis, make sure you take your medication as directed.

A cane may help reduce the stress on your knee. Most people use the cane on the *same* side as the painful knee.

Do not use a pillow under the knee while resting or sleeping. This can make your knee stiff.

Knee pain can result from foot problems; make sure your shoes fit properly and are in good shape.

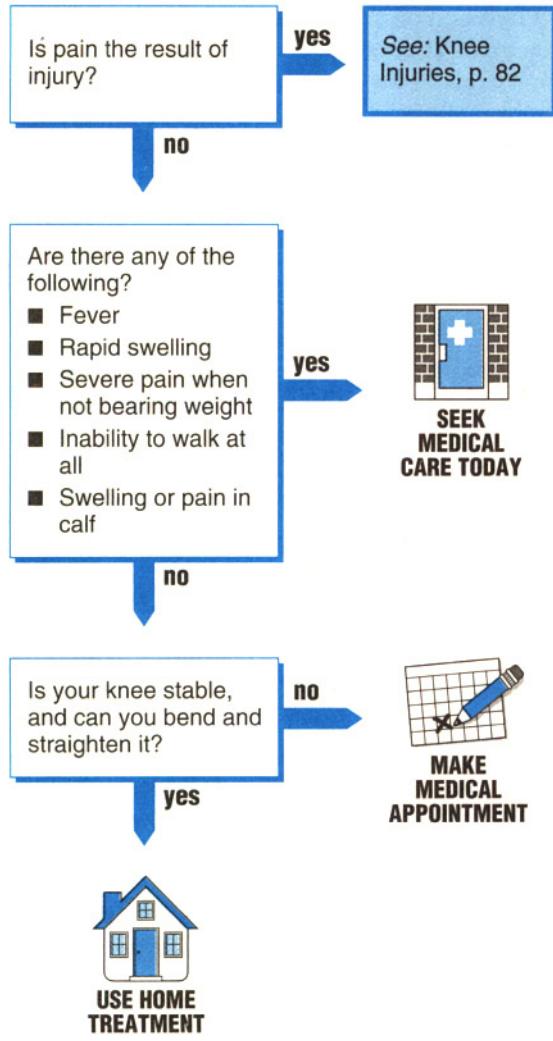
Start exercising slowly. Increase your level of activity until you are exercising several times daily. Here is a gradual program:

- Start by bending and straightening the leg. Work at getting it straight and keeping it straight. You may find it more comfortable to sit or lie down while a friend moves the leg for you.
- Next, begin gentle exercises. Tighten your thigh muscles and hold for two seconds, then rest for two seconds. Do ten repetitions three times a day.
- Introduce gentle activity. A bicycle in low gear is a good place to start. Stationary bicycles are fine. Be sure that the seat is high enough so your knee doesn't bend to more than a right angle as you pedal.
- Swimming and walking are very good activities for knees. Gradually increase your distance. Avoid exercise and activities that involve deep knee bends; these place too much stress on the knee.

See your doctor if your knee is painful after six weeks of home treatment.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine your knee and other joints. You may have an X-ray done of your knee. The doctor may use a needle to draw fluid from the knee.

KNEE PAIN

Several operations are helpful for knee problems, including surgery to trim or remove cartilage. Increasingly, doctors are using an arthroscope to diagnose and treat knee problems. This is a minor procedure.

For severe and persistent problems, the doctor may suggest total knee replacement. This surgery is usually successful in giving total pain relief.

BENEFITS OF EXERCISE

Does exercise such as walking or running cause knee problems? No. If the knee isn't injured, exercise and weight bearing are good. They help nourish the cartilage, and they keep the side ligaments, the muscles, and the bones strong, which helps keep the knee stable.

Leg Pain

Four types of problems account for most leg pain not associated with injuries:

- Inflammation and clots in veins—thrombophlebitis
- Infection of the calf—cellulitis
- Narrowing of arteries—intermittent claudication
- “Overuse” problems associated with vigorous exercise, collectively referred to as “shin splints” (page 226)

Thrombophlebitis is most likely to occur after a prolonged period of inactivity, such as a long car or plane ride. The pain is aching and usually not localized, but sometimes a firm and tender vein can be felt in the middle of the calf. Swelling doesn't always occur or may be so slight that it's hard to detect.

Cellulitis is an infection of the leg tissues, usually limited to the calf and ankle regions. It can mimic thrombophlebitis. Treatment requires antibiotics.

A “Baker's cyst” behind the knee can, rarely, be the cause of leg pain and swelling. It may require injection of a corticosteroid medication or other measures.

In older people or heavy smokers, the arteries in the leg may become narrowed so that not enough blood reaches the muscles during even such mild exercise as walking. The pain that this causes is called intermittent claudication, because the pain is brought on by exercise, but relief comes in a few minutes with rest.

Both thrombophlebitis and intermittent claudication will require the help of the

doctor, but thrombophlebitis is more urgent. A decision on the method of treatment should be made as soon as possible.

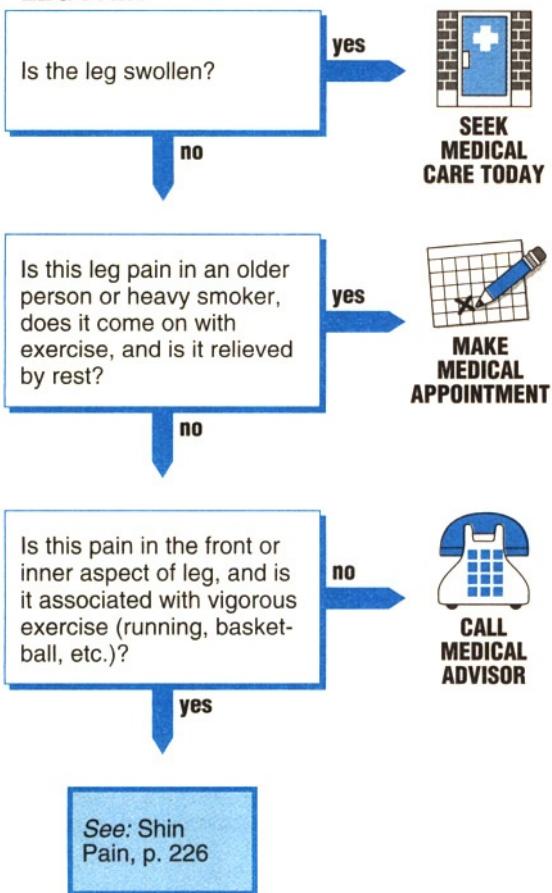
Consult the physician by telephone for leg pain that doesn't fit the description of intermittent claudication, thrombophlebitis, or shin splints.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If thrombophlebitis is suspected, the crucial question is whether or not to prescribe anti-coagulants (blood thinners). The purpose of anticoagulants is to minimize the risk of a clot going to the lungs—pulmonary embolism. However, the effectiveness of anticoagulants is far from complete, and the therapy itself carries substantial risks.

Current information suggests that a simple test called impedance plethysmography (IPG) is very useful in detecting the presence of thrombophlebitis in the thigh. Because thrombophlebitis in the calf alone is thought to produce little risk of pulmonary embolism, a negative IPG test indicates no need for anticoagulants. IPG is painless and requires no surgery or injections. Regardless of whether IPG is done, you and the doctor must come to an understanding about the risks and benefits of anticoagulant therapy before making a decision.

Intermittent claudication can usually be diagnosed from history and physical examination. However, if the problem is substantial, an arteriogram (a special X-ray of the arteries of the legs) will be required to determine where the problem lies before treatment can be considered. Therapy, if required, is one of several surgical procedures ranging from insertion of a special tube (balloon catheter) so that the artery is widened to bypass the obstructed segment with a synthetic graft.

LEG PAIN

Shin Pain

Shin pain is often called "shin splints," a catchall term that may indicate any one of four conditions associated with strenuous exercise, usually after a period of relative inactivity.

Posterior tibial shin splints are the "original" shin splints and account for about 75% of the problems affecting athletes in the front portion of their legs. Overstressing the posterior tibial muscle causes pain where the muscle attaches to the tibia, or shinbone, which is easily seen and felt in the front of your leg. Pain and tenderness are located in a three- to four-inch (8–10 cm) area on the inner edge of the tibia about midway between the knee and ankle. It is the muscle and the attachments to the bone that are painful; the front of the tibia itself, felt immediately beneath the skin, is not tender.

The front of the tibial bone is tender, however, in another form of shin splint, tibial perostitis. The pain and tenderness are similar to that in posterior tibial shin splints except that it is more toward the front of the leg and the bone itself is tender.

A third form of shin splint, anterior compartment syndrome, is located on the outer side of the front of the leg. You can readily feel the difference between the hard tibial bone and the muscles located in the anterior compartment. Pain arises when the muscles swell with blood during hard use. The compartment cannot increase in size so that the swelling squeezes the blood vessels and diminishes blood flow. The lack of adequate blood flow to the muscles causes

the pain. After you rest for 10 to 15 minutes, the pain goes away.

Sharply localized pain and tenderness in the tibia one to two inches (3–5 cm) below the knee is typical of a stress fracture. Just as with stress fractures of the foot, these are likely to occur two to three weeks into an increased training program after the legs have taken a real pounding. As with stress fractures of the foot, stress fractures of the tibia aren't treated with casts, but with rest.

HOME TREATMENT

Posterior Tibial Shin Splints. This condition will usually respond to a week of rest during which the area of tenderness is iced twice a day for 20 minutes. Acetaminophen, aspirin, ibuprofen, or naproxen with every meal may also help (page 38). When the pain is gone, stretch the posterior tibial muscle using the exercises described for Achilles tendinitis (page 234). If you have flat feet, consider getting an arch support (orthotic) for your athletic shoe. Don't begin running again for another two to four weeks, and then only at half speed and with a gradual increase in speed and distance.

Tibial Perostitis. This is treated in the same way as posterior tibial shin splints, except that your gradual return to sports can begin after a week of rest; acetaminophen, aspirin, ibuprofen, or naproxen; and ice therapy. Athletic shoes with good shock absorption, especially in the heel, are very important.

Anterior Compartment Syndrome. This condition will almost always go away as the muscles gradually become accustomed to vigorous exercise. You can help by resting for ten minutes when pain occurs, and running

SHIN PAIN

Is this pain in the front or inner aspect of the leg, and is it associated with vigorous exercise such as running or basketball?

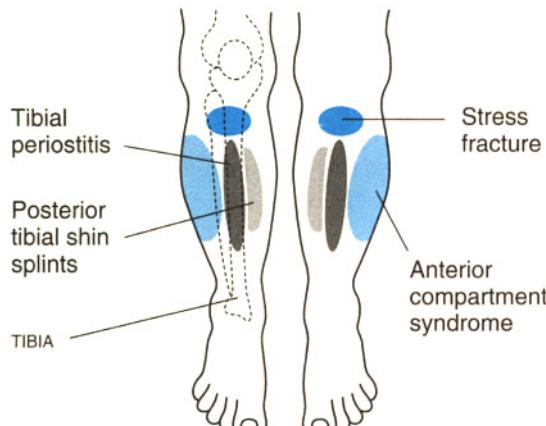
no

See: Leg Pain,
p. 224

yes



USE HOME TREATMENT



Sites of shin pain

slowly when you begin to run again. Cooling the leg with ice for 20 minutes after each workout may also help. Complete rest is not necessary. Shoes and pain relievers are unimportant in the treatment of anterior compartment syndrome. If you're the 1 person in 1,000 with anterior compartment syndrome for whom the problem doesn't go away with home treatment, surgery can be considered.

Stress Fractures. These require rest from running, usually for a month, before gradually starting to recondition your legs. Complete healing requires between four and six weeks. Crutches can be used but usually aren't necessary.

Note again that only anterior compartment syndrome has any treatment other than home treatment and that this treatment (surgery) is used only as a last resort. However, if you are unsure as to the nature of the problem or you have made no progress with home treatment after several weeks, consult the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Home treatment will be prescribed for any of the four varieties of shin splints. In the very rare event that anterior compartment syndrome doesn't go away over time, the pressure can be relieved by splitting the tough, fibrous tissue (fascia) that surrounds the muscles. This is a relatively simple surgical procedure and can be accomplished without requiring a stay in the hospital.

Ankle Pain

The ankle is a large weight-bearing joint that is unavoidably stressed at each step. Several kinds of arthritis can involve the bones and cartilage of the ankle, but pain and instability are more frequently a result of problems in the ligaments.

With an ankle sprain, the ligament attaching the bump on the outer side of the ankle to the outer surface of the foot is injured at one or both ends; the ankle itself is all right.

With arthritis, injured ligaments may let the joint slip and wobble. This results in further stress on the ligaments, pain, and instability. Walking on an unstable joint increases the damage, but with a stable joint, walking is usually all right.

If you look at your leg when you are lying down and again when you are standing, you can tell if the joint is stable. If it is unstable, the line of your leg won't be straight down to the foot when you stand. Perhaps the foot will be slipped a half inch to an inch (1-3 cm) to the outside of where it should be. When you aren't bearing weight, it will move back in line toward a more normal position. The unstable joint may actually slip sideways if you try to move the foot with your hands. Instability is not just a swollen ankle (page 230); the ankle must be crooked to be unstable.

HOME TREATMENT

Listen to the pain message. It is telling you to rest your ankle a bit more, to provide support for an unstable ankle, to back off your exercise

program, or to use an aid to take weight off the ankle. The unstable ankle should be supported for major weight-bearing activity.

Support is most simply obtained from high-lacing boots, but sometimes these will be too uncomfortable and you will need specially made boots or an ankle brace. Professional help is required for adequate fitting of such devices, and they can be quite expensive.

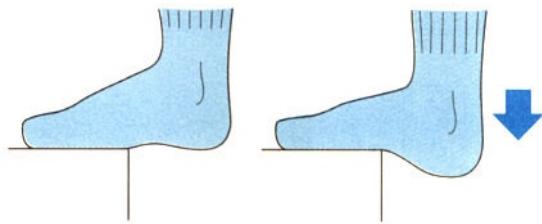
Crutches and even a cane can help you take the weight off the sore ankle.

For the stable ankle, an elastic bandage (page 54) and a shoe with a comfortable, thick heel pad will help. Jogging shoes are good. Light hiking boots, resembling running shoes that go above the ankle, are often excellent.

If you have arthritis, make particularly sure that you have been taking any prescribed medication exactly as ordered. Sometimes a patient gets a little bored and lax with the pill-taking routine and a few days later experiences pain or swelling.

As soon as the pain begins to decrease, you can gently begin to exercise the joint again. Swimming is good because you don't have to bear weight. Start easily and slowly with your exercises.

1. Sit on a chair, let the leg hang, and wiggle the foot up and down and in and out.
2. Later, walk carefully with an ankle bandage for support. Stretch the ankle by putting the forefoot on a slightly raised surface, such as a step, and lowering the heel.



ANKLE PAIN

Is this pain due to an injury?

yes

See: Ankle Injuries, p. 80

no

Are there any of the following?

- Fever
- Heat and redness
- Severe pain when not bearing weight
- Inability to walk at all

yes



**SEEK
MEDICAL
CARE TODAY**

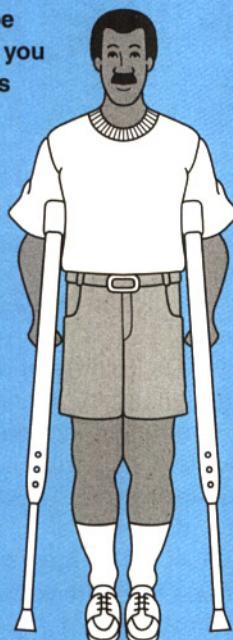
no



**USE HOME
TREATMENT**

USING CRUTCHES

Crutches should be short enough so you don't injure the nerves in your armpits by leaning on the crutch. Take the weight on your hands or arms. When a person stands straight, crutches should reach from six inches to the side of the feet to two inches—or three to four fingers' width—below the armpits.



3. As the ankle gains strength, you can walk on tiptoe and walk on your heels to stretch and strengthen the joint.

Do the exercises several times a day. The ankle shouldn't be a lot worse after exercising, if you aren't overdoing it. Keep at it, take your time, and be patient.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The ankle and the area around it will be examined. X-rays may be necessary. The

doctor may prescribe anti-inflammatory medications or increase the dosage if you are already taking them. Special shoes or braces may be prescribed.

Surgery is occasionally necessary. Fusing some of the ankle bones together is generally the most useful procedure. A fixed, pain-free ankle is far preferable to an unstable and painful one. The artificial ankle joint isn't yet satisfactory for most people, but engineers are making rapid progress in this area.

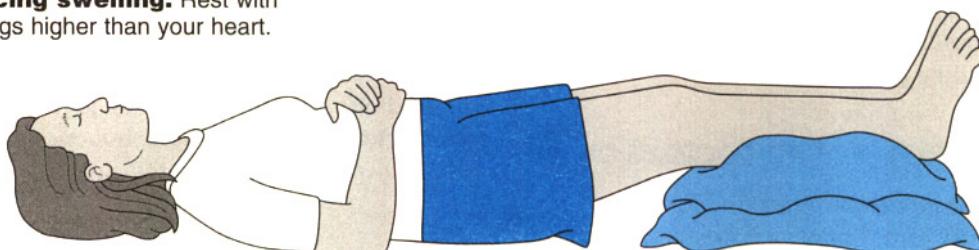
Ankle and Leg Swelling

Painless swelling of the ankles is a common problem, and the swelling usually affects both legs and may extend up the calves or even the thighs.

Usually the problem is fluid accumulation (edema). This is most pronounced in the lower legs because of the effects of gravity. If there is excess fluid and you press firmly with your thumb on the area that is swollen, it will squeeze the fluid out of that area and leave a deep impression. The depression will stay for a few moments.

Fortunately most swelling is due to local causes. Often, breakdowns in the veins over time have made it difficult for blood to be returned to the heart fast enough. This increases pressure in the smallest blood vessels (capillaries) and causes fluid to leak out into the tissues, which causes the leg swelling. This is what happens in "varicose veins," but the problem can happen with larger, deeper veins as well as with capillaries.

Reducing swelling. Rest with your legs higher than your heart.



Serious Problems

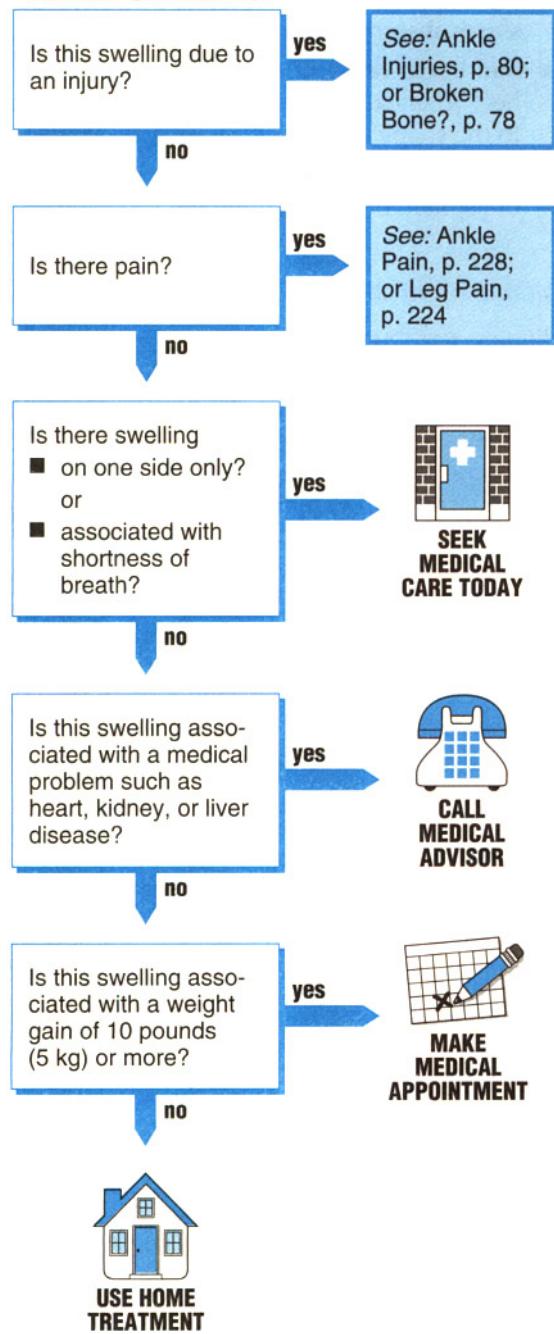
If just one leg becomes swollen rapidly, thrombophlebitis (a blood clot in the vein) may be present, and a doctor is needed (page 224). Thrombophlebitis usually causes pain and redness also, but this isn't always true.

Accumulation of fluid in the body as a result of heart failure can also result in swollen ankles. With serious lung disease, such as emphysema, blood may "back up" through the heart, increase pressure in the veins, and thus cause ankle swelling. More rarely, a problem with the kidneys can result in swelling of the ankles. With serious liver disease, retention of fluid is very common. This fluid tends to accumulate primarily in the abdomen but is also frequently present in the legs.

HOME TREATMENT

If there is an associated medical problem, the most important treatment will come from your doctor. However, all kinds of ankle swelling can be helped by things you can do yourself. First, you need to exercise your legs. As you work the muscles, the fluid tends to work back into the veins and lymphatic channels, and the swelling tends to go down.

Ankle swelling is almost always a signal that your body has too much salt. A low-salt

ANKLE SWELLING

diet helps decrease the fluid retention and the ankle swelling.

Elevating your legs can help the fluid drain back into more proper parts of your circulatory system. Lie down and prop your legs up so they are higher than your heart as you rest. One or two pillows under the calves will help. Be sure not to place anything directly under the knees and don't wear any constricting clothing or garters on the upper legs.

Avoid sitting or standing without moving for long periods of time. If you must be in these positions, work the muscles in your calves by wiggling your feet and toes frequently. Support stockings, by applying constant external pressure, help reduce ankle swelling.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will conduct a thorough examination including heart and lungs as well as the legs. Blood tests may be taken to check the function of your kidneys and your liver and to measure the proteins in your blood. The specific treatment will be directed at whatever underlying cause is found. Diuretics (pills that decrease fluids in the body by increasing urination) may be prescribed. These are effective, but, of course, they have some side effects, such as causing loss of potassium from the body. If home treatment is successful, it is generally better than using drugs.

Heel Pain

The most frequent causes of heel pain are sometimes referred to as injuries, but they aren't due to a single event such as a fall or twist. Each of the following problems usually brings tenderness and some swelling.

Plantar fasciitis is a sprain of the tendon that is attached to the front of the heel bone and runs forward along the bottom of the foot. There are four main causes of plantar fasciitis:

- Feet that flatten and roll inwardly (pronate) excessively when walking or running
- Shoes with inadequate arch support
- Sudden turns that put great stress on the ligaments
- Running on hard surfaces or up hills

The retrocalcaneal bursa is a fluid-filled sac that surrounds the back of the heel. This may become inflamed (bursitis) due to pressure from shoes. For this reason, it is sometimes called a "pump bump." The inferior calcaneal bursa is located underneath the heel. Inflammation here is usually caused by landing hard or awkwardly on the heel.

The Achilles tendon is the large tendon that connects the calf muscles to the back of the heel. Achilles tendinitis occurs when the calf muscles repeatedly contract hard or suddenly. There are four factors that contribute to Achilles tendinitis:

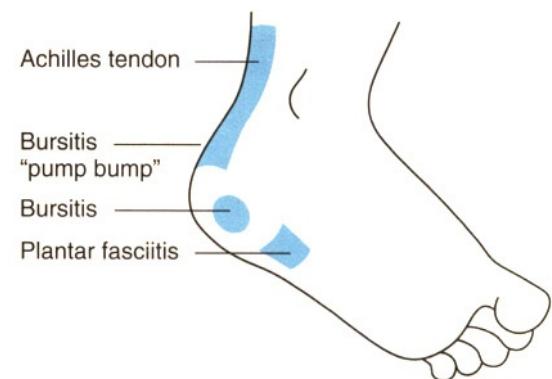
- Shortening of and lack of flexibility in the calf muscle—Achilles tendon unit (the main cause)

- Shoes that don't provide good stability and shock absorption for the heel
- Sudden inward or outward turning of the heel when striking the ground (this is due to the shape of the foot, an inherited trait)
- Running on hard surfaces such as concrete or asphalt, or running on hills

HOME TREATMENT

Plantar Fasciitis. Give your feet as much rest as possible for a week or so. Pain relievers can be used for comfort (page 38). Use that time to get proper-fitting shoes—that is, shoes with adequate arch supports and flexible soles. A one-quarter-inch (6 mm) heel pad is a good idea. Some people need to wear only well-padded shoes, such as running shoes. Lace the top two eyelets very firmly to take some tension off your ligaments. Try an orthotic device (obtained through a podiatrist or orthopedic surgeon), especially if there is excessive pronation of the foot. Be very patient. This problem can take a long time to go away.

Bursitis. Resting for seven to ten days and taking a pain reliever with each meal will help



HEEL PAIN

Is this pain on the bottom of the foot about 1 to 2 inches (3–5 cm) from the back edge of the heel?

yes



...for plantar fasciitis.

no

Is this pain and swelling just above the back of the heel or on the bottom of the heel near the back edge?

yes



...for bursitis.

no

Is this pain and tenderness in the Achilles tendon, usually about 2 to 3 inches (5–8 cm) above the bottom edge of the heel?

yes



...for Achilles tendinitis.

no

Has problem persisted for more than 6 weeks?

yes



MAKE
MEDICAL
APPOINTMENT

no



**USE HOME
TREATMENT**

relieve the initial problem (page 38). For retrocalcaneal bursitis, getting a new shoe or stretching the old shoe so that there is no rubbing against the heel is recommended. Moleskin may be used to relieve pressure from the "pump bump."

Achilles Tendinitis. Stop exercising, apply ice twice daily to the tendon, and take a pain reliever with each meal for a week (page 38). After that, stretching is the most important treatment. Remember to stretch and hold the stretched position. Do not bounce.

One method of stretching the Achilles tendon is wall push-ups:

1. Stand two feet (0.7 m) from a wall, hands outstretched and placed on the wall.
2. Bend elbows so that body moves closer to the wall. Keep heels on the ground.
3. Hold for a count of ten and push away from wall.

4. Repeat ten times per session, three sessions a day.

Slow improvement is the rule in most cases. If things are getting worse despite home treatment or if there is little progress after a month, see your doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Plantar Fasciitis and Bursitis. Cortisone injections, no more than three, may be tried if adjustments to the shoe and the use of orthotics haven't been successful. Surgery is a last resort and is seldom necessary.

Achilles Tendinitis. A stronger oral anti-inflammatory medicine may be prescribed, but cortisone injections aren't done because they may weaken the tendon and lead to rupture. In particularly resistant cases, a walking cast may be tried. Surgery is almost never recommended.

Foot Pain

There are some common problems that often lead to unnecessary pain or an unnecessary visit to the doctor's office.

The nerves that supply sensation to the front portion of your foot and your toes run between the long bones of the foot, the metatarsals. (There is a metatarsal just behind each toe.) Tight-fitting shoes can squeeze the nerves between the bones, and this may cause swelling in a nerve, a Morton's neuroma. The swelling is very sensitive, and pressure can cause intense pain. If pressure is constant, some numbness between the toes may also occur. Morton's neuroma occurs most commonly between the third and fourth metatarsals (between the middle toe and the next toe toward the outside of the foot).

If your big toe points toward the other four toes on that foot, the end of the metatarsal behind the big toe may rub against the shoe. The skin thickens over the end of the metatarsal, and the metatarsal itself may develop a bony spur at that point. This is a bunion, and if it becomes inflamed and sore, it can make life miserable.

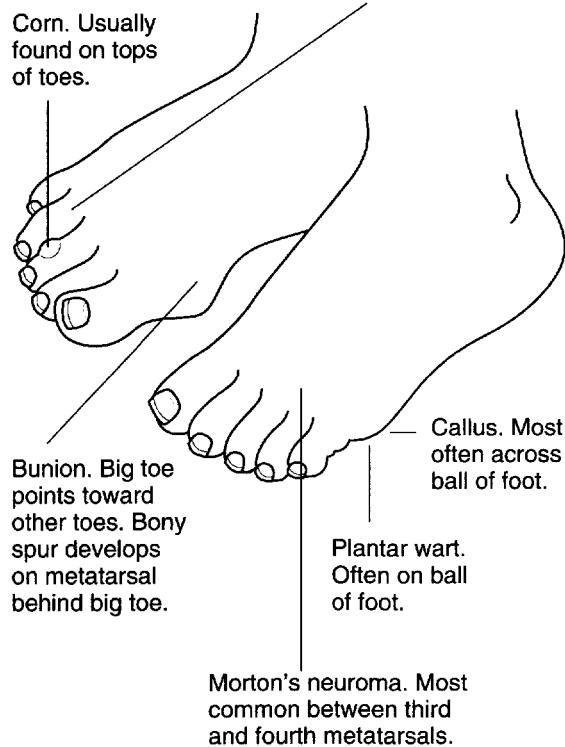
Corns and calluses are the results of friction, and friction is usually caused by ill-fitting shoes. Corns appear as lumps of thickened skin that may be hard with a clear core or soft and moist. They are usually found on the tops of toes. Calluses also appear as thickened skin but are less lumpy and are most often found across the ball of the foot.

Plantar warts are caused by a virus and are often found on the ball of the foot. They may be distinguished from calluses by small

black dots within the wart, the interruption of normal skin lines, and the inward growth of the wart.

Unaccustomed, heavy use of the feet, as in beginning training for running or basketball, may produce enough stress to produce a crack—stress fracture—in the metatarsals. The fourth metatarsal is most vulnerable to this. A stress fracture usually occurs several weeks into an increased training session or other activity involving strenuous use of the feet. Pain usually comes on gradually.

Stress fracture.
Fourth metatarsal
most vulnerable.



Sites of foot problems

HOME TREATMENT

Morton's Neuroma. Shoes with adequate room around the ball of the foot are necessary. Acetaminophen three times a day for two to three weeks may also help (page 38).

Bunion. Place a small sponge or pad between the big and second toes so that the big toe becomes aligned with the other four toes. Moleskin or padding around the bunion may help relieve pressure. Shoes wide enough in the ball of the foot, so that pressure isn't applied, will help. Acetaminophen or other pain medication may be used as above (page 38).

Corns and Calluses. The first step is to make sure your shoes fit properly. Sandals, if practical, and cushioning socks can be helpful. The "corn plasters" containing 40% salicylic acid available without a prescription are effective. Be sure to follow the directions: cut the plaster so that it is smaller than the corn or callus, and be careful in removing the dead skin that the plaster produces. A doctor's visit is rarely needed.

Plantar Warts. Good shoes and corn plasters can be effective for plantar warts also, but the removal of dead skin may be more difficult and time-consuming. For this reason plantar warts end up in the doctor's office more often than corns and calluses. See the doctor if you are making no progress in decreasing the size of the problem. Meanwhile, wear slippers or bath shoes to decrease the likelihood of passing the virus on to someone else.

Metatarsal Stress Fracture. You are going to have to give your foot a rest. Using crutches for a week or so may be helpful in getting pressure off the foot if it is particularly

painful. Remember that it may take from six weeks to three months for the fracture to heal completely so that you can return to full activity. A cast doesn't reduce the healing time and may create other problems, so most doctors avoid any kind of cast if at all possible.

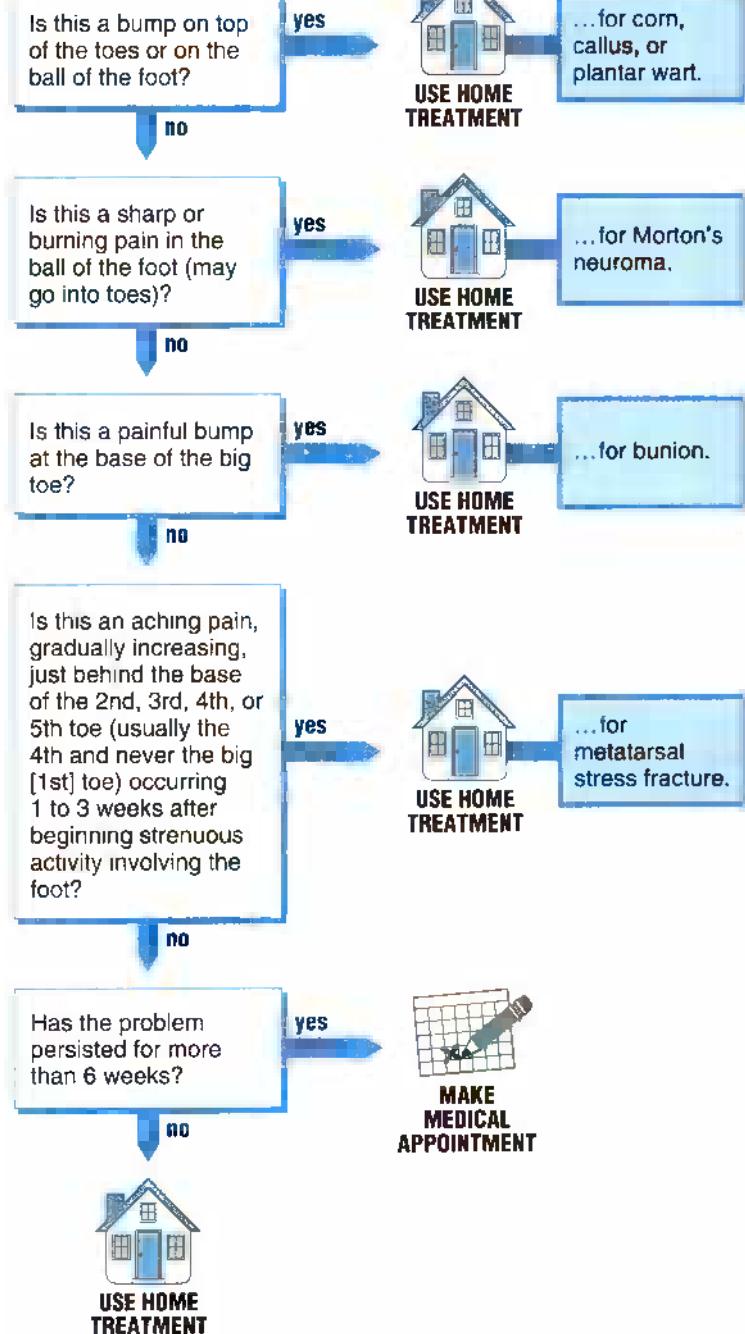
WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Morton's Neuroma. Cortisone injections, no more than three, may be tried if relief hasn't been obtained with oral medication and switching shoes. If these fail, the neuroma can be removed surgically. The operation usually leaves a region of skin on the foot permanently numb.

Bunion. If the bunion is particularly inflamed, a cortisone injection can provide temporary relief. If the big toe is so crooked that adjusting the shoes and using moleskin don't help, then surgery to realign the big toe may be needed.

Plantar Warts. The doctor may use cold (liquid nitrogen), heat (electrocoagulation), or surgery to remove a plantar wart. Unfortunately, plantar warts often recur.

Metatarsal Stress Fracture. The doctor has little to offer to relieve metatarsal stress fractures. You can get crutches at the drugstore. Casts are to be avoided if at all possible, and surgery is virtually never done. A walking cast for an incredibly painful foot is about the only thing the doctor can do that you can't.

FOOT PAIN

CHAPTER 9

Chest, Abdominal, and Urinary Problems

Chest Pain

Chest pain is a serious symptom meaning "heart attack" to most people. However, many things in the chest can cause pain. Often it's hard even for a doctor to figure out the cause.

There's no easy rule to decide which pains you may treat at home. If you have any doubts about chest pain, or have other symptoms such as shortness of breath, call 911 immediately.

The heart almost never causes pain for healthy men under 30 years of age or women under 40. Heart pain remains rare among men in their 40s and women in their 50s. Until middle age, chest pain is usually caused by something other than the heart:

- A brief, shooting pain is common in healthy young people and means nothing. So is a "catch" at the end of a deep breath.
- Hyperventilation is a common cause of chest pain, particularly in young people (page 278).
- If you press at the spot of discomfort and cause or worsen the pain, it is probably

coming from the chest wall, not the heart. You can treat this pain at home.

- The pain of pleurisy gets worse with a deep breath or cough. Call your doctor.
- If the pain throbs with each heartbeat, the covering of the heart may be inflamed (pericarditis). Call your doctor.
- Pain from an ulcer is worse on an empty stomach and gets better with food. Call your doctor.
- Pain from the gallbladder is often more intense after a meal. Call your doctor.

HOME TREATMENT

Treat pain in the chest wall with a pain reliever (page 38) or topical treatments (e.g., Ben-Gay, Vicks Vaporub). Rest and heat will also help. See the doctor if chest pain lasts for more than five days.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will take the history and do a physical examination. Most likely, the doctor will run an electrocardiogram (EKG) and blood tests. The doctor may do additional tests if the cause of chest pain remains unknown. The person with chest pain may need to stay in the hospital. The doctor may prescribe pain medication.

CHEST PAIN

Are any of the following present?

- Shortness of breath
- Irregular heartbeat or pulse
- Sweating or dizziness
- Severe pain
- Nausea

yes

Call 911.

no

Do you feel new or worsening pains that might be angina?

yes



**CALL
MEDICAL
ADVISOR**

no

Is chest tender to touch in the area of pain?

yes



**USE HOME
TREATMENT**

no



**MAKE
MEDICAL
APPOINTMENT**

HEART ATTACK

The chest pain of a heart attack is usually intense, though it can be mild. Sometimes the sensation is more like pressure or squeezing on the chest. Usually the pain or discomfort is centered beneath the breastbone. The pain may radiate to the jaw or down the inner part of either arm.

A person having a heart attack may experience nausea, sweating, dizziness, or shortness of breath. Call 911 immediately if you suspect a heart attack.

Chest pain that occurs with exertion and goes away with rest isn't an actual heart attack. Doctors call this angina pectoris, or angina. The risk of a heart attack is highest when you feel new or worse angina pain. Call your doctor immediately if you have new angina pains.

Shortness of Breath

This symptom is normal under circumstances of strenuous activity. The medical use of "shortness of breath" doesn't include shortness of breath after heavy exertion, being "breathless" with excitement, or having clogged nasal passages. These instances aren't cause for alarm.

Rather, shortness of breath is a problem if you:

- Get "winded" after slight exertion or at rest
- Wake up in the night out of breath
- Have to sleep propped up on several pillows to avoid becoming short of breath

This is a serious symptom that should be promptly evaluated by your doctor.

If wheezing is present, the problem is probably not as serious, but attention is needed just as promptly. In this instance, you may have asthma or early emphysema. See Wheezing (page 120).

A sudden onset of a new symptom of shortness of breath can, rarely, be a symptom of a blood clot in the lungs called a pulmonary embolus. There may have been leg swelling or pain before. This is a medical **emergency**, even if the shortness of breath is not too severe.

Hyperventilation syndrome (page 278) is a common cause of shortness of breath in previously healthy young people and is almost always the problem if the fingers are tingling. In this syndrome the patient is actually overbreathing but has the sensation of shortness of breath.

A second emotional problem that may include the complaint of difficult breathing is

mental depression (page 282). Deep, sighing respirations are a frequent symptom in depressed individuals.

HOME TREATMENT

Rest, relax, and use the treatment described for hyperventilation syndrome (page 278) if indicated. If the problem persists, see a doctor. There isn't much you can do for shortness of breath at home.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will thoroughly examine the lungs, heart, and upper airway passages. Electrocardiograms (EKGs), chest X-rays, and blood tests will sometimes be necessary. Depending on the cause and severity of the problem, the doctor may prescribe hospitalization, fluid pills, heart pills, or asthma medicine. Oxygen is less frequently helpful than commonly imagined and can be hazardous for patients with emphysema.

**SHORTNESS
OF BREATH**

Is there shortness of breath at rest, or is shortness of breath associated with wheezing?

yes



**SEEK
MEDICAL
CARE NOW**

no

Did this shortness of breath begin suddenly?

yes



**SEEK
MEDICAL
CARE NOW**

no

Is there tingling in the fingers?

yes

See:
Hyperventilation
Syndrome,
p. 278

no



**MAKE
MEDICAL
APPOINTMENT**

Palpitations

Everyone experiences palpitations. A pounding heart seems serious but is usually trivial. It can be brought on by strenuous exercise or intense emotion or can just happen. It is seldom associated with serious disease. Most people who complain of palpitations don't have heart disease but are overly concerned about the possibility of such disease and thus overly sensitive to normal heart actions. Often this anxiety stems from heart disease in parents, other relatives, or friends.

Understanding the Pulse

The pulse can be felt on the inside of the wrist, in the neck, or over the heart itself. On your next checkup, ask the nurse or doctor to check your method of taking pulses. Take your own pulse and those of your family, noting the variation with respiration. There is a normal variation in the pulse with respiration (faster when breathing in, slower when breathing out). Even though the pulse may speed up or slow down, the normal pulse has a regular rhythm.

Occasional extra heartbeats, felt as "flip-flops" or thumps in the chest, occur in nearly everyone. The most common time to notice these extra beats is just before going to sleep. They are of no consequence unless they're frequent (more than five per minute) or if they occur in runs of three or more.

Rapid pulses may also mimic palpitations. In adults, a heart rate greater than 120 beats per minute (without exercise) is cause to check with your doctor. Young children may have normal heart rates in that range, but they

rarely complain of the heart pounding. If one does, check the situation with your doctor.

Causes

Keep in mind that the most frequent causes of rapid heartbeat (other than exercise) are anxiety (page 276) and fever (page 262). The presence of shortness of breath (page 240) or chest pain (page 238) increases the chances of a significant problem. Hyperventilation may also cause pounding and chest discomfort, but the heart rate remains less than 120 beats per minute (page 278).

HOME TREATMENT

If a person seems stressed or anxious, focus on this rather than on the possibilities of heart disease. If anxiety doesn't seem a likely cause and the person has none of the other symptoms on the decision chart, discuss the problem with the doctor by phone. If it persists, see the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Tell the doctor the exact rate of the pulse and whether or not the rhythm was regular. Usually the symptoms will disappear by the time you see the doctor, so the accuracy of your story becomes crucial. The doctor will examine your heart and lungs. An electrocardiogram (EKG) is unlikely to help if the problem is not present when the test is being done. A chest X-ray is seldom needed.

Don't expect reassurance from a doctor that your heart will be sound for the next month, year, or decade. Your doctor has no crystal ball, nor can he or she perform an annual tune-up or oil change. You, not the doctor, are in charge of the preventive maintenance of your heart (see Chapter 1).

PALPITATIONS

Is there shortness of breath, or is there chest pain?

no

yes



SEEK
MEDICAL
CARE NOW

Are extra beats more than 4 per minute or coming in runs of 3 or more?

no

yes



SEEK
MEDICAL
CARE TODAY

Is the pulse more than 120 beats per minute?

no

yes



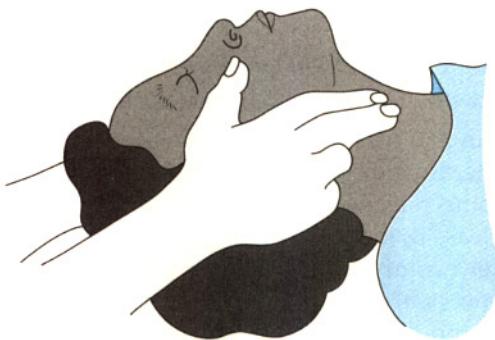
SEEK
MEDICAL
CARE TODAY



USE HOME
TREATMENT



Wrist pulse. This drawing shows the technique for taking a pulse from the inside of the wrist.
(Caution: Do not use your thumb, which has its own pulse.)



Neck pulse. This drawing shows the technique for taking a pulse from either side of the neck.
(Caution: Do not take pulse from both sides of the neck at once.)

Nausea and Vomiting

Medications are the most common cause of nausea and vomiting in the elderly, whereas viral infections are the most common cause in children and young adults. When viruses are to blame, diarrhea is usually present as well.

Food poisoning is often blamed for stomach problems but is actually one of the less frequent causes of nausea and vomiting. In any event, nausea and vomiting caused by food poisoning are treated the same way as any other kind.

Dangers of Vomiting

Dehydration is the real threat with most vomiting. The speed with which dehydration develops depends on the size of the individual, the frequency of the vomiting, and the presence of diarrhea. Thus, infants with frequent vomiting and diarrhea are at the greatest risk. Signs of dehydration are:

- Marked thirst
- Infrequent urination or dark yellow urine
- Dry mouth or eyes that appear sunken
- Skin that has lost its normal elasticity. To determine this, gently pinch the skin on the stomach using all five fingers. When you release it, it should spring back immediately; compare with another person's skin if necessary. When the skin remains tented up and doesn't spring back normally, the person may be dehydrated.

Bleeding (bloody or black vomit) or severe abdominal pain also requires a doctor's attention immediately. Some abdominal dis-

comfort accompanies almost every case of vomiting, but severe pain is unusual.

Head injuries may be associated with vomiting (page 86).

When pregnancy, diabetes, or medications cause nausea and vomiting, getting the doctor's advice by phone is usually sufficient to determine the approach you should take.

Headache and stiff neck along with vomiting are sometimes seen in meningitis, so an early visit to the doctor's office for further advice is wise. Lethargy or marked irritability in a young child has a similar implication.

Persistent nausea without vomiting is often due to medication, occasionally to ulcers or cancer.

HOME TREATMENT

The objective of home treatment is to take in as much fluid as possible without upsetting the stomach any further. Sip clear fluids such as water or ginger ale. Suck on ice chips if nothing else will stay down. Don't drink much at any one time, and avoid solid foods. As your condition improves, try soups, bouillon, Jell-O, and applesauce. Milk products may help but sometimes aggravate the situation. Work up to a normal diet slowly. Popsicles or iced fruit bars often work well with children.

If vomiting persists for more than 72 hours, or if the person isn't hydrated enough after that time, check with your doctor.

If a medication might be responsible, call the doctor to see if you should keep taking it. If it might be from an over-the-counter medicine you have taken yourself, stop taking it.

If nausea persists for four weeks, call the doctor.

NAUSEA AND VOMITING

Are any of the following present?

- Black or bloody vomit
- Severe abdominal pain
- Marked irritability or lethargy in a small child
- Headache and stiff neck

no

yes



**SEEK
MEDICAL
CARE NOW**

Are any of the following present?

- Painful or frequent urination
- Signs of dehydration
- Child unable to retain any fluids for 8 hours or more
- Adult unable to retain any fluids for 12 hours or more

no

yes



**SEEK
MEDICAL
CARE TODAY**

Has there been a head injury recently?

no

yes

**See: Head
Injuries, p. 86**

Are any of the following present?

- Diabetes
- Pregnancy or possible pregnancy
- Patient is taking medication

no

yes



**CALL
MEDICAL
ADVISOR**



**USE HOME
TREATMENT**

**WHAT TO EXPECT
AT THE DOCTOR'S OFFICE**

The history and physical examination will focus on determining the degree of dehydration, as well as the possible causes. Blood tests and a urinalysis may be ordered but aren't always necessary. Ordinary X-rays of the abdomen are usually not very helpful, but special X-ray procedures may be necessary in some cases. If dehydration is severe, intravenous fluids may be given. This may require hospitalization, although it can often be done in the doctor's office. The use of antivomiting drugs is controversial, and they should be used only in severe cases.

Diarrhea

Many of the considerations with respect to diarrhea are the same as those in Nausea and Vomiting (page 244). Viruses are the most common cause, and dehydration is the greatest risk. Diarrhea is often accompanied by nausea and vomiting. Vomiting and fever both increase the risk of dehydration. Bacteria or bacterial toxins (food poisoning) may also produce diarrhea, but antibiotics are rarely helpful and may make things worse. As with viral infections, the major danger in bacterial problems is dehydration, and the treatment is essentially the same.

DEHYDRATION

Severe and prolonged diarrhea can lead to dehydration. Fever and vomiting increase fluid loss and raise the risk of dehydration. People with the lowest tolerance for dehydration are infants, the elderly, and those with health problems. Signs of dehydration are:

- Marked thirst
- Scanty urination or dark yellow urine
- Dry mouth
- Eyes that appear sunken
- Skin that has lost its normal elasticity. Normally skin springs back if you pinch it; when a person is dehydrated the skin may remain tented up after pinching.

Dangers of Diarrhea

Black or bloody diarrhea may signal significant bleeding from the stomach or intestines. However, medicines containing bismuth subsalicylate (Pepto-Bismol, etc.) or iron may also turn the stool black. Cramping and intermittent gaslike pains are usual with diarrhea, but severe, steady abdominal pain isn't. Bleeding or severe abdominal pain requires the immediate attention of a doctor.

Many medications may cause diarrhea. Frequent culprits include the following:

- Nonsteroidal anti-inflammatory drugs (NSAIDs), especially meclofenamate (Meclofenamate)—these are often prescribed for arthritis
- Antibiotics
- Gold compounds
- Blood pressure drugs
- Acid-blocking drugs
- Antacids containing magnesium
- Digitalis
- Anticancer drugs

If you are taking such medications, call the doctor who prescribed them.

HOME TREATMENT

As with vomiting, the objective in treating diarrhea is to get as much fluid in as possible without upsetting the intestinal tract any further. Sip clear fluids; plain old tap water is best. If nothing will stay down, sucking on ice chips is usually tolerated and provides some fluid. Avoid juices or sodas for children. Pedialyte is essential for infants.

DIARRHEA

Are any of the following present?

- Black or bloody stools
- Severe abdominal pain

yes



no

Has an infant in 24 hours:

- Had more than 3 watery stools?
- Had a total of more than 7 loose stools and episodes of vomiting (either or both totaling 7)?

yes



no

Are there signs of dehydration?

no

yes



Could a medication be responsible?

no

yes



Has the problem lasted more than 4 days?

no

yes



**USE HOME
TREATMENT**

Once the patient tolerates clear fluids, it is time to eat the foods that spell BRAT:

- Bananas
- Rice
- Applesauce
- Toast

Avoid milk and fats for several days.

Nonprescription preparations such as Pepto-Bismol (bismuth subsalicylate) or Kapectate will change the consistency of the stool from a liquid to a semisolid state, and bismuth subsalicylate may reduce stool amount and frequency (page 49). Adults may try narcotic preparations such as Parepectolin or Parellixir, but these should be avoided in children. If symptoms persist for more than 96 hours, call your doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A thorough history and physical examination with special attention to assessing dehydration will be completed. The abdomen will be examined. Frequently the stools will be examined under the microscope, and occasionally a culture will be taken. A urine specimen may be examined to assist in assessing dehydration. An antibiotic may be prescribed. A narcotic-like preparation (such as Lomotil) may also be prescribed for adults to decrease the frequency of stools. Chronic diarrhea may require more extensive evaluation of the stools, blood tests, and often X-ray examinations of the intestinal tract. As with vomiting, severe dehydration will require intravenous fluids. This may be taken care of in the doctor's office or may require hospitalization.

Heartburn

Heartburn is irritation of the stomach or the esophagus, the tube that leads from the mouth to the stomach. The stomach lining is usually protected from the effects of its own acid. Certain factors, however, such as smoking, caffeine, aspirin, and stress, cause this protection to be impaired. The esophagus is not protected against acid, and a backflow of acid from the stomach into the esophagus causes irritation. There may be a sour taste in the mouth.

Ulcers of the stomach or the upper bowel (duodenum) may also cause pain. Treatment for ulcers is the same as for uncomplicated heartburn, provided that pain isn't severe and there's no evidence of bleeding. Long-lasting stomach ulcers may demand antibiotic treatment (see *Abdominal Pain*, page 250).

Vomiting black, "coffee ground" material or bright red blood means giving the doctor a call. Black stools, rather like tar, have the same significance; however, iron supplements and bismuth subsalicylate (Pepto-Bismol) will also cause black stools.

Heartburn pain ordinarily doesn't go through to the back, and such pain may signal involvement of the pancreas or a severe ulcer.

Rarely, "indigestion" or heartburn can signal a heart attack. If you are over 40 years of age and the heartburn is a new problem, check out the chest pain discussion (page 238).

HOME TREATMENT

Avoid substances that aggravate the problem. The most common irritants are coffee, tea,

alcohol, aspirin, ibuprofen, and naproxen. The contributing effect of smoking or stress must be considered in every sufferer.

Relief is often obtained by using nonabsorbable antacids (Maalox, Mylanta, Gelusil, etc.) every one to two hours (page 41). Baking soda may provide quick relief but isn't suitable for repeated use. Nonfat milk may be substituted for antacid but adds calories. If the pain continues, you can try the nonprescription formulas of Tagamet or Pepcid AC.

If the pain is worse when lying down, the esophagus is probably the problem. Measures that help prevent backflow of acid from the stomach into the esophagus should be employed:

- Avoid lying down or reclining after eating.
- Elevate the head of the bed with blocks four to six inches (10–15 cm).
- Don't wear tight-fitting clothes (girdles, tight jeans).
- Avoid eating or drinking for two hours before going to bed.

If the problem could have been caused by a medication, call the prescribing doctor.

If the problem lasts for more than three days, call your doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will determine if the problem is due to stomach acid, a peptic acid syndrome. If so, treatment will be similar to that outlined above. Medications to reduce secretion of acid may be prescribed. X-rays of the esophagus and stomach (upper GI) may be done, after the patient has swallowed barium, to determine the presence of ulcers and to note if backflow of acid from the stomach into the esophagus,

HEARTBURN

Is there vomiting of black or bloody material, is the person passing tarlike black stools, or is there persistent chest pain?

yes



**SEEK
MEDICAL
CARE NOW**

no

Does the pain go through to the back?

yes



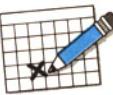
**SEEK
MEDICAL
CARE TODAY**

no

Are all of these present?

- Burning pain just below breastbone or ribs
- Some relief obtained with milk or bland food
- Aggravated by coffee, tea, or alcohol

no



**MAKE
MEDICAL
APPOINTMENT**

yes



**USE HOME
TREATMENT**

or hiatal hernia, is present. Because the treatment for any acid syndrome is essentially the same, an X-ray is usually not done on the first visit. Any indication of bleeding will require a more vigorous approach to therapy.

Abdominal Pain

Abdominal pain can be a sign of a serious condition. Fortunately, minor causes are much more frequent. Location of the pain can help in suggesting the cause.

- **Appendix pain** usually occurs in the right lower quarter of the abdomen
- **Diverticulitis** usually hurts in the left lower quarter of the abdomen
- **Kidney pain**, the back
- **Gallbladder**, the right upper quarter
- **Stomach**, the upper abdomen
- **Bladder** or female organs, the lower areas

Exceptions to these rules do occur.

Pain from hollow organs—such as the bowel or gallbladder—tends to be intermittent and resembles gas pains or colic. Pain from solid organs—kidneys, spleen, liver—tends to be more constant. Stomach ulcers tend to create burning pain in the upper abdomen, which usually gets better after a meal or a dose of antacid. There are exceptions to these rules as well.

When to See a Doctor

If the pain is very severe or if bleeding from the bowel occurs, see a doctor. Similarly, if there has been a significant recent abdominal injury, see the doctor—a ruptured spleen or other major problem is possible.

Pain during pregnancy is potentially serious and must be evaluated. An “ectopic pregnancy”—in the fallopian tube rather than in the uterus—can occur before a woman is even aware she is pregnant. Pain in only one

area suggests a more serious problem than generalized pain; again, there are exceptions. Pain that recurs with the menstrual cycle, especially premenstrually, is typical of endometriosis; see Difficult Periods (page 298).

Stomach ulcers are made worse by excess acid and better by antacids. It's now known that a bacterium called helicobacter pylori is responsible for many, if not most, stomach ulcers. So if your pain isn't completely eased by antacids in a week, see the doctor to consider other forms of therapy.

Appendicitis

The most constant signal of appendicitis is the *order* in which symptoms occur:

1. Pain—usually first around the belly button or just below the breastbone; only later in the right lower quarter of the abdomen
2. Nausea or vomiting or, at the very least, loss of appetite
3. Local tenderness in the right lower quarter of the abdomen
4. Fever ranging from 100° to 102°F (38° to 39°C)

The following signs make appendicitis unlikely:

- Fever precedes or is present at the time of initial pain
- There's *no fever* or a *high fever*, greater than 102°F (39°C), in the first 24 hours
- Vomiting accompanies or precedes the first bout of pain

HOME TREATMENT

Sip water or other clear fluids, but avoid solid foods. A bowel movement, passage of gas through the rectum, or a good belch may give

ABDOMINAL PAIN

Are any of the following present?

- Black or bloody stool
- Moderate or severe abdominal pain
- Abdominal injury in the last 48 hours

yes



no

Is pain localized to one area of the abdomen, or is the person pregnant or possibly pregnant?

yes



no

Is there nausea, vomiting, or diarrhea?

yes

See: Nausea and Vomiting, p. 244; or Diarrhea, p. 246

no



relief—don't hold back. A warm bath helps some patients.

Antacid treatment for heartburn, indigestion, or suspected stomach ulcer should usually begin with 500 mg of calcium carbonate (Tums, etc.) every four hours (page 41). You may also use liquid antacids and periodic drinks of nonfat milk. If antacids fail, try one of the nonprescription medications that help stop stomach acid secretion (page 42). And if these don't work either, a visit to the doctor is in order.

The key to home treatment is periodic reevaluation; any persistent pain should be treated at the emergency room or the doctor's office. Home treatment should be reserved for mild pains that resolve within 24 hours or are clearly identifiable as stomach flu, heartburn, or other minor problems.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will give a thorough examination, particularly of the abdomen. Usually a white blood cell count and urinalysis, and often other laboratory tests, will be recommended. X-rays are generally not important for pain of short duration but are sometimes needed. Observation in the hospital may be required. If the initial evaluation is negative but pain persists, reevaluation is necessary.

Doctors have achieved impressive results treating stomach ulcers with antibacterial agents to kill the helicobacter pylori. If your doctor diagnoses a stomach ulcer, ask about such treatment.

Constipation

Many people are overly preoccupied with constipation. Concern about the shape of the stool, its consistency, its color, and the frequency of bowel movements is often reported to doctors. Such complaints are medically trivial. Only rarely (and then usually in older patients) does a change in bowel habits signal a serious problem.

Weight loss and thin, pencil-like stools suggest a tumor of the lower bowel.

Abdominal pain and a swollen abdomen suggest a possible bowel obstruction.

HOME TREATMENT

We like to encourage a healthy diet for the bowel, followed by a healthy lack of interest in the details of the stool-elimination process. The diet should contain fresh fruits and vegetables for their natural laxative action and adequate fiber residue. Fiber is present in brans, celery, and whole-grain breads and is absent from foods that have been overly processed. Fiber draws water into the stool and adds bulk; thus, it decreases the transit time from mouth to bowel movement and softens the stool.

Bowel movements may occur three times daily or once every three days and still be normal. The stools may change in color, texture, consistency, or bulk without need for concern. They may be regular or irregular. Don't worry about them unless there is a major deviation.

If you need to use laxatives, we prefer a bulk laxative such as Metamucil (page 48). Milk of magnesia is satisfactory, but it and

stronger traditional laxatives should not be used over a long period.

For an acute problem, an enema may help. Fleet's enemas are handy and disposable. If such remedies are needed more than occasionally, ask your doctor about the problem on your next routine visit.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

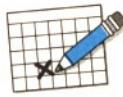
If you have had a major change in bowel habits, expect a rectal examination and, usually, inspection of the lower bowel and sometimes the entire colon with a flexible tube called a sigmoidoscope. An X-ray of the lower bowel (using a barium enema) is often needed. These procedures are generally safe and only mildly uncomfortable. If you have only a minor problem, you may receive advice similar to that under Home Treatment, without examination or procedures.

CONSTIPATION

Is constipation associated with the following?

- Very thin, pencil-like stools
- Abdominal pain and bloating
- Weight loss

yes



**MAKE
MEDICAL
APPOINTMENT**

no



**USE HOME
TREATMENT**

Rectal Problems

Seldom is a rectal problem major, but the discomfort it can cause may make life miserable. Unlike most other medical problems, rectal pain doesn't yield the dividend of a good topic for social conversation.

Hemorrhoids, or "piles," are the most common rectal problem. There is a network of veins around the anus, and they tend to enlarge with age, particularly in individuals who sit a great deal during the day. Straining to have a bowel movement and passing hard, compacted stools tend to irritate these veins, and they may become inflamed, tender, or clogged. They may bleed or bulge outside the anus. The veins themselves are the "hemorrhoids." They may be outside the anal opening and visible (external), or they may be inside and invisible (internal). Pain and inflammation usually disappear within a few days or a few weeks, but this interval can be extremely uncomfortable. After healing, a small flap, or "tag," of vein and scar tissue often remains.

Bleeding from the digestive tract should be taken seriously, especially blood from higher in the digestive tract. This blood will be burgundy or black. Iron supplements or bismuth subsalicylate (Pepto-Bismol) may also turn the stool black. Blood from hemorrhoids may be on the outside of the stool but won't be mixed into the stool substance and frequently will be seen on the toilet paper after wiping. Such bleeding from hemorrhoids isn't medically significant unless it persists for several weeks.

Sometimes a child will suddenly awake in the early evening with rectal pain. This almost

always means pinworms. Though these small worms are seldom seen, they're quite common. They live in the rectum, and the female emerges at night and secretes a sticky and irritating substance around the anus into which she lays her eggs. Occasionally the worms move into the vagina, causing pain and itching in that area. Although the Food and Drug Administration has approved the nonprescription sale of a drug effective against pinworms, the manufacturer refuses to sell it without a prescription. You'll have to call a doctor for a prescription even if you're sure the problem is pinworms.

If rectal pain persists more than a week, consult the doctor. In such cases, a crack in the wall of the rectum may have developed, or an infection or other problem may be present.

HOME TREATMENT

Soften the stool by including more fresh fruits and fiber (bran, celery, whole-grain bread) in the diet, or by using fiber bulk laxatives (page 48). Keep the area clean. Use the shower or sitz bath as an alternative to rubbing with toilet paper.

For external hemorrhoids, after gently drying the painful area, apply zinc oxide paste or powder (page 51). This will protect against further irritation. The various proprietary hemorrhoid preparations are less satisfactory. We prefer not to use compounds with a local anesthetic agent because these compounds may sensitize and irritate the area and may prolong healing. Such compounds have "-caine" in the brand name or in the list of ingredients.

Internal hemorrhoids sometimes may be helped by using a soothing suppository in addition to stool-softening measures. If relief isn't complete within a week, see the doctor.

RECTAL PROBLEMS

Are any of the following present?

- More than a small amount of blood
- Burgundy or black blood
- Blood mixed in the stool

yes



**CALL
MEDICAL
ADVISOR**

no

Are hemorrhoids present?

yes



**USE HOME
TREATMENT**

no



**CALL
MEDICAL
ADVISOR**

Even if the problem resolves quickly, mention it to your doctor on your next visit.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will examine the anus and rectum. If a clot has formed in a hemorrhoid, the vein may be lanced and the clot removed. Major hemorrhoid surgery is seldom required and should be reserved for the most persistent problems. Usually, advice such as that given in Home Treatment will be given.

Incontinence

Incontinence is the inability to hold feces or urine. We're all born incontinent, and as we grow older there's a tendency for this problem to return. Incontinence is a complicated issue because there are many causes and many treatments. It isn't a hopeless condition. The vast majority of people can be greatly helped.

Effects of Aging

In women, the uterus and pelvic floor sag with aging. This changes the angle of the urethra (the tube leading from the bladder) and disposes it to leak urine.

In men, harmless enlargement of the prostate gland tends to block passage of urine until finally the bladder must overflow.

With age, there are sometimes sudden contractions of the bladder muscles. This results in increased pressure at unexpected times. There can be decreased sensitivity to the presence of a full bladder, and once the condition is realized, it can be difficult to get to the toilet in time.

Causes of Incontinence

Drugs such as diuretics ("water pills") can cause major surges in urine flow. Other drugs, such as tranquilizers, sedatives, anticholinergics, pain pills, and antidepressants, can block the normal voiding mechanisms; this results in retention of urine and then incontinence.

Infections of the urinary tract can cause an urgency for which there is no time to react.

Fecal Incontinence

Fecal incontinence is usually due to the presence of hard or impacted stool in the rectum.

This results in diarrhea and incontinence around the impacted stool. Problems with fecal incontinence should be reported to your doctor. This isn't a complaint to be shy about. If you let it persist, it will begin to affect every part of your life and even your self-image.

HOME TREATMENT

For fecal incontinence, it's important that your diet contain adequate fiber, water, and bulk. A soft stool passed twice a week is normal, but you should consider a hard, impacted stool (even if passed in small amounts twice daily) a problem. Fiber—as in whole grains, bran, celery, fresh fruits, and vegetables—is helpful. Preparations (Metamucil, Fiberall, etc.) can be used to add bulk (page 48). Because the presence of impacted feces in the rectum can make you feel bad all over, it is important to get this taken care of immediately. The doctor will help.

Performance of the bladder can often be improved by exercising the muscles that control the urinary outlet. Practice stopping urination in midstream and then starting again. This exercise is often difficult, especially for women, but it will build stronger sphincter muscles. Deliberately contracting the muscles around your anus and urinary tract for a second or two, then relaxing, then repeating, will build strength in these muscles and help tighten the pelvic floor. Many doctors recommend that these exercises be done up to 100 times daily.

Double voiding techniques can be helpful. Here, you empty the bladder as much as you can, wait a minute or so and then empty it again. It is surprising how much additional urine will sometimes be present. "Bladder drill" consists of urinating at fixed intervals, perhaps every four hours, during the day, whether the sensation of urgency is present

INCONTINENCE

Are there other problems with urinating, such as pain, bloody urine, or hesitancy?

yes

See: Difficult Urination for Men, p. 258; or Difficult Urination for Women, p. 260

no

Is there either of the following?

- Repeated incontinence of urine, even small amounts
- Incontinence of feces

yes



**MAKE
MEDICAL
APPOINTMENT**

no



**USE HOME
TREATMENT**

or not; this can help. If you have trouble getting to the toilet on time, consider keeping a urine receptacle close at hand. Absorbent underwear (Depends, etc.) can help avoid embarrassment.

Always suspect that drugs that you're taking might be aggravating the problem; be sure to bring this possibility to the attention of your doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will perform a complete examination, with emphasis on the abdomen, rectum, and urinary opening. Urinalysis will usually

be performed. If there are abnormalities, cystoscopy (inspection of the inside of the bladder) may be performed.

The gynecologist and the urologist are the specialists most familiar with these problems. If simple treatments don't work, a variety of specialized tests may pinpoint the problem.

In women, the doctor will sometimes prescribe a local estrogen cream, which can be surprisingly effective. Uterine or pelvic suspension operations are sometimes needed.

Men may choose prostatectomy, drugs, or simple "watchful waiting." Internal or external tubes (catheters) are sometimes used.

Difficult Urination for Men

theless, using antibiotics has become standard medical practice. Given this and the difficulty of distinguishing between bladder infection and prostatitis, see a doctor unless the symptoms respond quickly and completely to home treatment. Prostatitis and prostatism require the doctor's help.

Infections of the bladder may be signaled by:

- Pain or burning upon urination
- Frequent, urgent urination
- Blood in the urine

These symptoms aren't always caused by infection due to bacteria. They can be due to a viral infection or excessive consumption of caffeine-containing beverages (coffee, tea, and some soft drinks), or they may have no known cause and may be blamed on "nerves."

Infection of the prostate gland—*prostatitis*—may cause symptoms similar to those of a bladder infection. Difficulty in starting urination, dribbling, or decreased force of the urinary stream—symptoms of *prostatism*—may also be present. However, prostatism is much more likely to be due to benign prostatic hypertrophy (BPH) than prostatitis. Some degree of BPH is universal in elderly men. Prostatic cancer may also cause prostatism.

Vomiting, back pain, or teeth-chattering, body-shaking chills aren't typical of bladder or prostate infections and suggest kidney infection. This requires a more vigorous treatment and follow-up. A history of kidney disease (infections, inflammations, and kidney stones) also alters the treatment.

Most, if not all, bacterial bladder infections will respond to home treatment. Never-

HOME TREATMENT

For symptoms of a bladder infection:

- Drink a lot of fluids. Increase fluid intake to the maximum (up to several gallons of fluid in the first 24 hours). Bacteria are literally washed from the body during the resulting copious urination.
- Drink fruit juices. Putting more acid into the urine, while less important than the quantity of fluids, may help bring relief. Cranberry juice is the most effective because it contains a natural antibiotic.

Begin home treatment as soon as symptoms are noted. If symptoms persist for 24 hours or recur, see the doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A urinalysis and culture should be performed. The back and abdomen are usually examined. With symptoms of prostatitis or prostatism, a rectal examination (so that the prostate can be felt) should be expected. With pre-existing kidney disease or symptoms of kidney infection, a more detailed history and physical as well as extra laboratory studies may be needed.

If bacterial infection is determined, the doctor will prescribe an antibiotic. A surgical procedure—there are several—may be chosen to relieve prostatism, but drugs or simple "watchful waiting" may be best for you.

**DIFFICULT
URINATION: MEN**

Are symptoms associated with fever, vomiting, back pain, or shaking chills?

no

yes



Is there a discharge from the penis?

no

yes

See: Sexual
Problems and
Questions,
Chapter 12

Is the problem associated with hesitancy, dribbling, or weak urine stream?

no

yes



Is blood in the urine the only symptom?

no

yes



USE HOME
TREATMENT

Difficult Urination for Women

The best-known symptoms of bladder infection are:

- Pain or burning on urination
- Frequent, urgent urination
- Blood in the urine

These symptoms aren't always caused by infection due to bacteria. They can be due to a viral infection, excessive use of caffeine-containing beverages (coffee, tea, and cola drinks), or bladder spasm, or they can have no known cause (i.e., "nerves").

Bladder infection is far more common in women than it is in men. The female urethra, the tube leading from the bladder to the outside of the body, is only about one-half inch (1 cm) long—a short distance for bacteria to travel to reach the bladder. Sometimes bladder infection is related to sexual activity; hence, "honeymoon cystitis" has become a well-known medical syndrome.

Bladder infections are common during pregnancy. Treatment may be more difficult and must take the pregnancy into account.

Vomiting, back pain, or teeth-chattering, body-shaking chills aren't typical of bladder infection but suggest kidney infection. This requires more vigorous treatment and follow-up. A history of kidney disease (infections, inflammations, and kidney stones) also alters the treatment.

Most, if not all, bacterial bladder infections will respond to home treatment alone.

Nevertheless, using antibiotics has become standard medical practice, and it is possible that they shorten the illness. Antibiotics may be more important in recurrent bladder infections.

HOME TREATMENT

Begin home treatment as soon as you note symptoms.

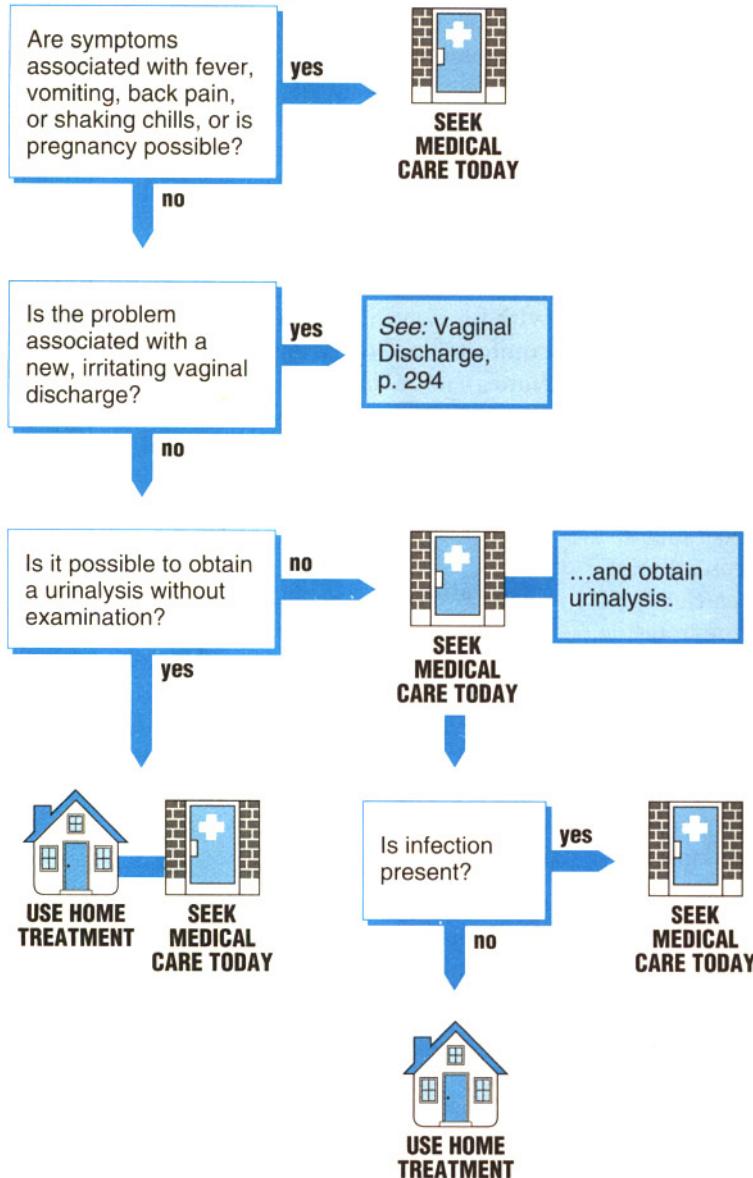
- Drink a lot of fluids. Increase fluid intake to the maximum (up to several gallons of fluid in the first 24 hours). Bacteria are literally washed from the body during the resulting copious urination.
- Drink fruit juices. Putting more acid into the urine, although less important than the quantity of fluids, may help bring relief. Cranberry juice is the most effective, as it contains a natural antibiotic.

If relief isn't substantial in 24 hours and complete in 48, call the doctor.

For women with recurrent problems, an important preventive measure is to wipe from front to back after urination. Most bacteria that cause bladder infections come from the rectum.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

A urinalysis and culture will be performed. The back and abdomen are usually examined. In women with a vaginal discharge, an examination of both vagina and discharge is often necessary. With pre-existing kidney disease or symptoms of kidney infection, a more detailed history and physical are needed, and extra laboratory studies may be necessary. If tests prove there is a urinary tract infection, the doctor will prescribe an antibiotic.

**DIFFICULT
URINATION: WOMEN**

CHAPTER 10

Generalized Problems

Fever

A high temperature is not always a sign of illness. Normal body temperature varies from person to person and is usually lower in the morning. Physical activity, excitement, anxiety, food, and heavy clothing can all raise body temperature. Hormones can cause a monthly change in body temperature in fertile women. Children usually have a higher temperature than adults, and their temperatures go up and down more during the day.

The point at which an elevated temperature becomes a fever is not well-defined. To make it easy, we say that a fever is a temperature over 100°F (38°C) taken with an oral thermometer. A temperature that remains around 99° to 100°F (38°C) for a week or more also deserves attention.

Causes

The most common causes of fever are viral and bacterial infections, such as colds, sore throats, earaches, diarrhea, urinary infections, roseola, chicken pox, mumps, and measles. Pneumonia, appendicitis, and meningitis are also occasional causes.

A fever can cause the brain's temperature center to register cold, triggering the body's systems to produce more heat, such as by

shivering. The person with a fever may look pale, as blood is shunted away from the skin. He or she may have goose bumps. Children will sometimes curl up in a ball to conserve heat. Don't bundle up the person with chills in blankets. This will only cause the fever to go higher.

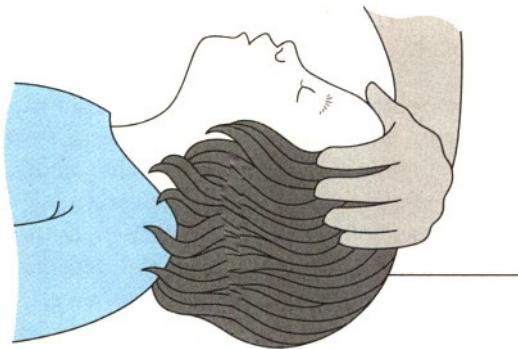
HOME TREATMENT

You can reduce the body temperature of a person with a high fever by sponging the skin with lukewarm water. (Cool water may be uncomfortable. Do not use alcohol because the fumes can be dangerous.) You can also cool the person in a tub of water about 70°F (21°C). Wetting the hair will feel good and help carry away heat. After drying, have the person rest in a cool room wearing little or no clothing. You can cover a child with a light sheet.

Medication

You don't need to do anything for a mild fever. If the fever is high enough to interfere with a person's sleep, work, or other activities, you can treat it with an over-the-counter remedy. We recommend acetaminophen (page 38). Aspirin, ibuprofen, naproxen, and ketoprofen are also safe and effective when used properly. Remember:

- Never give oral medication to a person who is unconscious or having a seizure. Acetaminophen and aspirin are available in suppository form.
- Avoid giving aspirin to children or teenagers. We recommend acetaminophen instead.
- Use all drugs carefully, whether or not they require a prescription. Never take a drug prescribed to somebody else. Remember that medications come in different strengths. Mixing up drugs can be dangerous, especially for children.



Open airway. If a child is having a febrile seizure, pull the head back slightly. Do not force anything into the mouth.

Starve a Fever?

You may have heard the old saying that begins, "Starve a fever." Unfortunately, it's not a helpful old saying. There are many reasons why people should eat during a fever. A person whose body temperature is high burns calories faster and therefore needs to consume more.

Even more important than food for someone with a fever are fluids. Never withhold liquids from a feverish person (unless he or she is in the middle of a seizure). Even if the fever makes the person so uncomfortable that he or she won't eat, it is still essential that the person drink fluids.

Call the doctor if a fever lasts for more than 48 hours or if it stays above 103°F (39.5°C) after an hour of home treatment.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The medical professional will take a history and do a physical examination to assess fever and other symptoms. If a person appears very sick, a doctor may run blood and urine tests. In rare cases, a doctor may order a chest X-ray.

SEIZURES

An extremely high fever can cause a seizure or convulsion. Such seizures are relatively common in normal, healthy children, especially those between six months and four years of age. Although a seizure may appear dramatic, there is little danger to the child. Usually a fever-related seizure lasts a few minutes and causes no lasting effects. (Sometimes there is brief weakness or even paralysis in an arm or leg.) Less than half of all children who have one such seizure ever have another. Repeated seizures, or a seizure that lasts more than 30 minutes, may suggest more serious medical conditions.

If a child with a fever has seizures, do the following:

- Protect his or her head from hitting the floor or hard objects. Place the child on a bed.
- Keep the child's airway open, and do rescue breathing as needed.
- Do not force an object or your fingers into a person's mouth. This is likely to result in injury. It's not possible for the child to "swallow the tongue," and serious tongue bites are rare.
- Start to lower the child's fever with sponging or suppositories (page 39). Never give a person having seizures anything by mouth, such as liquids or medication.
- **Get immediate medical attention.** Call 911 if necessary.

GENERALIZED PROBLEMS

If the person has had a seizure for the first time, a doctor may order a spinal tap to check for meningitis. If you have a bacterial infection, a doctor or nurse-practitioner may prescribe an antibiotic.

Often the medical professional will suggest sponging or over-the-counter medication, as we describe above. If you have no infection or other symptoms, the doctor may advise "watchful waiting."

HEAT STROKE

Exposure to a warm and humid environment, especially while not drinking enough fluids, can cause heat exhaustion. Symptoms include weakness, headache, dizziness, thirst, nausea, and vomiting. The person's temperature may be elevated, but not above 101°F (38°C). The skin of a person with heat exhaustion is sweaty because the body is trying to cool off. Move the person into a cool place and have him or her drink lots of water.

Heat stroke, also called sunstroke, is an **emergency**. It arises when the body is no longer able to cool off. A person with heat stroke has dry skin. Body temperature rises quickly when sweating stops, even topping 105°F (40.5°C). A person suffering heat stroke no longer complains of heat or thirst. He or she may be confused or delirious, lose consciousness, or have seizures.

The person with heat stroke needs immediate medical care. You must rapidly cool the person's body by ice baths, ice packs, wet sheets, or any other means possible. Brain damage and other injuries may result if the victim's temperature doesn't go down. Treatment in the emergency room can be very effective.

FEVER

Do you see any of these signs?

- Temperature of 101°F (38°C) in a child less than 3 months of age
- Neck stiffness
- Unusual confusion, irritability, or lethargy
- Rapid breathing in a child
- Seizure

yes



**SEEK
MEDICAL
CARE NOW**

no

Has fever lasted more than 24 hours in a child 3 months to 1 year of age?

yes



**CALL
MEDICAL
ADVISOR**

no

Has fever shown no improvement in 72 hours or lasted more than 5 days?

yes



**SEEK
MEDICAL
CARE TODAY**

no

Is there sore throat, ear pain, cough, abdominal pain, skin rash, diarrhea, or frequent urination, or are there other symptoms?

yes

Look up the appropriate symptom

no



**USE HOME
TREATMENT**

Headache

Headache is the single most common complaint of modern times. Usually tension and muscle spasms in the neck, scalp, and jaw cause headaches. They are annoying but invariably get better with time.

If your headaches are worse in the morning, consider having your blood pressure measured. High blood pressure can cause headaches.

Migraines are a type of severe headache causing pain on one side of the head only. A migraine often causes nausea or vomiting and may be preceded by flashes of light or seeing "stars."

Some people prone to headaches worry that they have a brain tumor. Unless you have some other dramatic signs—paralysis or a personality change—the chance that an occasional headache is a brain tumor is exceedingly remote.

When accompanied by other symptoms, a headache might be the sign of an **emergency**:

- After a head injury, a headache accompanied by vomiting or difficulty seeing suggests a dangerous increase in pressure inside the skull.
- A headache, a fever, and the inability to touch the chin to the chest suggest that the covering of the brain and spinal cord might be inflamed (meningitis).
- Headaches that are accompanied by difficulty in using the arms or legs, or by slurring of speech, require immediate medical attention.

HOME TREATMENT

Acetaminophen, aspirin, ibuprofen, naproxen, and ketoprofen are quite effective in relieving headache (page 38). You can take these medications with food to prevent stomach irritation. Do not give aspirin to children or teenagers. For migraine headaches, medications that include caffeine (Excedrin) are often best.

You may relieve headache by resting with the eyes closed and the head supported. You may find a massage or heat applied to the back of the neck soothing. Relaxation techniques such as meditation may also work.

Talk to your doctor about persistent headaches that don't respond to home treatment. Call the doctor if headaches quickly become more frequent or severe.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The health professional will ask for a medical history and do a physical examination. He or she will pay special attention to the head and neck and to neurological function. Doctors rarely do imaging studies such as CT or MRI unless a headache doesn't respond to therapy.

Doctors treat most tension headaches with the basic home treatment approach we describe above. Your doctor may prescribe medication for migraine or cluster headaches.

If there is tenderness to pressure in the back of the neck where the muscles meet the skull, then a cervical collar (see Neck Pain, page 208), worn at night, can sometimes help.

HEADACHE

Was the headache caused by an injury?

yes

See: Head Injuries, p. 86

no

Do you have any of the following?

- Inability to bring chin to chest
- Visual disturbances
- Slurring of speech
- Problems moving arms or legs

yes



**SEEK
MEDICAL
CARE NOW**

no

Have headaches persisted for more than a few days, or are they worse in morning?

yes



**MAKE
MEDICAL
APPOINTMENT**

no



**USE HOME
TREATMENT**

Sleep Disorders

Almost everybody suffers from sleep problems now and then. Millions of people snore each night. Many people have occasional insomnia. And for 15 to 20 million Americans, sleeplessness is an ongoing problem.

Medical problems can affect the quality of your sleep. Conditions that cause pain or shortness of breath may make sleep difficult. Depression and stress can also affect sleep. In these cases, treating the underlying cause is the best way to sleep soundly again.

For many people snoring is just a noisy annoyance. However, a few snorers actually stop breathing for 30 or more seconds several times during the night. This condition, called obstructive sleep apnea, has the following signs:

- Loud, repeated snoring
- Feeling tired during the day and taking naps

By contrast, a person with central sleep apnea produces no loud, repeated snoring, but still stops breathing briefly during sleep. The signs of this condition are:

- Waking up many times during the night, often feeling short of breath
- Seldom taking naps, though one may feel tired

Most central sleep apnea occurs in men.

Doctors have linked sleep apnea with heart disease, high blood pressure, and impotence in men. Fortunately, doctors offer a range of effective treatments for it.

HOME TREATMENT

Often a sleeping partner is the first to know of a serious snoring problem. If you've heard complaints, avoid sleeping on your back, which allows the tongue to rest against the back of the throat. Losing weight is one of the least expensive and most effective treatments for snoring.

Many people turn to alcohol or drugs to help them sleep. These substances interfere with normal sleep and can make your problems worse.

While alcohol has a sedating effect, it can also act as a stimulant and may keep you awake. Nonprescription sleep remedies seem to depend on the placebo effect: they work because you expect them to. Some contain antihistamines that may cause you to feel drowsy during the day. Stronger prescription sedatives can knock you out but do not give a normal, restful sleep. Often sleeping pills make insomnia worse. You should deal with possible causes of insomnia before trying sleeping pills.

Here are some tips for a good, restful night's sleep:

- Stop smoking. Smokers have more sleep trouble than nonsmokers.
- Exercise regularly, but not in the last two hours before going to bed.
- Avoid drinking alcohol in the evening.
- Avoid caffeine for at least two hours before bedtime—coffee, tea, soda, and chocolate.
- A bedtime snack seems to help many people, as does the traditional glass of warm milk. But don't eat a big meal within three hours of going to bed.
- Develop a sleeping routine with a regular bedtime, but don't go to bed if you feel wide awake.

SLEEP DISORDERS

Do you still have insomnia after 3 weeks of home treatment, or do you still snore despite losing 10% of excess weight?

yes



no

- Break your chain of thought before going to bed; read, watch television, take a bath, or listen to music to relax your mind.
- Once in bed, use creative imagery and relaxation techniques to keep your mind free of distracting thoughts.
- If all else fails (or even if it doesn't), sex is one of the most effective natural sleep inducers.

It may take you several weeks to establish a normal sleep routine. Talk to your doctor if you still have sleep problems after trying these methods.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will ask about your sleeping schedule, sources of stress and anxiety, and other sleep factors. In some cases you may have brain activity monitored (electroencephalogram, or EEG) as you sleep. Rarely, the doctor may have more sophisticated tests done during a sleep study at the hospital (polysomnography).

In rare cases where weight loss and home treatment don't stop snoring, the doctor may discuss surgery of the nose and throat.

Weakness and Fatigue

Weakness and fatigue are often considered to be similar, but in medicine they have distinct and separate meanings.

Weakness refers to lack of *strength*. Weakness is usually the more serious condition and is particularly important when it is confined to one area of the body. Such weakness in one area is often due to a problem in the muscular or nervous system, such as a stroke.

Fatigue is lack of *energy*. It is tiredness or lethargy. Fatigue is typically associated with a viral infection or with feelings of anxiety, depression, or tension. It's caused by a large variety of illnesses.

Hypoglycemia means "low blood sugar," and many patients fear that this problem is the cause of their tiredness. A few individuals do in fact feel shaky several hours after a meal because their blood sugar level drops at that point. However, they do *not* feel fatigued. Low blood sugar throughout the day can cause fatigue, but this is a rare condition.

Chronic fatigue is common; about one in every four adults seen in doctors' offices say it is one of their problems. But chronic fatigue syndrome (CFS) is unusual; perhaps only one in a thousand of the adults who complain of chronic fatigue meet the criteria for this diagnosis.

CFS created a stir in the 1980s because some doctors believed it to be a new disease, probably due to an acute infection (perhaps Epstein-Barr virus, or even yeast). However, a link to infection has never been demonstrated, and there is little evidence that treating for infection is useful. As a result, other doctors believe that CFS is actually a collection of

diseases that have been with us for a long time under such names as neurasthenia and even "the vapors." To try to resolve this issue, groups of experts have created a standard list of criteria for diagnosing chronic fatigue immune-deficiency syndrome (CFIDS, pronounced "see-fids"). This list excludes almost all people with chronic fatigue. But the problem still may be one such as fibromyalgia (page 206) or depression (page 282).

HOME TREATMENT

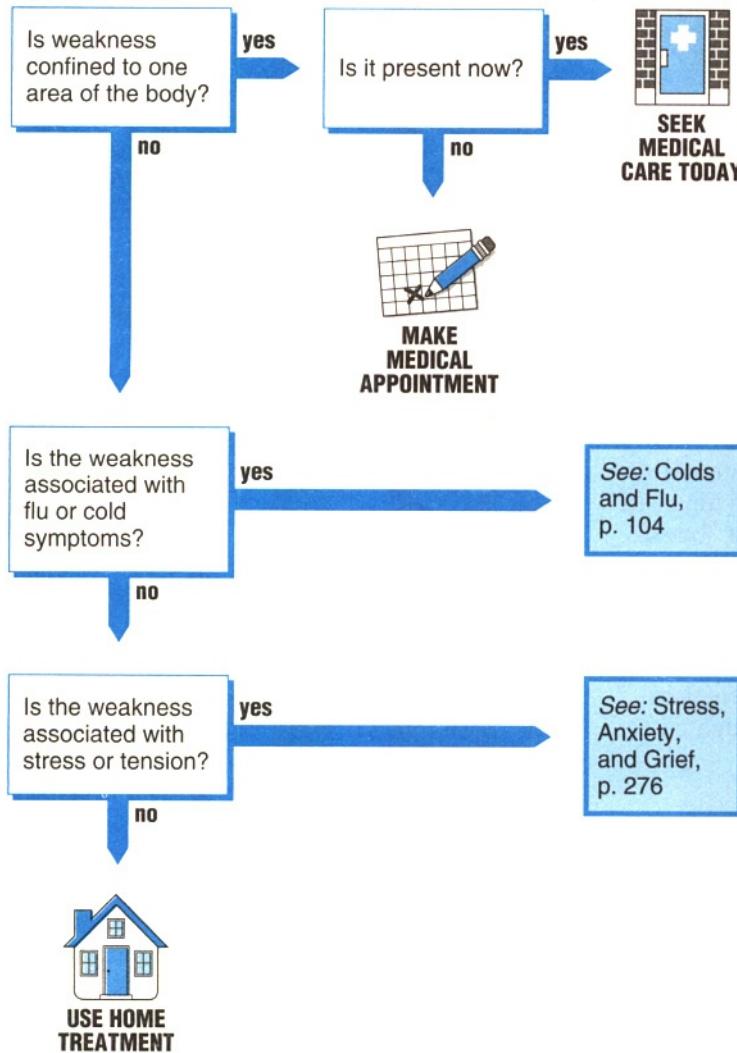
There is time and need for careful reflection on the causes of fatigue. The most common situation was once termed "the tired housewife syndrome." Many young and middle-aged women come to the doctor's office complaining of fatigue and requesting tests for anemia or thyroid problems. Many adult women are mildly iron deficient, and thyroid problems may cause fatigue, but it is very unusual for one of these conditions to be the cause of fatigue. In most cases, fatigue is more closely related to boredom, unhappiness, some disappointment, or just plain hard work. The patient should consider these possibilities before consulting the doctor.

Vitamins are rarely helpful, but in moderation they don't hurt.

If fatigue lasts for more than two weeks, see your doctor.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

If the problem is weakness of only part of the body, the doctor will concentrate the examination on the nerve and muscle functions. A typical stroke will be identified by such an examination, whereas more uncommon ailments may require further testing and special procedures.

WEAKNESS

If the problem is fatigue, the medical history is the most important part of the encounter. Physical examination of the heart, lungs, and thyroid gland can be expected. The doctor may test for anemia and thyroid dysfunction, as well as other problems. Inquiry into the patient's lifestyle and feelings is important.

There are no direct cures for the most common fatigue syndromes. Pep pills don't work, and the downswing when the pills wear off usually makes the problem worse. Tranquilizers generally intensify fatigue. Vacations, job changes, undertaking new activities, and making marital adjustments are far more helpful.

Up to 80% of people with CFS have depression or anxiety as a part of the problem, and many doctors feel that treating those problems is the best way to deal with CFS.

Dizziness and Fainting

Three different problems are frequently introduced by the complaint of dizziness or fainting: loss of consciousness, vertigo, and lightheadedness.

Unconsciousness

True unconsciousness includes a period in which the victim has no control over the body and of which there is no recollection. Therefore, if consciousness is lost while standing, the victim will fall and may sustain injury in doing so. The common symptom of "blackout," in which the person finds it difficult to see and needs to sit or lie down but can still hear, isn't true loss of consciousness. Such blackouts may be related to changes in posture or to emotional experiences. True loss of consciousness needs to be investigated promptly by a doctor.

Vertigo

Vertigo is caused by a problem in the balance mechanism of the inner ear. Because this balance mechanism also helps control eye movements, there is loss of balance and the room seems to be spinning around. Walls and floors may seem to lurch in crazy motions. Most vertigo has no definite cause and is thought to be due to a viral infection of the inner ear. A doctor should be seen.

Feeling Lightheaded

"Lightheadedness" is by far the most common of these problems. It is that woozy feeling that is such a common part of flu or cold syndromes. If such a feeling is associated with other flu or cold symptoms, see page 104.

Lightheadedness that isn't associated with other symptoms is usually not serious either. Many people with this condition are tense or anxious. Others have low blood pressure and regularly feel lightheaded when standing up suddenly. This is called "postural hypotension" and doesn't require treatment. Many medications, especially anti-hypertensives, may cause lightheadedness. If lightheadedness is associated with the use of drugs, the doctor should be contacted to determine if the drug should be discontinued.

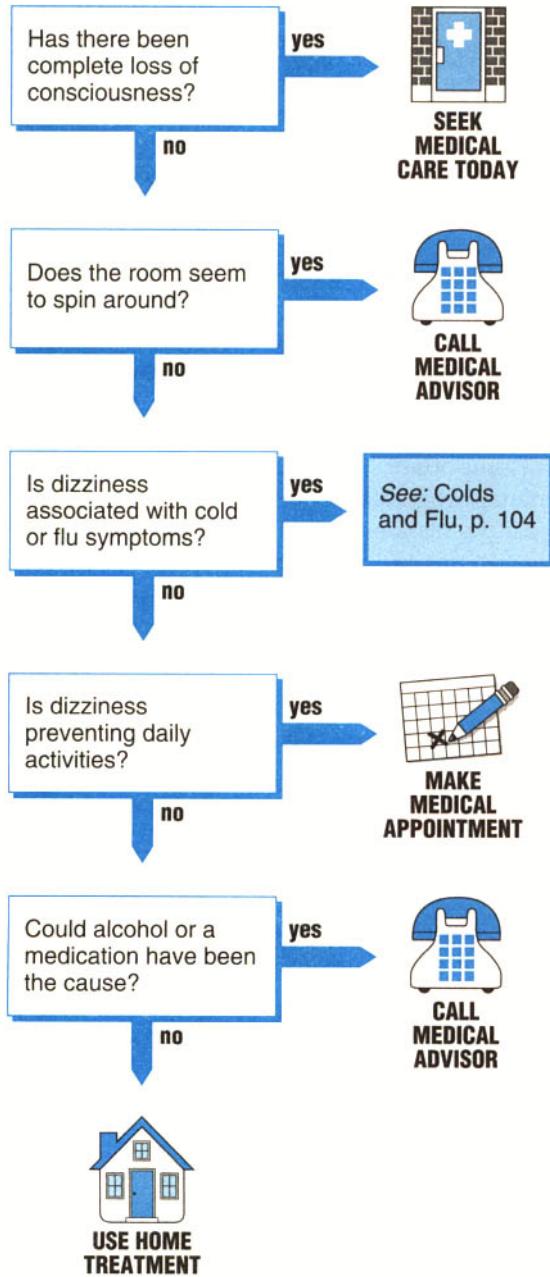
Alcohol is also a frequent cause of lightheadedness. If you suspect excess drinking may be the real cause of the problem, see page 284.

HOME TREATMENT

A person most often feels a momentary blackout after he or she moves suddenly from reclining or sitting to standing upright. Blood stops flowing to the brain for an instant, and the person may notice a fleeting loss of vision or a lightheaded feeling. This phenomenon is called postural hypotension. Most people will experience it at one time or another, but it becomes more frequent as we grow older. The therapy is to avoid sudden changes in posture. Unless postural hypotension suddenly becomes worse, you don't need to visit the doctor. You may report the feeling on your next routine visit.

A persistent lightheaded feeling without any other symptoms doesn't indicate a brain tumor or other hidden disease. This type of lightheadedness often disappears when the person resolves anxiety. Not infrequently, it's a problem the person must learn to live with.

If the problem persists for more than three weeks, call the doctor.

DIZZINESS**WHAT TO EXPECT AT THE DOCTOR'S OFFICE**

The doctor will obtain a history with emphasis on making the distinctions outlined above. If loss of consciousness is the problem, the heart and lungs will be examined and nerve function will be tested. Special testing for irregular heartbeat or sudden drop in blood pressure may be necessary. If vertigo is the problem, the head, ears, eyes, and throat will be examined, along with neurological testing. Sometimes further tests of hearing or balance may be required. A search for predisposing factors, such as anxiety, will be made. Often a period of "watchful waiting" will be advised.

High Blood Pressure

High blood pressure (hypertension) is one of the most common and most treatable chronic health problems. It affects 30 to 40 million Americans—more than one in ten. High blood pressure is a silent disease, often causing no symptoms until it is too late. A catastrophic heart attack, a stroke, or kidney disease is often the first sign of disease.

Two numbers make up the blood pressure reading. The upper number, or systolic, represents the maximum pressure in the arteries when the heart pumps. The lower number, or diastolic, is the pressure while the heart is at rest.

A typical blood pressure may be 120/80, but what is "normal" varies over a wide range. In general, the lower the blood pressure, the better. Blood pressure is considered high if the upper (systolic) pressure is above 140, or if the lower (diastolic) number is above 90. Low readings are usually seen in children and adults in excellent physical condition.

Don't panic over one blood pressure result. Several readings over several weeks are needed to be meaningful. At least a third of those whose first reading is high have a normal reading when blood pressure is later rechecked.

Monitoring Your Blood Pressure

Have your blood pressure checked at least once a year. Blood pressure measurement is painless, quick, and reliable. The doctor's office may not be the best place to have your pressure checked, however, because being nervous can raise your blood pressure. Free blood pressure checks are often available at

health fairs, businesses, and health agencies. Many stores, such as drugstores, have blood pressure machines available for public use, and these are reasonably accurate.

Is it worth buying a home blood pressure cuff or measuring machine? Many reliable, affordable models are on the market. If you have high blood pressure you'll want to check yourself frequently so you can report any changes or difficulties to your doctor; a home blood pressure monitor may make sense for you. But unless you intend to use a monitor frequently, it may not be worth the cost.

If You Have High Blood Pressure

It is important to understand that you must manage high blood pressure yourself. You bear the responsibility for controlling your weight, maintaining a proper level of activity, not smoking, limiting the salt and fats in your diet, and taking your medicine properly. Expect only a few doctors appointments for this condition.

- **Keep in Shape.** Make exercise, weight control, and a good diet part of your routine. Although a person in good shape can have high blood pressure, your risk is greater if you're overweight and out of shape. Reducing your weight is a reliable way of lowering your blood pressure. Exercise conditions your cardiovascular system.
- **Diet.** Decreasing the salt, fat, and cholesterol in your diet and increasing the potassium and calcium help lower blood pressure and decrease the risk of heart disease.
- **Managing Drugs.** If the doctor prescribes medication to control your blood pressure, understand how to manage the drugs. Ask the doctor about side effects and warning signs. On a chart, note which drugs you take, along with all your blood pressure

measurements. With this record you and your doctor can make the important decisions about managing your high blood pressure.

Drug therapy is effective but is expensive and has risks and side effects. Through good self-care and risk reduction, many people can control their blood pressure without the need for medication. Others can reduce the drug dosage required to control the blood pressure, saving money as well as lowering risks and side effects. Aim to reduce your drug intake—but don't change your therapy unless your doctor says so.

- **Stick With It.** Managing high blood pressure is a lifelong job. Don't stop your program because you feel good. Don't wait for signs and symptoms before you take preventive measures. If you take care of high blood pressure, it will probably never cause you a major problem. If you ignore it, you are needlessly endangering your life and well-being.

Stress, Anxiety, and Grief

Stress isn't a disease, but a fact of life. Our reactions can vary tremendously, sometimes in ways that are not good.

Anxiety is a common reaction to powerful stress, such as money troubles. People who react to daily stress with anxiety probably need counseling, though they may not realize that. They may instead focus on the common symptoms of anxiety:

- Insomnia
- Nervousness
- Rapid heart rate
- Inability to concentrate
- "Lump in the throat," or even difficulty swallowing
- Hyperventilation (like "lump in the throat," most common in young adults, especially women—see page 278)

Grief is a normal reaction to loss, such as the death of a loved one or the end of a job. Working through grief is an important part of dealing with loss. While family and community resources can provide some support, the only therapy for grief is time.

A grieving person may turn to alcohol, tranquilizers, or other prescription medication. While drugs may give short-term relief, they don't solve problems. Alcohol and drugs are crutches that interfere with normal recovery. You must address the underlying issues.

HOME TREATMENT

Recognizing the signs of anxiety is the first step to finding and treating its cause. You may find it helpful to talk with friends, family, or a member of the clergy. Agencies in your community provide services and referrals. Occasionally the person may require long-term therapy with a counselor. No single type of therapy is better for all people. Your choice should depend on what works for you.

Too much caffeine can cause chronic anxiety. Cutting down on caffeine may help you relax. Caffeine is found in coffee, soft drinks, tea, chocolate, nonprescription stimulants (e.g., No Doz, Vivarin), and a variety of cold and headache remedies.

Relaxation techniques and a program of regular physical exercise can help reduce anxiety.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

For hyperventilation syndrome, the doctor may have the person breathe into a paper bag to restore normal breathing. The doctor may also ask the person to lie down and voluntarily hyperventilate (50 deep breaths) to understand how the symptoms arise. He or she may prescribe a tranquilizer.

The doctor will get the medical history and do a physical exam. Health providers may take an electrocardiogram (EKG) and chest X-rays. The doctor will evaluate anxiety and determine whether you need a referral to a mental health professional.

STRESS

Is the person breathing rapidly?

no

yes

Does the person feel a lump in the throat that interferes with breathing?

no

yes



CALL MEDICAL ADVISOR

Does the person feel a lump in the throat that:

- Interferes with eating solid food?
- Comes with a recent loss of weight?
- Is present all the time?

no

yes



MAKE MEDICAL APPOINTMENT

Does the person feel anxiety that:

- Interferes with work?
- Has no known cause?
- Can't be modified without outside help?

no

yes

Make appointment with doctor or counselor.



USE HOME TREATMENT

Is the person over 40 or under 15 years of age?

no

yes

See: Shortness of Breath, p. 240; and Palpitations, p. 242

Is either of the following present?

- Severe pain
- The person is normally calm

no

yes



SEEK MEDICAL CARE NOW



USE HOME TREATMENT

Hyperventilation Syndrome

Anxiety, especially unrecognized anxiety, can lead to physical symptoms. The hyperventilation syndrome is such a problem. In this syndrome, a nervous or anxious person becomes concerned about his or her breathing and feels unable to get enough air into the lungs. This is often associated with chest pain or tightness.

The sensation of being out of breath leads to overbreathing and a lowering of the carbon dioxide level in the blood. The lower level of carbon dioxide brings on symptoms of numbness and tingling of the hands, and dizziness. The numbness and tingling may extend to the feet and may also be noted around the mouth. Occasionally muscle spasms may occur in the hands.

This syndrome is almost always a condition of young adults. While it is more common in women, it is also frequently seen in men. Usually this syndrome afflicts people who recognize themselves as being nervous and tense. It often happens when such people have additional stress, use alcohol, or are in situations where it is advantageous to have a sudden, dramatic illness. A classic example is the occurrence of the hyperventilation syndrome during separation or divorce proceedings, so that the event becomes a call for help to the estranged spouse.

However, hyperventilation is also a natural response to severe pain. When in doubt, take a person who is hyperventilating to the doctor's office rather than discount a potentially serious problem.

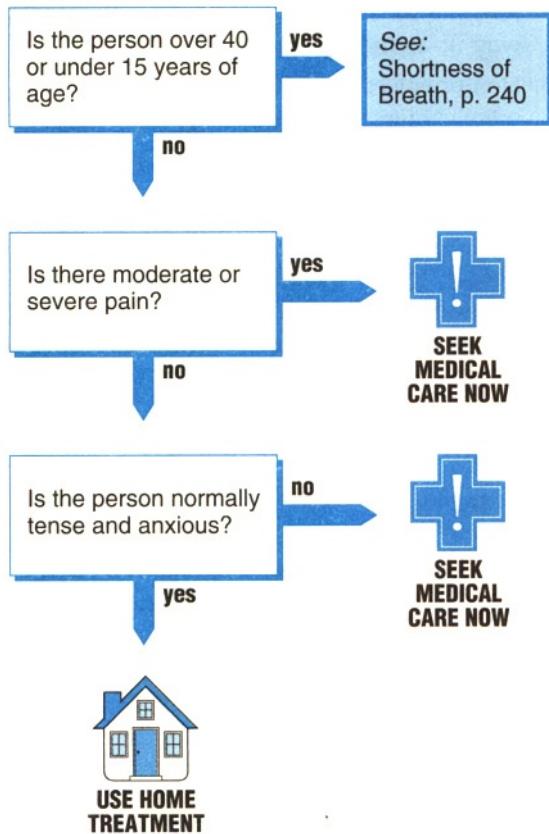
HOME TREATMENT

The symptoms of hyperventilation syndrome are due to carbon dioxide loss from overbreathing. If the person breathes into a paper bag, so that the carbon dioxide is taken back into the lungs rather than being lost into the atmosphere, the symptoms will be alleviated. This usually requires five to fifteen minutes with a small paper bag held loosely over both the nose and the mouth. This isn't always as easy as it sounds because a major feature of the hyperventilation syndrome is panic and a feeling of impending suffocation. Approaching such a person with a paper bag for the mouth and nose may prove difficult, so be sure to reassure the person first.

Repeated attacks may occur. Once the person has honestly recognized that the problem is anxiety rather than a disease, the attacks will stop because the panic component won't come into play; convincing the person is the main obstacle. Having the person voluntarily hyperventilate (50 deep breaths while lying on a couch) to demonstrate that this reproduces the symptoms of the previous episode is frequently helpful. People are usually afraid that they are having a heart attack or are on the verge of a nervous breakdown. Neither is true, and when the fear has dissipated, hyperventilation usually ceases.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will obtain a history and direct attention primarily to the examination of the heart and lungs. In the young person with a typical syndrome, with a normal physical examination and no abdominal pain, the diagnosis of hyperventilation is easily made. Electrocardiograms (EKGs) and chest X-rays are seldom needed. These procedures may occasionally be necessary in less clear-cut cases.

HYPERVENTILATION

If hyperventilation syndrome is diagnosed, the doctor will usually provide a paper bag and the instructions given above. A tranquilizer may be administered; we prefer merely to reassure the patient. It is seldom possible to deal effectively with the cause of the anxiety during the hyperventilation episode. The patient shouldn't assume that the underlying problem is solved simply because the hyperventilation has been controlled.

Lump in the Throat

The feeling of a "lump in the throat" is the best known of all anxiety symptoms. There may even be some difficulty swallowing, although eating is possible if an effort is made. The sensation is intermittent and is made worse by tension.

The difficulty in swallowing is worst when the person concentrates on swallowing and on the sensations within the throat. As an experiment, try to swallow rapidly several times without any food or liquid, and concentrate on the resulting sensation. You will then understand this symptom.

Several serious diseases can cause difficulty swallowing. In these cases, the symptom begins slowly, is noticed first with solid foods and then with liquids, results in loss of weight, and is more likely to be found in those over 40. "Lump in the throat," like the hyperventilation syndrome, is likely to be found in young adults, most frequently women.

HOME TREATMENT

The central problem isn't the symptom but, rather, the underlying cause of the anxiety state (see Stress, Anxiety, and Grief, page 276). Recognition that the symptom is minor is crucial to its disappearance.

Relaxation techniques may be helpful. One such technique is called progressive relaxation:

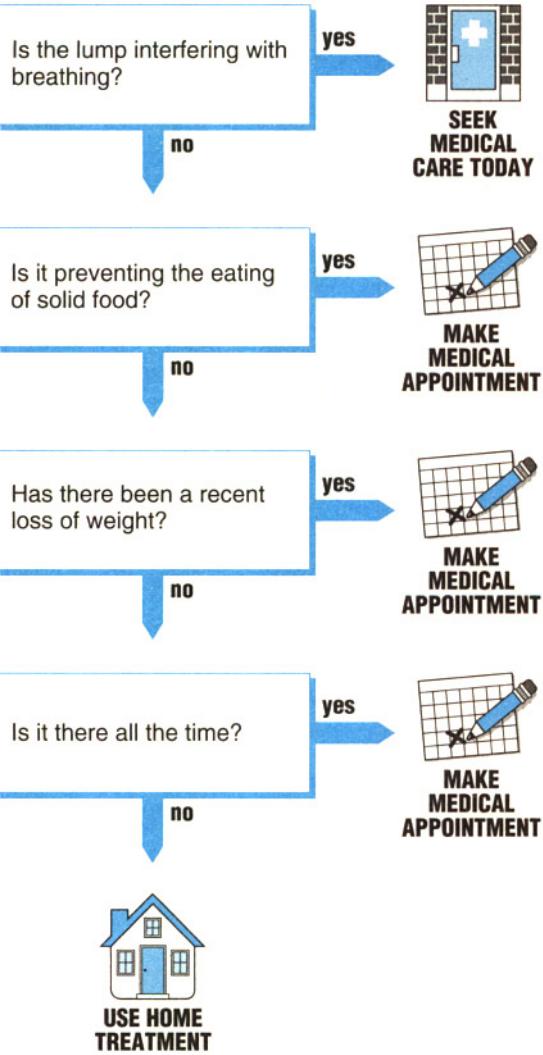
1. Imagine that your toes weigh a thousand pounds and you couldn't move them if you wanted to. Let them go completely limp.

2. Do the same with each part of your body, relaxing the muscles and working your way up to the top of your head.
3. Don't neglect the facial muscles. Tension often centers in the forehead or jaw and keeps you from relaxing.

An alternative is to imagine that your breath is coming in through the toes of your right foot, all the way up to your lungs, and back out through the same foot. Do this three times. Repeat the procedure for the left foot and then for each of your arms.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

After taking a medical history and examining the throat and chest, a doctor may sometimes believe that X-rays of the esophagus are necessary. If an abnormality of the esophagus is found, further studies may be performed. Reassurance will probably be the treatment given.

LUMP IN THROAT

Depression

Everybody gets the blues sometimes. Depression can range from a lack of energy to an overwhelming sense of hopelessness. It can seem like a general fatigue or a vague sense of ill health. You may feel poorly and not know why. The future holds no promise. You have a sense of loss.

Most depression is a normal response to an unhappy event. It is natural to be depressed by the death of a loved one, or after a big disappointment at work. However, if depression continues and starts to interfere with your work or family life, make an appointment to see your doctor.

Ask yourself these questions:

- Are you sad or blue for most of the day, for more days than not?
- Do you often cry even though you aren't sure why?
- Do you think that unhappiness is the rule in your life?
- Do you no longer get pleasure from things you used to like?
- Do you often have feelings of hopelessness?

If you answered yes to any of these questions, you are likely to be depressed.

Consider how your emotional condition is affecting your life:

- Do you have a poor appetite, or do you overeat?
- Do you not sleep enough, or do you sleep too much?
- Do you have low energy or fatigue?

- Do you feel bad about yourself in general?
- Do you have trouble concentrating or making decisions?

If you answered yes to any of these questions, you may have serious depression. Seek help from your doctor or a mental health counselor.

HOME TREATMENT

Activity is the natural antidote for depression. Regular exercise can be as effective for mild depression as the drugs prescribed by doctors.

Stay involved with other people and let them support you. Tell someone about your problems. Don't push everyone away, and don't let your depression drive them away.

Drugs can cause depression, including tranquilizers, high blood pressure medicines, corticosteroids (e.g., prednisone), codeine, and indomethacin. If you are concerned about prescription medication, talk with your doctor. Reduce your other alcohol and drug use.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will ask about issues and events related to depression. The doctor may offer suggestions for activities and exercise. He or she may adjust the dosage of medication that may be causing depression.

The doctor may prescribe antidepressant medication. You may be hospitalized if there is a risk of suicide.

DEPRESSION

Do you have thoughts of suicide?

yes



CALL
MEDICAL
ADVISOR

Has depression interfered with work or family, or has it lasted more than a week?

yes

Make appointment with doctor or counselor.

Is depression caused by medication?

yes



CALL
MEDICAL
ADVISOR



USE HOME
TREATMENT

SUICIDAL FEELINGS

If the depression is so severe that you are thinking of suicide, call the doctor immediately. Many communities have telephone hotlines for crisis counseling. If there is no hotline in your community, go to the nearest emergency room.

Alcoholism

A person with a drinking problem seldom changes this harmful behavior alone. Although recovery must come from within, the decisive nudge often comes from a relative, friend, or coworker. If, like most people, you know someone who drinks too much, you can provide that help.

If in reading this section you recognize yourself as a person who drinks too much, be your own best friend and get help now.

Warning Signs

Problem drinking:

- Drinking to get drunk
- Trying to solve or avoid problems by drinking
- Becoming loud, angry, or violent after drinking
- Drinking at inappropriate times, such as in the morning, before driving, or before going to work
- Drinking that causes problems, harm, or concern to others
- Developing an ulcer or gastritis

Alcoholism:

- Spending time thinking about drinking, or planning where and when to get the next drink
- Receiving citations for driving while intoxicated, or having an automobile accident after any alcohol intake

- Starting to drink without planning to, and losing track of the amount of alcohol consumed, or denying the amount of alcohol consumed
- Needing a drink before stressful situations
- Having no memory of what occurred while drinking, although the alcoholic may have appeared normal to others at the time
- Incurring malnutrition and neglect
- Suffering from withdrawal symptoms, including delirium tremens (DTs)

A pregnant woman who drinks heavily is at risk of harming the fetus in her womb, a condition called fetal alcohol syndrome.

What to Say to the One You Care For

Pick a good time: not when the person is drunk but not long after a crisis. Tell the person what you have observed and how it causes problems. Describe your feelings and ask how the person feels about the situation. Suggest a way out. Try not to sound as if you are charging the person with a crime. Don't try to punish, bribe, or emotionally blackmail the person, but remain calm, detached, and factual. Make sure you leave the responsibility for the negative behavior and for changing it with the drinker.

The person may deny having a problem. Stating your concern and pointing out examples of trouble may be all you can do the first time. When the problem recurs, talk to the drinker again.

HOME TREATMENT

Alcoholism isn't a problem that is easily solved at home, but a doctor can't cure it either. The focus of any treatment must be

ALCOHOLISM

Has the person displayed 2 or more of these signs?

- Mentioned a need to cut down on drinking
- Acted annoyed when someone criticized his or her drinking
- Expressed guilt feelings about drinking
- Taken an "eye-opener" first thing in the morning

yes

The odds are overwhelming that the person is an alcoholic. Seek counseling.

no

Has the person displayed any of the above signs?

yes

The person may have a drinking problem. Discuss how it has affected your relationship.

no

Refer to page 284 for more warning signs. If the person does not exhibit any of them, suspect other problems.

on the drinker changing his or her behavior. There are many worthwhile methods, some involving physicians or professional counselors and some not. Some techniques insist on abstinence, and others aim to reduce drinking to within acceptable limits.

The route to recovery pioneered by Alcoholics Anonymous (AA) has been as successful as any and more so than most. AA uses a self-help format to encourage the problem drinker to face up to his or her alcoholism and come to grips with the consequences. Almost all clinic- and hospital-based alcohol treatment programs refer their patients to AA once they have gotten off to a good start. AA provides sustained support.

Allied with AA are Al-Anon (for people affected by a family member's alcoholism) and Alateen (for teens with family members or friends who are alcoholics). The most important ingredient in every program is commitment on the part of the drinker.

Where to Find Help

Start by looking in your phone book's white pages under "alcohol abuse"; there are many information hotlines that operate around the clock. For more information you can contact these central offices:

- Alcoholics Anonymous (AA)
General Service Office
P.O. Box 459 Grand Central Station
New York, NY 10163
(212) 870-3400
- Al-Anon and Alateen
Family Group Headquarters
P.O. Box 862 Midtown Station
New York, NY 10018-0862
(212) 302-7240

GENERALIZED PROBLEMS

- National Council on Alcoholism
and Drug Dependence
12 West 21st Street, 7th Floor
New York, NY 10010
(800) 622-2255
- National Clearinghouse
for Alcohol and Drug Information
P.O. Box 2345
Rockville, MD 20847-2345
(800) 729-6686

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Tell your doctor if you are recovering from alcoholism or suspect you have a drinking problem. A history of drinking can affect many aspects of your medical care.

If you ask your doctor for help for an alcoholic friend, the doctor will probably suggest counseling for your friend. Since the cost of outpatient treatment is less than one-tenth the cost of inpatient care, hospitals best serve patients who require acute detoxification; patients who may go into severe withdrawal, requiring medical care; or patients who suffer from profound psychological problems beyond alcoholism.

Drug Abuse

From 5 to 13% of adults in this country abuse or depend on some kind of psychoactive substance other than alcohol. This problem extends beyond illegal drugs, such as cocaine and some narcotics, to abuse of prescription drugs. People addicted to drugs need someone to push them into getting help. You, as a loved one or colleague, can start that process and improve both your lives.

Overdoses and withdrawal symptoms are just two of the dangers of drug dependency. Abusers need the substance so much that they will harm themselves or others to have it, causing many more medical and nonmedical problems. The craving for a drug may lead people to steal, share needles, engage in risky sex, neglect their health, and take other risks. Addictions also make abusers more emotionally volatile, and thus more prone to violence. At least one-half of all spouse abuse cases and one-third of all child abuse and suicide cases are related to substance abuse.

HOME TREATMENT

It isn't your role to treat a drug problem. Let the professionals do that. Your first task is to recognize the situation. The decision chart lists some of the signs of substance abuse. Unfortunately, they aren't all as easy to spot as the chronic runny nose of a cocaine abuser.

If you suspect that a person is abusing drugs, talk to counselors, self-help groups, and your doctor. Phone hotlines are available locally and nationwide. Groups like Nar-Anon can provide support for you during this troubled period.

You may then be able to confront the drug abuser with your worry. "I'm concerned about your behavior. You seem troubled. Why not speak to someone about it?" See Alcoholism (page 284) for more advice on bringing up the subject. If the person agrees to seek help, share your knowledge about counseling services.

Many substance abusers resist such advice, however. It isn't your role to force them to stop their behavior, only to protect yourself from its consequences. Don't assist the drug abuser to continue abusing by:

- Covering up his or her behavior from others
- Taking over the abuser's responsibilities in the home or at work
- Cooperating in buying, selling, or using the drug

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

For the drug abuser who refuses your entreaty to get help, a doctor or other professional advisor might recommend a method called

STEROID USE

Anabolic steroids are drugs that target the muscles instead of the brain, encouraging muscle cell growth. They have positive medical uses, but taking them without a prescription can lead to dependency. Anabolic steroids have become very popular among young men and teenage boys, both those involved in athletics and those who want larger muscles to improve their appearance. Ironically, steroid abusers risk acne, stunted growth, impaired fertility, and psychological problems.

intervention. After meeting several times with an advisor, family members and friends confront the user. Led by the advisor, they express their concerns, citing specific examples. If the abuser agrees to get help, he or she immediately enters a treatment program. If the abuser still refuses help, it is critical that family members receive counseling so that they don't inadvertently enable the abuser to continue his or her behavior.

After diagnosing substance abuse, most doctors will refer the patient to a treatment program run by specialists. There is no cure for substance dependence; the craving can persist for life. But it can be controlled. Treatment programs are geared to the long haul. Successful rehabilitation or recovery can be expected for 50 to 70% of all substance abusers.

Sometimes a short stay in a hospital is necessary to prevent a patient from dying of an overdose or withdrawal, to hold a dangerously unstable person, or to treat complications of drug abuse, such as infections. The average stay for drug abuse problems is 12 days. The hospital should guide the patient to continuing treatment after discharge.

Where to Find Help

Narcotics Anonymous (NA) and Cocaine Anonymous (CA) are self-help groups

organized on the principles of Alcoholics Anonymous. Nar-Anon serves people affected by a family member's drug abuse. These organizations are listed in most phone directories, and you can contact these central offices:

- Narcotics Anonymous (NA)
World Service Office
19737 Nordhoff Place
Chatsworth, CA 91311
(818) 773-9999
- Nar-Anon
Family Group Headquarters
P.O. Box 2562
Palos Verdes Peninsula, CA 90274
(310) 547-5800
- For immediate help, look in your phone book's white pages under "drug abuse." Here are two national numbers:
 - National Institute
of Drug Abuse Hotline
(800) 662-HELP
 - Cocaine Hotline
24-hour information and referral
(800) COCAINE

DRUG ABUSE

Does the person exhibit any of these signs?

- Unhealthy lifestyle—neglect of appearance
- Secretive behavior
- Frequently being absent or late
- Mood swings
- Weight loss
- Money problems
- Anxiety and nervousness
- Impulsive behavior
- Troubled relationships
- Denial that problem exists

yes

Make appointment with doctor or counselor.

no

Consider other problems.

CHAPTER 11

Women's Health

Breast Self-examination

One in eight women will have a breast cancer. Most are curable if caught early. Most lumps in the breast are not cancerous. Most women will have a lump in a breast at some time during their lives. Many women's breasts are naturally lumpy (so-called benign fibrocystic disease). Obviously, every lump or possible lump cannot and should not be subjected to surgery.

Regular self-examination of your breasts improves your chances of avoiding serious consequences. Self-examination should be done monthly, just after the menstrual period.

The technique is as follows:

1. Examine your breasts in the mirror, first with your arms at your sides (A1) and then with both arms over your head (A2). The breasts should look the same. Watch for any change in shape or size, or for dimpling of the skin. Occasionally a lump that is difficult to feel will be quite obvious just by looking.
2. Next, while lying flat, examine the left breast using the inner fingertips of the right hand and pressing the breast tissue against the chest wall. Don't pinch the tissue between the fingers; all breast tissue feels a bit lumpy when you do this. The left hand should be behind your head while you

examine the inner half of the left breast (B1) and down at your side when you examine the outer half (B2). Don't neglect the part of the breast underneath the nipple or that which extends outward from the breast toward the underarm (B3). A small pillow under the left shoulder may help.

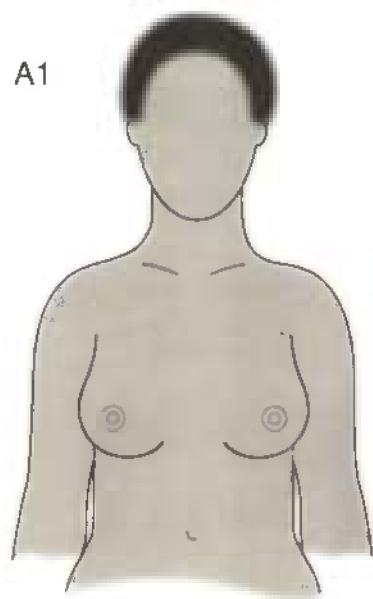
3. Repeat this process on the opposite side.

Any lump detected should be brought to the attention of your doctor. Regular self-examination will tell you how long it has been present and whether it has changed in size. This information is very helpful in deciding what to do about the lump; even the doctor often has difficulty with this decision. Self-examination is an absolute necessity for a woman with naturally lumpy breasts. She is the only one who can really know whether a lump is new or old, or has changed size. For all women, regular self-examination offers a better hope that surgery will be performed when, and only when, it is necessary. Many doctors recommend repeating a self-examination in the shower, where smooth, slightly soapy skin can make lumps easier to detect.

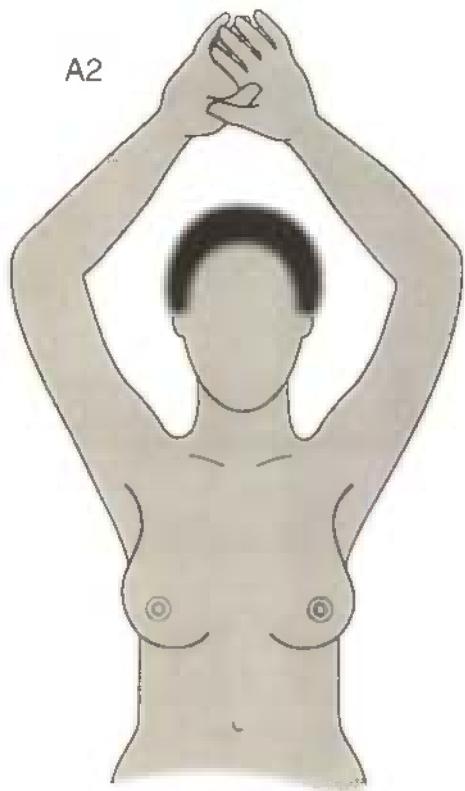
Professional Prevention

Breast self-examination is a supplement to other screening tests for breast cancer, not an alternative. Mammography can detect smaller lumps, particularly in women with large or lumpy breasts. Hence we strongly recommend mammography yearly after age 50 and after age 40 for women with a strong history of breast cancer in their family. The physician or other health worker examination also can be of benefit. The reason for careful monthly self-examination is that a cancer may be not present on mammography one year and be at an incurable stage at mammography a year later.

A1



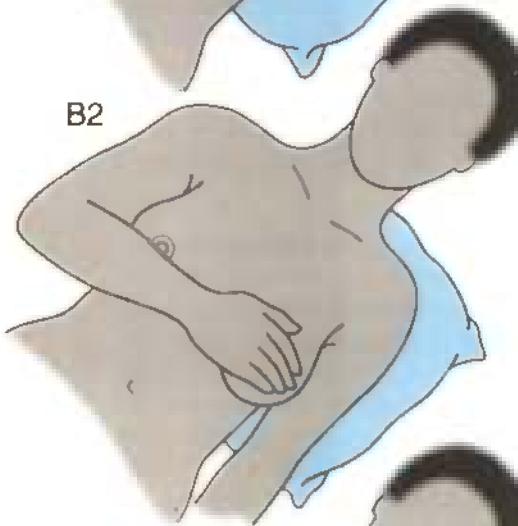
A2



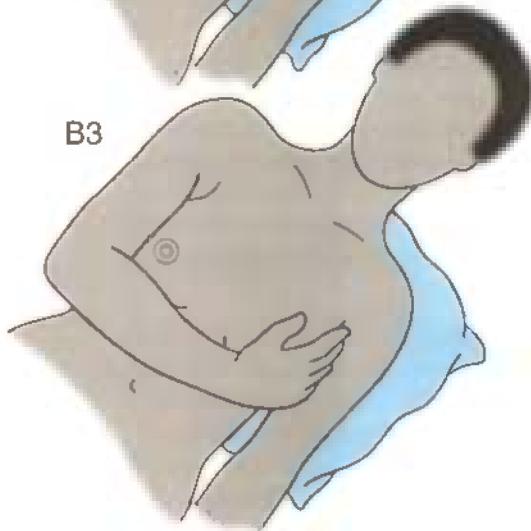
B1



B2



B3



The Gynecological Examination

Examination of the female reproductive organs, usually called a "pelvic examination," may be expected for complaints related to these organs, along with the annual Pap smear. This examination yields a great deal of information and is often absolutely essential for diagnosis. By understanding the phases of the examination and your role in them, you can make it possible for an adequate examination to be done quickly and with a minimum of discomfort.

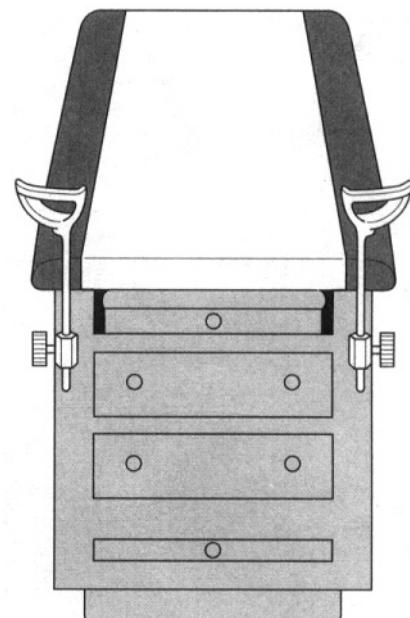
Positioning. Lying on your back, put your heels in the stirrups (the nurse may assist in this step). With your knees bent, move down to the very end of the examination table. Get as close to the edge as you can. Now let your knees fall out to the sides as far as they will go. Don't try to hold the knees closed with the inner muscles of the thigh. This will tire you and make the examination more difficult.

The key word during the examination is "relax"; you may hear it several times. The vagina is a muscular organ, and if the muscles are tense, a difficult and uncomfortable examination is inevitable. You may be asked to take several deep breaths in an effort to promote relaxation.

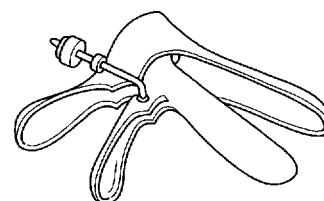
External Examination. Inspection of the labia, clitoris, and vaginal opening is the first step in the examination. The most common findings are cysts in the labia, rashes, and so-called venereal warts. These problems have effective treatments or may need no treatment at all.

Speculum Examination. The speculum is the "duck-billed" instrument used to spread the walls of the vagina so that the inside may be seen. It is not a clamp. It may be constructed of metal or plastic. The plastic ones will click open and closed; don't be alarmed.

If a Pap smear or other test is to be made, the speculum examination usually will come



Examination table with stirrups



Speculum

before the finger (manual) examination. The speculum will be lubricated with water only; otherwise the results of the Pap smear may be spoiled. If these tests aren't needed, the manual examination may come first. The speculum also opens the vagina so that insertion of an intrauterine device (IUD) or other procedures can be accomplished.

Manual Examination. By inserting two lubricated, gloved fingers into the vagina and pressing on the lower abdomen with the other hand, the doctor can feel the shape of the ovaries and uterus as well as any lumps in the area. The accuracy of this examination depends on both the degree of relaxation of the patient and the skill of the doctor. Obese women can't be examined as easily; this is another reason not to be overweight.

Usually the best pelvic examinations are done by those who do them most often. You don't need a gynecologist, but be sure that your internist or family practitioner does "pelvics" on a regular basis before you request a yearly gynecological exam. A nurse-practitioner who does pelvic examinations regularly is usually an expert also. The Pap smear alone doesn't require a great deal of experience.

Many doctors will also perform a rectal or recto-vaginal (one finger in rectum and one in vagina) examination. These examinations can provide additional information. Usually during the examination there is a drape over your knees and the doctor sits on a stool out of your line of sight. Ask the doctor to explain what is going on.

obtained with the aid of a speculum. This provides cells for study under the microscope. A trained technician (a cytologist) can then classify the cells according to their microscopic characteristics.

Your doctor will explain the approach to confirming the diagnosis and starting treatment.

A single Pap smear detects up to 90% of the most common cancers of the womb and 70 to 80% of the second most common. Both of these common types of cancer grow slowly. Current evidence indicates that it may take ten years or more for a single focus of cancer of the cervix to spread. Thus, there is an excellent chance that regular Pap smears will detect the cancer before it spreads.

Cancer of the cervix is more frequent with moderate to heavy sexual activity, especially, and perhaps only, if you have multiple partners. It can follow from sexually transmitted diseases. Regular Pap testing probably should begin when regular sexual activity begins or at age 21, whichever is earlier. Testing is done annually for the first three years. If these first Pap smears are normal, then tests are done every three years. Some experts suggest that the tests can be discontinued at age 65 if all previous tests have been normal. While this recommendation probably carries little risk, we think that a Pap smear every three years is a small burden and prefer to continue the tests.

THE PAP SMEAR

You should be familiar with the basics of this test, in which a scraping of the cervix and a sample of the vaginal secretions are

Vaginal Discharge

Normal vaginal secretions are thin, clear, and painless. Abnormal vaginal discharge is common, however, and can have many causes.

Hormonal changes can cause vaginal dryness and irritation in older women. You may need a prescription cream if the symptoms bother you. Forgotten tampons and other foreign bodies can cause vaginal irritation and discharge. Abdominal pain and bleeding between periods (page 296) suggest the possibility of a serious problem.

Bacteria, viruses, and other microbes can infect the vagina and cause discharge:

- A mixture of bacteria may be responsible (nonspecific vaginitis)
- A yeast infection (monilia) can cause a white, cheesy discharge
- Trichomonas, a common microbe, can cause intense itch and a white, frothy discharge

These infections aren't serious, but they are bothersome. Make an appointment with the doctor if the discharge lasts more than a few days.

See the doctor if it's possible someone has exposed you to a sexually transmitted disease (STD). Don't feel ashamed. Doctors treat STDs all the time. You'll be asked to name your sexual contacts. Be frank about naming people with whom you had contact—for their benefit. Information is kept strictly confidential and may prevent spreading the disease.

Other signs to seek medical care are if:

- The discharge is more than slight.
- The discharge is yellow-green, grey, cheesy, smelly, or bloody.
- The affected area hurts or itches.
- The discharge lasts more than a few days.
- A girl with vaginal discharge has not reached puberty.

HOME TREATMENT

Patience and good hygiene are the home treatment of vaginal discharge.

Wear cotton underwear, use condoms, and take a daily shower.

Nonprescription anti-yeast creams, such as Monistat, may help you if your discharge is similar to a previously diagnosed yeast infection.

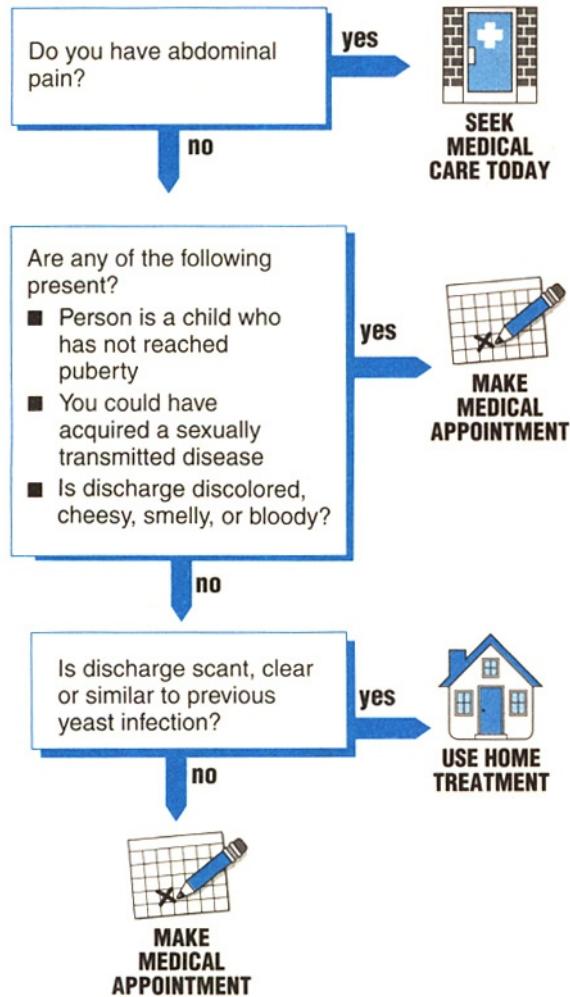
Call your doctor if you are taking an antibiotic such as tetracycline for some other condition. Your doctor may change the medication.

See the doctor if symptoms get worse or persist after a few days of home treatment. Do not douche for 24 hours before your doctor's appointment.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will do a pelvic examination. He or she may obtain a culture from the vagina for laboratory analysis.

Suppositories or creams are the usual treatment of vaginal discharge. The doctor may prescribe oral medication for severe cases of fungal or trichomonas infection. If a sexually transmitted disease is possible, the doctor will prescribe an antibiotic. Your sexual partner(s) may require treatment too.

VAGINAL DISCHARGE

Bleeding Between Periods

Most often the interval between two menstrual periods is free of bleeding or spotting. Many women experience such bleeding, however, even though no serious condition is present. Women with an intrauterine birth control device (IUD) are particularly likely to have occasional spotting. If the bleeding is slight and occasional, it may be ignored.

Serious conditions such as cancer and abnormal pregnancy may be first suggested by bleeding between periods. However, many less serious problems, such as fibroids (benign tumors in the uterus), may have the same sign. If bleeding is severe or occurs three months in a row, a doctor must be seen. Often a serious problem can be detected best when the bleeding isn't active. The gynecologist or the family doctor is a better resource than the emergency room.

Any bleeding after menopause should be evaluated by a doctor.

HOME TREATMENT

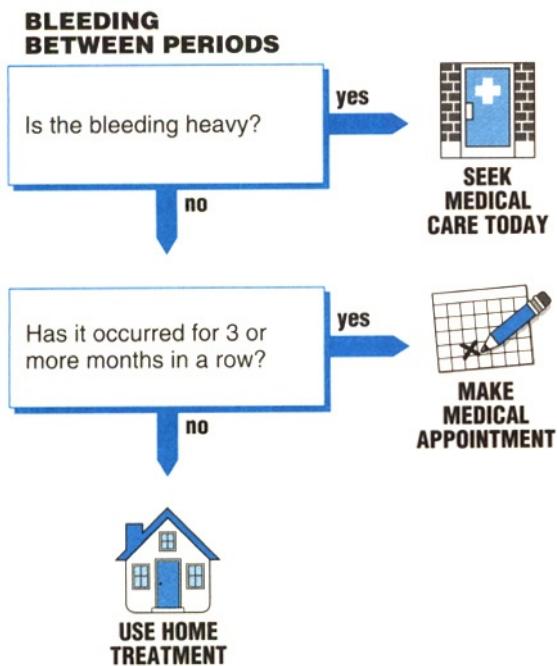
Relax and use pads or tampons. Avoid taking aspirin, ibuprofen, naproxen, ketoprofen, or other NSAIDs (page 38) if possible; it may prolong the bleeding. If in doubt about the effect of any medication, call your doctor.

The relationship between tampons and toxic shock syndrome is a subject of medical controversy, but many doctors believe that leaving tampons in place too long increases the risk of this problem. Change tampons regularly, at least twice daily. Be sure that

tampons are removed: it is surprisingly easy to forget about them. We don't think tampons should be avoided but believe they should be used with care.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Some personal questions, a pelvic examination, and a Pap smear should be expected (see The Gynecological Examination, page 292). If bleeding is active, the pelvic examination and Pap smear may be postponed but should be performed within a few weeks.



Difficult Periods

Adverse mood changes and fluid retention are very common in the days just prior to a menstrual period. Such problems are vexing and can be difficult to treat but are a result of normal hormonal variations during the menstrual cycle.

The menstrual cycle varies from woman to woman. Periods may be regular, irregular, light, heavy, painful, pain-free, long, or short, and yet still be normal. The rhythm of a menstrual cycle is medically less significant than bleeding, pain, or discharge between periods. Only when problems are severe or recur for several months is medical attention required. The doctor can find such problems as endometriosis—the presence of the sort of tissue that lines the uterus in other parts of the body, where it can cause problems. Emergency treatment is seldom needed.

HOME TREATMENT

Diuretics (pills that help the body get rid of fluids through increased urination) and hormones are rarely needed. As we have said in other sections of this book, we prefer the simple and natural to the complex and artificial. We have all too frequently seen hormone treatment lead to mood changes that are worse than premenstrual tension, and diuretics lead to potassium loss, gouty arthritis, and psychological drug dependency.

Salt tends to hold fluid in the tissues. The most natural way to start fluids moving is to cut down on salt intake. In the United States,

the typical diet has ten times the required amount of salt. Many authorities feel that this is one cause of high blood pressure and arteriosclerosis. If you can eliminate some salt, you may have less swelling and fluid retention. If food tastes flat without salt, try using lemon juice as a substitute. Commercial salt substitutes are also satisfactory. Products with the word "sodium" or the chemical symbol "Na" anywhere in the list of ingredients contain salt.

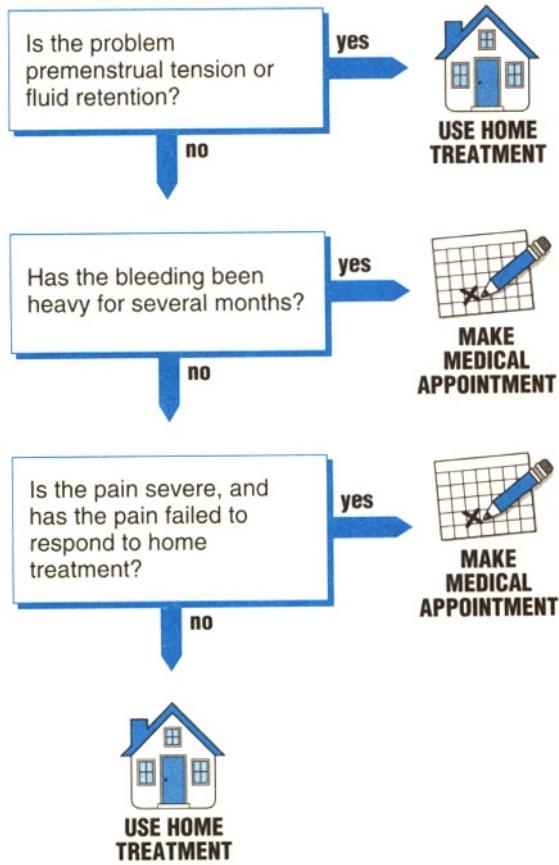
For menstrual cramps, use ibuprofen (Advil, Nuprin, Midol, etc.) (page 40) or naproxen (Naprosyn, Aleve, etc.) (page 41). Products claimed to be designed for menstrual cramps (such as Midol) now have ibuprofen as the main ingredient. Many patients swear by such compounds, and they are fine if you want to pay the premium. We don't understand why, on a scientific basis, they should be any better than plain ibuprofen. Ibuprofen or naproxen is usually most effective, but occasionally aspirin or acetaminophen may be preferred.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will give you some advice. Frequently a prescription for diuretics or hormones will be given. For menstrual cramps, ibuprofen (Motrin, etc.) or another prostaglandin-inhibiting drug is often prescribed. Note that ibuprofen is also available in lower doses (Advil, Nuprin, Midol, etc.) without a prescription (page 40).

Pelvic examination is often unrewarding and sometimes may not be performed. However, if endometriosis is suspected, the pelvic exam should be done during the premenstrual phase of the menstrual cycle.

In cases of heavy bleeding, dilatation and curettage, or "D and C," may be required.

DIFFICULT PERIODS

The removal of the uterus (hysterectomy) shouldn't be performed for this complaint alone. If a tumor is found, surgery will sometimes be required; but the common fibroid tumor will often stop growing by itself, and surgery may not be needed. Such tumors often grow slowly and often stop growing at menopause, so an operation can be avoided by waiting. If the Pap smear is positive, however, surgery is usually required.

Missed Periods

Although pregnancy is often the first thought when a period is missed, there are many reasons for being late. Obesity, excessive dieting, strenuous exercise, and stress may cause missed or irregular periods. Diseases such as hyperthyroidism that upset the hormonal balance of the body may also be the cause of missed periods, but this is only infrequently the case. It is normal for periods to be irregular before they stop completely with menopause.

Pregnancy Tests

Testing for pregnancy has become faster, easier, and more sensitive in the last decade. Home test kits that provide a reasonable degree of accuracy are now available and may show a positive result as early as two weeks after the missed period. The most sophisticated laboratory test available through your doctor's office may turn positive within a few days after the period should have started. In both instances, a negative result is less reliable when the test is used soon after the period is missed. Thus, it is common to repeat the test after a negative result if periods don't resume.

Because a positive result is less likely to be misleading than a negative one, the rule is to believe a positive test, but not to trust a negative test until it has been repeated at least once.

Other Causes

Two opposites, obesity and starvation, often lead to irregular periods. If either of these conditions is severe and persistent, it can cause the complete cessation of periods. At

the other end of the health spectrum, women who are undergoing rigorous athletic training often have irregular periods. The missed periods themselves do not harm the athlete, but there is some concern that the hormonal imbalance that causes the missed periods may also lead to loss of calcium from bones. Currently it isn't possible to determine if this poses any real risk to women athletes.

Emotional as well as physical stress may result in irregular periods. Indeed, anxiety over possible pregnancy may cause a missed period, thereby increasing the anxiety even further.

Missed periods, rarely, can be a first clue to a metabolic problem or other disease. If the problem persists over two or more cycles, seek medical advice.

If you've reached the age when menopause is possible or likely, then this inevitable event must move to the top of your list of possible causes for the missed period. You may have already experienced some of the other symptoms of menopause. Your periods may also be irregular for a considerable time before they cease altogether. (See Menopause, page 302, for more information.)

HOME TREATMENT

In this instance, home treatment consists of giving yourself some time to consider the various causes of missed periods. You can do something about obesity (see Chapter 1). If you are dieting to the point of starvation, you may have a condition known as anorexia nervosa, and you should consult a doctor or a psychotherapist. If you are following a course of strenuous physical exercise, be alert for further information concerning the possible harmful effects of hormonal imbalance associated with missed periods. Finally, knowing that emotional stress may lead to missed

MISSED PERIODS

Is pregnancy possible?

yes

Home testing: Many home pregnancy tests become positive approximately 2 weeks after the period was due. The most sophisticated laboratory tests may become positive within a few days after the period was due.

Are you over 42 years old?

yes

See: Menopause, p. 302

Have you missed 2 or more periods in a row?

yes



periods will help you focus on the cause of the stress rather than on a potential symptom.

If you feel that there is no satisfactory explanation for the missed period or are unable to develop a plan for dealing with the cause on your own, a phone call to your doctor should provide the advice you need.

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

Because diseases are relatively infrequent causes of missed periods, most doctors won't rush into a series of tests in an effort to detect these diseases. The doctor will consider the common causes of missed periods discussed above; this is best done with a careful history and physical examination. If pregnancy is the only real possibility, the doctor may refer you by phone to the laboratory for a pregnancy test so that you can avoid an unnecessary office visit.

Menopause

Many women expect that menopause will be a time of difficulty and unhappiness. Understanding the changes that take place during menopause—and what you can do about them—is the best way to approach this time of your life. You may even find that, on balance, menopause is a positive experience.

During menopause, the ovaries reduce their production of female hormones (estrogen and progesterone). Menstrual periods usually become lighter and irregular, and then stop altogether. The halt of menstrual periods means the end of fertility. After menopause a woman no longer needs contraception to prevent pregnancy. This is one aspect of menopause that many women consider positive.

Hot flashes—sudden feelings of intense heat lasting two or three minutes—are an annoying sign of menopause. They can happen anytime during the day but are most common in the evening. Caffeine and alcohol may make hot flashes worse. Exercise may improve them. For most women, hot flashes gradually decrease over about two years and eventually disappear altogether.

Many women also have mood swings during menopause. It isn't clear whether menopausal hormonal changes cause the mood swings. The moods many women report aren't necessarily unpleasant, just unexpected. For example, one may feel alert in the middle of the night, but not uncomfortable.

Menopausal changes may also prompt a woman to worry, which is why it's good to know what changes are common. A woman in menopause may be depressed, but menopause does not cause depression.

Female hormones are responsible for the production of natural lubricants in the vagina. Loss of estrogen can cause vaginal dryness. This may lead to irritation, itching, and soreness during and after intercourse.

Osteoporosis, a condition that makes bones more fragile, begins with menopause but causes no symptoms for years. Usually the first sign of osteoporosis is a broken bone, often a hip, later in life. Such fractures are especially serious because they may lead to prolonged physical inactivity. Also, once bones become thin enough to fracture easily, it is difficult to reverse the process and strengthen the bones.

HOME TREATMENT

Staying cool is the key to treating hot flashes. Keep the home or office cool, dress lightly, and drink plenty of water. Reduce your consumption of alcohol and caffeine, and maintain a regular exercise program. There's no need for medicines such as acetaminophen or aspirin.

You can get relief from vaginal dryness with lubricants such as water-based gels (e.g., Lubifax, K-Y), unscented creams (e.g., Albolene), or other over-the-counter products (e.g., Lubrin). Many women also find that the soreness of intercourse decreases with regular sexual activity.

Regular exercise and adequate dietary calcium are important to prevent osteoporosis. An aerobic exercise program—30 minutes a day, four days a week—is good, but any physical activity will help keep bones strong (page 4). Calcium is essential to maintain strong bones. Postmenopausal women should have 1,200 to 1,500 mg of calcium per day, about as much as in a quart (1 L) of skim milk. You can use a calcium supplement if you can't get enough from dairy products.

MENOPAUSE

Are you more than 42 years old?

no

Consider problem other than menopause.

yes

Is one or more of the following present?

- Decreasing menstrual periods
- Hot flashes
- Vaginal dryness
- Unexpected mood changes

no

Consider problem other than menopause.

yes

Do you want to consider estrogen replacement therapy (ERT)?

yes



no



USE HOME TREATMENT

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will take the history and do a physical examination to confirm menopause.

The major issue you should discuss with the doctor is whether to take estrogen replacement therapy. Estrogen can reduce many symptoms of menopause. It also reduces the risk of heart disease, which is statistically the biggest effect. It may slightly increase your risk of uterine cancer. We recommend estrogen replacement therapy (ERT) for most women.

Your doctor may prescribe estrogen combined with progestin, a hormone similar to progesterone. This combination may eliminate the increased uterine cancer risk and may even help protect against breast cancer. However, this combination may increase the risk of high blood pressure, heart disease, and stroke. Many doctors prescribe estrogen skin patches, which have a low dose and few side effects. However, some estrogen patches are not strong enough to strengthen the bones.

For vaginal dryness the doctor may prescribe estrogen-containing creams or suppositories. These work well and cause few side effects.

Talk over the risks and benefits of estrogen replacement therapy with your doctor.

CHAPTER 12

Sexual Problems and Questions

Sexually Transmitted Diseases

There are many types of sexually transmitted diseases (STDs). Their symptoms range from annoying to deadly. Fortunately, there are now treatments for all of them. Furthermore, it is important for you to know if you have an STD and may thus infect your sexual partner. For these reasons, you must not let embarrassment block you from seeking medical care.

The table opposite lists the symptoms of six STDs. If you think you might have any of these, you need the help of a doctor. On page 306 you'll find information about genital herpes, the only type of STD you might be able to treat at home.

TABLE 8*Sexually Transmitted Diseases*

| <i>Disease</i> | <i>Symptoms</i> | <i>Diagnosis</i> | <i>Treatment</i> | <i>Special Concerns</i> |
|--|--|--|--|---|
| Gonorrhea | MEN: discharge from penis; burning feeling while urinating WOMEN: usually none; sometimes vaginal discharge and abdominal discomfort | ■ Culture of a suspected infection ■ Examination of vaginal discharge by microscope | Antibiotics | Untreated can lead to: ■ Severe pelvic inflammation in women ■ Infertility ■ Arthritis ■ Other problems |
| Syphilis | FIRST SIGN: chancre sore in genital, anal, or mouth area LATER: rash, slight fever, swollen joints | ■ Examination of fluid from chancre ■ Blood test | Penicillin or other antibiotics | Untreated can lead to: ■ Blindness ■ Brain damage ■ Heart disease ■ Birth defects |
| Chlamydia | Similar to gonorrhea, if any | ■ Culture of a suspected infection ■ Examination of vaginal discharge by microscope | Antibiotics | Untreated can lead to: ■ Pelvic inflammation ■ Infertility in women ■ Pregnancy complications |
| Genital warts | Small, fleshy "condyloma" growths in genital or anal area: soft and reddish inside the body, darker growths outside | ■ Physical examination | Large growths may be removed surgically or burned off | Can return after treatment |
| Pubic lice | ■ Itching worse at night ■ Lice visible in pubic hair ■ Eggs ("nits") attached to pubic hair | ■ Physical examination | Medication to kill the lice | None |
| AIDS (acquired immunodeficiency syndrome) | ■ Unusual susceptibility to illness ■ Persistent fatigue and fever ■ Night sweats ■ Unexplained weight loss ■ Swollen glands ■ Persistent diarrhea ■ Dry cough | ■ Blood test for antibodies to the human immunodeficiency virus (HIV) | Treatment can now help fight the virus and slow the disease, but there is still no cure. | Symptoms may not appear until years after infection. See page 308 for more information. |

Genital Herpes

About 20 million Americans are infected with one of the two types of herpes virus.

- Herpes type 1 is usually spread by kissing. It causes the common fever blisters and cold sores of the lips and mouth, but can also affect the genitalia.
- Herpes type 2 usually causes infections of the genitals. It is typically spread by sexual contact and is thus rare in children.

About one-third of those infected with herpes have bouts of red, painful blisters that last five to ten days. Illnesses, trauma, or emotional stress may trigger these episodes.

Herpes is most contagious during and just before the time when the blisters appear. Many infected people have an itchy or tingly feeling (prodrome) a day or two before the outbreak of blisters. To lower the chance of infecting someone else, avoid sexual contact when the prodrome or blisters are present. Condoms help but don't give complete protection.

Herpes infections are associated with cancer of the cervix. Therefore, if a woman has recurrent herpes infections, she has another reason to obtain a regular Pap smear.

HOME TREATMENT

The herpes sores heal on their own, and you can't do much for them. People with fever blisters try salves, calamine lotion, alcohol, and ether. Some people may get relief, but no remedy works well. A hot bath for five to ten minutes seems to speed healing. Over-the-

counter products (e.g., Blistex) may provide some relief. Many people believe that reducing stress and anxiety is helpful.

Call the doctor if the problem lasts for more than two weeks or if you're unsure your condition is herpes.

To locate a local support program, contact:

- American Social Health Association
P.O. Box 13827
Research Triangle Park, NC 27709
(800) 230-6039
www.ashastd.org

WHAT TO EXPECT AT THE DOCTOR'S OFFICE

The doctor will take the history and do a physical examination. He or she will ask about your sexual habits and other personal information. It is important that you be complete and accurate.

If you have herpes, the doctor may take a sample for laboratory analysis. There are no drugs to cure herpes, but acyclovir (Zovirax) in oral form or in an ointment may make your first attack heal sooner: in 10 to 12 days rather than 14 to 16 days. The ointment usually doesn't work as well on repeated attacks. Oral acyclovir does decrease the number and severity of recurrences if you take the drug continuously, but its side effects can include nausea, vomiting, diarrhea, dizziness, joint pain, rash, and fever.

GENITAL HERPES

Is there a group of small, painful blisters on reddened skin?

no

Consider another problem.

yes

Is this a first episode, and do you want somewhat faster healing?

yes



no

Are these severe, frequent attacks?

yes



no



USE HOME TREATMENT

AIDS and Safer Sex

AIDS (acquired immunodeficiency syndrome) is caused by the human immunodeficiency virus (HIV). This virus suppresses the immune system and leaves the body susceptible to normally rare disorders, including the type of pneumonia characterized as pneumocystis, Kaposi's sarcoma (a form of skin cancer), and other opportunistic diseases (diseases that take advantage of the body's low immune defenses).

MODES OF TRANSMISSION

HIV is transmitted through sexual intercourse—oral, vaginal, or anal—or through sharing needles or syringes with an infected person.

HIV has not been shown to be spread from saliva, sweat, tears, urine, or feces. You won't get AIDS from casual contact, such as working with someone with AIDS, a kiss, a telephone, a toilet seat, or a swimming pool. However, babies of infected women may be infected during pregnancy or through breastfeeding.

Some hemophiliacs and surgical patients have become infected because of transfusions of contaminated blood. The probability of receiving infected blood is now very small. There is no risk in donating blood.

WHO'S AT RISK?

The majority of AIDS cases in North America are concentrated among male homosexuals, bisexuals, and intravenous drug users.

Approximately 4% of cases have been attributed to heterosexual contact.

The rate at which AIDS is spreading within the heterosexual community isn't clear. However, there is an alarming increase among intravenous drug abusers. Experts believe that this may be the main means of transmission within the heterosexual population in the future. It is important to stress that though AIDS has been predominant in certain groups (that is, gay men and intravenous drug abusers), it's not who you are, it's what you do, that increases your risk of infection. Casual sex, whether homosexual or heterosexual, is the biggest threat for most people. Having sex with many different people can be very dangerous, even when condoms are used. Therefore, reducing risky behavior is the first step to preventing and controlling the spread of AIDS.

Especially risky behaviors are the following:

- Having sex with multiple partners
- Sharing drug needles and syringes
- Anal sex with or without a condom
- Vaginal or oral sex with someone who shoots drugs or engages in anal sex
- Sex with a stranger (pickup or prostitute) or with someone who is known to have multiple sex partners
- Vaginal sex without a condom when there is any chance the other person is infected with HIV

AIDS TESTING

Here are some ground rules for AIDS testing.

WHO: Men or women who have had sex with many partners or with prostitutes, who use intravenous drugs, who have gonorrhea or

syphilis, who have had sex with anyone who has engaged in these behaviors, or who received a blood transfusion or blood products between 1978 and 1985.

WHEN: Every three to six months for as long as the behavior creating the risk continues.

WHY: To detect infection with HIV. If you test positive, there are treatments that can reduce the risks of complications in some patients.

Testing needs to be accompanied by counseling with respect to prevention of AIDS as well as interpretation of results. Keeping results confidential may require special strategies, but notification of sexual partners is essential when results are positive.

PREVENTING AIDS

Currently a number of researchers are testing AIDS vaccines. However, a vaccine for mass inoculation isn't on the immediate horizon.

Therefore, the primary means of prevention are:

- Celibacy—not having sex
- Maintaining a monogamous relationship with an uninfected person
- Practicing safer sex in relationships where risk of infection is possible
- Not sharing needles and/or syringes, or better yet not shooting drugs

The risk of AIDS is somewhat decreased by using a latex condom; wear the condom for a time before and after oral, anal, and vaginal intercourse, as well as during. Safety is increased by using a water-based lubricant such as K-Y jelly, Gynol II, Today, or Corn Husker's Lotion. Don't use petroleum jelly,

cold cream, or baby oil as a lubricant. These products weaken the latex and can cause it to break.

Use of a spermicide containing nonoxynol-9 in conjunction with a condom may provide further protection from HIV infection if the condom breaks.

TREATMENT

There are now a number of effective drugs and drug combinations, and your doctor can advise you. Treatment can be expensive, and it can cause side effects. Treatment usually must be continued for life. Very long term effects are not yet known. How long life can be prolonged is not clear.

Therefore, for the foreseeable future, the best way to avoid AIDS is to avoid risky behavior and practice safer sex when in doubt of your partner's status.

PREVENTION OF OTHER SEXUALLY TRANSMITTED DISEASES (STDs)

The rules for AIDS prevention also decrease the risk of developing other STDs. Again, the effectiveness of condoms as a barrier to infection is not complete but can be substantial if properly used.

Preventing Unwanted Pregnancy

Every woman must decide to abstain from sex, have babies, or use a contraceptive technique. Ideally, the male partner participates in this decision, but through a well-known quirk of nature he doesn't participate in the most direct consequences. This chapter is concerned with the medical considerations involved in making decisions about contraception and childbearing. These decisions have a major effect on your health, both directly and indirectly, whether you are male or female. Childbearing and every form of contraception have definite risks.

Few women will pursue one course of action for all their childbearing years. Not having sex is most effective but will be a reasonable choice for only a few people. For most it is neither a practical nor a healthy suggestion. An exception: Postponing the onset of sexual activity can often assist the emotional transition to adulthood. The majority of women employ some form of contraception except for specific times when they are attempting to get pregnant or aren't engaging in sexual intercourse. Choosing a method of contraception is one of the most intensely personal decisions you will make, and the rest of us should respect your right to make up your own mind. Ideally, your choice depends on you and your partner.

FORMS OF CONTRACEPTION

Here are brief descriptions of the most popular forms of contraception.

Surgeries. If you are sure that you don't want any more children, the safest methods for ensuring this are surgeries. Women can have their fallopian tubes tied (tubal ligation), preventing sperm from reaching their eggs. Men can have a vasectomy operation, which keeps sperm out of their semen. Neither surgery interferes with sexual performance or pleasure.

Birth Control Hormones. Birth control pills ("the pill"), Depo-Provera, and Norplant are the most common medications taken by women to prevent pregnancy.

Birth control pills use hormones to prevent pregnancy and must be taken on a daily basis. When used correctly they are very effective in preventing pregnancy. However, the pill may cause blood clots, which have been fatal on occasion. It may also contribute to high blood pressure. There are less dangerous but annoying side effects such as weight gain, nausea, fluid retention, migraine headaches, vaginal bleeding, and vaginal yeast infections.

Birth control pills can also be used as emergency contraception on "the morning after." Up to 72 hours after intercourse a woman who is worried that she may have been impregnated can take two doses of birth control pills 12 hours apart. This will reduce her chance of becoming pregnant by at least 75%. Depending on which pill is used, each dose is two or four times the usual daily dose of birth control pills. Therefore, it is helpful to ask advice from a doctor or clinic before trying this method. Since the dosages of hormone are so much higher, side effects are

more common: nausea occurs for 50 to 70% of women using this method and vomiting occurs for about 20%.

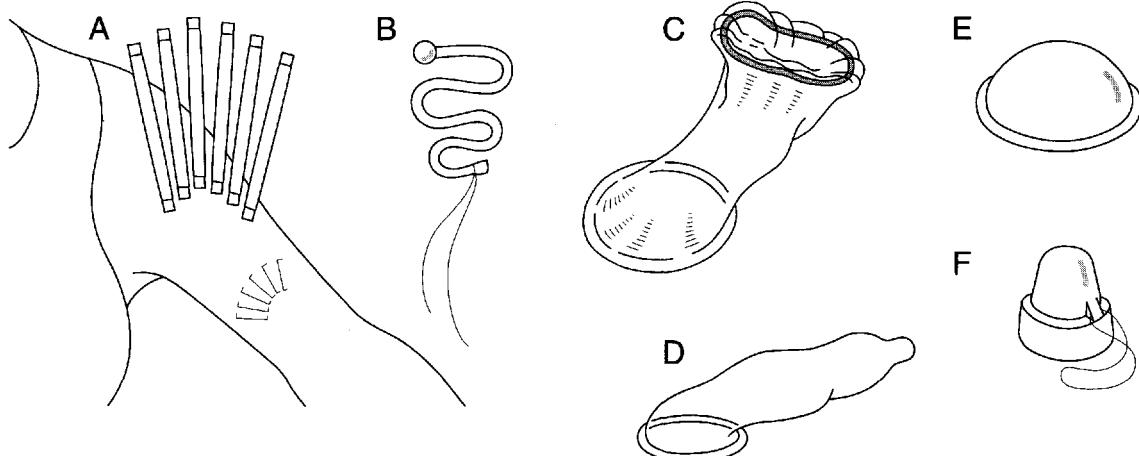
Depo-Provera is a long-lasting injection of hormones that provides contraception for about three months. Norplant provides five years of contraceptive hormones from six slender, flexible capsules surgically placed under the woman's skin—in the fleshy part of the upper arm, for instance. The capsules are designed to be removed if the woman desires, but there have been reports of problems in doing this. These options have side effects similar to those of birth control pills since they also depend on hormones for their effect.

Intrauterine Device (IUD). This device is inserted into the uterus by a doctor and remains there until removed or expelled. If the IUD is expelled, it may not be noticed. In such cases, some pregnancies have resulted. The IUD may also cause bleeding and cramps. In rare

instances, it is associated with serious infections of the uterus, although the type of IUD most frequently associated with these uterine infections—the Dalkon Shield—has been removed from the market.

Diaphragm, Cervical Cap. A diaphragm is a rubber membrane that fits over the opening to the uterus in the vagina. It must be inserted before intercourse and kept in place for at least six hours afterward. There are no side effects or complications from diaphragms. They are best used with a spermicidal foam or jelly. Cervical caps are more sturdy variations of the diaphragm and always contain spermicide. Caps are more effective for women who have never given birth.

Foams, Jellies, and Suppositories. These ointments contain chemicals that kill or immobilize the man's sperm. In the past they were used by themselves but now are almost



Contraceptive devices. (A) Norplant; (B) intrauterine device, or IUD (this figure shows a Lippes Loop; other types are available); (C) female condom; (D) male condom; (E) diaphragm; (F) cervical cap.

SEXUAL PROBLEMS AND QUESTIONS

always used in conjunction with a diaphragm. Side effects are unusual and consist of some irritation to the walls of the vagina. Their effect lasts only about 60 minutes, and many people find these preparations inconvenient and just plain messy.

Condoms. Male condoms are enjoying a resurgence of popularity. If used correctly, latex condoms are 90% effective in preventing pregnancy. They have no side effects, and they are inexpensive and widely available. However, the male must remember to use a condom properly, and some designs do decrease the male's physical sensitivity. Female condoms have been used less but appear to have similar advantages and disadvantages. Condoms are the only form of birth control to give substantial protection against sexually transmitted diseases, including AIDS. They work best when used with a spermicide.

Periodic Abstinence. In this technique the couple avoids intercourse during the time when they expect the woman to ovulate. Such techniques are often taught as "natural family planning," and are preferred by many couples with a religious or moral dislike for other forms of birth control. The "rhythm method" requires the woman to have fairly regular periods and to carefully take daily temperatures in order to predict the time of ovulation. Under the best of circumstances, it is only moderately effective. More recently developed techniques based on frequent measurement of the acidity of the cervical mucus are a slight improvement. All such methods require highly motivated people to make them work.

Finally, we will mention two methods that reduce the chance of pregnancy somewhat, but in the long run aren't reliable enough to prevent it. In withdrawal (*coitus interruptus*)

TABLE 9

Effectiveness of Contraceptive Methods

Percentage of women who become pregnant during the first year of using each contraceptive method (the lower the number, the more effective the method)

| Method | Typical Use | Perfect Use |
|--|-------------|-------------|
| No contraception | 85% | 85% |
| Spermicides only | 21 | 6 |
| Periodic abstinence | 20 | 4* |
| Withdrawal | 19 | 4 |
| Cervical cap women who have never given birth | 18 | 9 |
| women who have given birth | 36 | 26 |
| Diaphragm | 18 | 6 |
| Female condom | 21 | 5 |
| Male condom | 12 | 3 |
| Pill | 3 | 0.3* |
| IUD | 1* | 0.6* |
| Female sterilization | 0.4 | 0.4 |
| Depo-Provera | 0.3 | 0.3 |
| Male sterilization | 0.2 | 0.1 |
| Norplant (6 capsules) | 0.1 | 0.1 |

* This number is an average of the percentages produced by different methods within this category.

the male removes his penis from the vagina just before ejaculation. Because there are sperm present in the secretions of the penis *before* ejaculation occurs and because withdrawal at just the right time is a tricky business at best, this method rather frequently fails. Douching after intercourse also decreases the number of sperm in the vagina, but it too is far from reliable.

DECIDING TO GIVE BIRTH

You may decide to become pregnant for the best of reasons—your own reasons. One of the most popular reasons to have sex without birth control is that you wish to raise a family. Many women have ethical or religious objections to abortion—or to other forms of contraception, for that matter. A pregnant woman who won't be able to care for her baby but can't accept an abortion has the option of allowing the newborn to be adopted.

Another common reason not to use contraception is simply not wanting to bother with it. Not smart. Deciding to have sex without birth control is, over the long run, the same as deciding to become pregnant.

A woman who chooses to give birth to a child deserves good medical care. This lowers the health risks of pregnancy and childbirth and provides for a healthier, happier baby. We and Dr. Robert Pantell discuss pregnancy and birth in detail in *Taking Care of Your Child*.

ERECTILE DYSFUNCTION (ED)

Erectile dysfunction, the inability of the male to maintain an erection sufficient to complete intercourse, has now become a syndrome for both private and public discussion. Its frequency increases with age and with some diseases, such as diabetes.

First, consider the reversible causes. ED can result from smoking cigarettes, drinking alcohol, and taking any of a number of medications, especially drugs used to treat high blood pressure. Lack of aerobic physical exercise and obesity can sometimes contribute.

Second, effective medical treatment with Viagra is now available. This is expensive, doesn't always work, and poses some hazards, particularly for men taking nitroglycerin. Long-term effects are not yet known. This can be a difficult choice. Talk with your doctor. Don't buy the drug over the Internet without this essential medical discussion.

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PART III

*Managing Your
Professional
Medical Care*

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CHAPTER 13

Working with Your Doctor and Your Health Care System

You should have one personal doctor in whom you trust and confide. This doctor should be your advocate and your guide through the complicated medical care system. You may require an additional consulting doctor from time to time, and your personal doctor should interpret and coordinate that consultant's recommendations. Good medical care usually doesn't result from having a different doctor for every organ of your body. Having too many doctors working in an uncoordinated manner often results in too many medications, too many medical procedures, too many side effects, and sometimes in opposing approaches to treatment. Your personal doctor doesn't need to be an expert in everything; he or she should readily seek advice from others when needed and guide you to other appropriate health professionals. But someone has to view the whole picture, to know everything that's going on. Someone needs to take responsibility for putting all the information together and making sure that nothing has been left out.

Finding the Right Doctor

What kind of doctor should your personal doctor be? He or she might appropriately be a:

- **Family practitioner:** specialist in family medicine
- **Internist:** specialist in internal medicine
- **Gynecologist:** specialist in female medicine or health
- **Geriatrician:** specialist in the medical care of older people

The family practitioner and the general internist are trained in dealing with the "whole patient" and in appropriate use of other consultants as

required. Geriatrics is a relatively new specialty with practice limited to the senior population, and its practitioners take pride in recognizing the needs of the whole patient as well. Most internal medicine problems now occur after the age of 65, so the general internist has also become, in large part, a geriatrician.

If you have a particular major disease, such as heart disease or rheumatoid arthritis, it may be inefficient to have a general doctor who must frequently refer you to a specialist. See if it's possible for the specialist to serve as your primary doctor. As noted above, it's not a good idea to have two or more primary doctors at the same time.

The most important qualities that you want in a primary care doctor center on *communication* and *anticipation*. Communication is the human side of medicine. A good primary physician:

- **Takes time to listen.** You can help your doctor by explaining your problems clearly.
- **Takes time to talk with you.** The doctor will explain his or her suggested course of action clearly.
- **Plans ahead to prevent problems.** A substantial part of your conversation should be about how to prevent future illnesses. Problems will be anticipated and plans made before the problems become severe.
- **Reviews your total health program regularly.**
- **Has your trust and confidence.** If you can't communicate with your doctor, try another. Often two people just happen to operate on different frequencies. You want to keep the same doctor for a long time, so if a relationship with a particular doctor isn't working, find a new one early on. When you find the right doctor, stay with him or her unless there's a substantial change in your medical needs and you require a doctor with different skills.
- **Is available by telephone.** Simple questions can often be answered by phone. And you don't want to make a doctor visit just to get a prescription refilled.
- **Uses medication conservatively.** You don't want a doctor who just gives a pill for everything.

There's a technical side of medicine too, and for some individuals this will represent the most important part of modern medicine. Perhaps you need an operation on your blood vessels or your brain. Perhaps you need surgery inside your middle ear. Perhaps you need replacement of your hip joint, kidney dialysis, or even an organ transplant. In these situations your standards for excellence in your consulting doctor are a little different.

You're still interested in anticipation and communication, but you also want to pay a great deal of attention to the *technical skill* of the individual.

You'd like to know if a particular surgeon, for example, gets better or worse results than average. This is often a little hard to judge, but there are two key tests you can apply.

- Does the specialist have the complete confidence and approval of your primary doctor? Talk with your primary doctor about possible alternative physicians, and ask about the advantages and disadvantages of each.
- Ask how frequently the specialist performs the particular procedure. Technical results are generally better at institutions and with doctors who perform a technical procedure frequently. As a general rule, results are substantially better where the procedure is done at least 50 times each year, and are not as good where the procedure is done only occasionally.

These considerations don't apply only to surgical specialists. Increasingly the line between surgery and medicine has blurred. There are now "invasive cardiologists" who perform marvelous but sometimes hazardous tasks using long tubes manipulated through your blood vessels under X-ray control. The gastrointestinal "endoscopist" can now use long, flexible, lighted tubes to look at (and sometimes treat) a surprising amount of your insides from the outside. An arthroscopist can perform surgery inside a joint, needing only a small cut in the skin to admit a lighted tube with which to see the joint's interior. Arteriographers, often radiologists, use dye injected through long catheters to visualize your blood vessels on X-ray film. New imaging techniques include computed axial tomography (CT or CAT scans) and magnetic resonance imagery (MR or MRI). These techniques require skill both for performing the procedure and for interpretation of the results. Again, apply your two tests. Does the specialist who will do the procedure have the full agreement and confidence of your primary doctor? Does the specialist perform the procedure frequently?

Communicating with Your Doctor

You and your doctor must be able to listen, explain, ask questions, understand each other, and choose options wisely. Put simply, you and your doctor must be able to talk and work together as partners.

THE MEDICAL HISTORY

When you visit your doctor, it's essential for you to give a concise, organized description of your illness. Tell it like it is. If you want to report a sexual problem, don't say that you're "tired and run-down." If you're afraid that you have cancer, don't say that you came "for a checkup." Patients who ramble or don't mention their real concerns are their own worst enemies. The ability to give a good medical history helps to preserve your health and your dollars.

Most people don't realize that every doctor uses a similar process to learn a patient's medical history and to organize those facts so as to be able to remember and analyze them. Knowing that process can help you give accurate information. Your primary physician may not go through your entire medical history on a repeat visit, but doctors will do so during a first visit or a comprehensive evaluation. Be prepared to give your doctor information under these five headings.

- **Chief complaint.** After greeting you, the doctor usually asks about your chief complaint. This question may take several forms: "What bothers you the most?" "What brings you here today?" "What's the trouble?" Your answer establishes the priorities for the rest of the visit. Be sure you express your problem clearly. Know in advance how to state your chief complaint: "I have a sore throat." "I have a pain in my lower right side." "I seem to have three problems: sore throat, skin rash, and cloudy urine." Think of the chief complaint as the *title* for the story you're about to tell the doctor. Any of the problems listed in Part II may be your chief complaint, and there are hundreds of less common problems.
- **Present illness.** Next your doctor will want to hear the story behind your chief complaint: "When did this problem begin?" "When were you last entirely well?" "How long has this been going on?" Think about these questions in advance so you can give a clear answer: "Yesterday." "On June 4." "About the middle of May." If you're uncertain about the date that the problem began, state the uncertainty and tell what you can. "I'm not sure when these problems began. I began to feel tired in the middle of February, but the pain in the joints didn't begin until April." After you define the starting point for the problem, the doctor will want to establish the sequence of events from that time until the present. Tell the story in the order it occurred. Try not to use "flashbacks" or irrelevant details; you'll only confuse yourself and your doctor. The doctor may interrupt to ask specific questions or at the end ask questions about problems that you haven't mentioned.
- **Past medical history.** Your doctor may want more background information about your general health. Information that didn't appear important earlier may be relevant. The doctor will ask specific questions

about your general health, childhood illnesses, hospitalizations, operative procedures, allergies, and medications. Give direct, reasonably brief answers. If you report a drug "allergy," describe the specific reaction you experienced; many reactions to drugs (such as nausea, vomiting, or ringing in the ears) are not allergies but common side effects. Be thorough when reporting medications, including birth control pills, vitamins, pain relievers, and laxatives.

- **Review of systems.** In a complete medical exam, your doctor will usually review symptoms related to the different body systems, asking standard questions for each system.
- **Social history.** In a complete medical exam, your doctor may ask about your job, family, interpersonal stresses, smoking, drinking, use of drugs, sexual activity, even exposures to chemical or toxic substances. These questions are sometimes intensely personal. However, the answers can be of the utmost importance in determining your illness and how it can be best treated.

Supporting information can be extremely important. Know which medications you've taken before and during the course of your illness. Often it's helpful to bring the medication bottles to the doctor. Mention any allergic reactions that you have to drugs. If you're pregnant or could be pregnant, tell the doctor. If X-ray studies or laboratory tests have been performed during the course of the illness, try to make the results available to the doctor. If you've consulted other doctors, bring those medical records with you. Be a careful observer of your own illness. Your observations, carefully made and recounted, are more valuable than any other source of information.

Understanding Your Health Plan

The present variety of medical plans is somewhat bewildering. This section defines the major types of medical plans that have emerged, ranging from fee-for-service to prepayment.

"Managed care" techniques are an increasing part of all plans. In such an arrangement your care is "managed" by the health plan, which rules on whether it will pay for particular parts of your care. The health plan's representative may have to approve your surgery beforehand, or make sure that you don't stay in the hospital too long. The purpose of managed care is to save money for the health plan. It is sometimes argued that

managed care improves the quality of care through its surveillance techniques and that it prevents unnecessary surgery.

- **Traditional Indemnity.** This is the traditional type of medical insurance. Your medical care charges are paid at a specified rate. Often there are deductibles (you must pay for a certain amount on your own before coverage begins) and copayments (you must pay a certain percentage of charges up to a specified limit) as a part of these plans. Increasingly these plans include elements of managed care techniques.
- **Preferred Provider Organization (PPO).** The medical plan provides a list of "preferred doctors." If you choose one of these doctors, you'll pay less than if you choose a doctor or hospital not on the list because those on the list charge the medical plan less. Sometimes the plan may be an Exclusive Provider Organization (EPO). This is similar to a PPO except that you'll pay essentially *all* the medical costs if you don't use a doctor or hospital on the list given by the medical plan.
- **Health Maintenance Organization (HMO).** This is the original form of prepaid medical care. Virtually all HMOs today combine prepayment (sometimes called "capitation") with managed care techniques. Doctors who provide care for HMOs may be employed exclusively by the HMO or may contract to provide care for HMO patients while still providing care for patients in other medical plans. Usually HMOs won't pay for any care given by physicians or hospitals that aren't part of their HMO system except in emergencies or when you're traveling.
- **Point-of-Service Plan.** Recognizing that choice is important to many people, some plans will let you choose among plans when you go for care, i.e., at the point of service. In other words, you can wait until you need care to decide whether you'll use traditional indemnity, an EPO, or your favorite physician. However, if you choose a doctor or hospital that costs the health plan more, you will pay more. You get more freedom of choice, but at a cost.
- **Medical Savings Account (MSA).** These relatively new plans most often will be the least expensive for people who take care of themselves. Your insurance premium is broken into two parts. The first goes to buy an insurance policy against catastrophic illness with a high deductible, perhaps \$3,000. The remainder, perhaps \$2,000, goes into your medical savings account, and you use it to pay medical costs below the deductible. If you don't spend all the money in your medical savings account, you get to keep it. Be sure, however, that you don't delay care that you really need just to save money. Follow the guidelines of this book.

TABLE 10*A Question List*

| | |
|---|---|
| General questions to ask: | If the doctor suggests surgery or other medical procedures: |
| ■ What is my problem? | ■ What are the risks of the procedure? |
| ■ Is it a common problem? | ■ How frequently does this procedure relieve this kind of problem? |
| ■ What does the diagnosis mean? | ■ Must the procedure be done right away? Why? |
| ■ What is likely to happen? | ■ Can this be done safely as an outpatient procedure? |
| ■ Can you tell me what these words [any words you don't understand] mean? | ■ How frequently do you do this procedure? |
| ■ Could the problem be anything else? | ■ I would feel more comfortable with another opinion. Could you recommend someone for me to check with? |
| ■ How likely is that? | |
| ■ What are my options for the next step? | |
| ■ What are the benefits, risks, and cost of each choice? | |
| If the doctor suggests tests: | If the doctor suggests hospitalization: |
| ■ What will we learn from these tests? | ■ Can I have the tests or treatment done as an outpatient? |
| ■ Will they be uncomfortable? | ■ What are the risks of being in the hospital? |
| ■ Do I need to make special arrangements (such as fasting before the test or planning transportation home)? | ■ Which hospital do you suggest and why? |
| If the doctor suggests medication: | ■ Does the hospital staff perform this treatment frequently? |
| ■ How will the medication help? | ■ Can I recover at home and shorten the hospital stay? |
| ■ Does it have any side effects I should know about? | ■ What should I do at home? |
| ■ Is it available in a generic form? | ■ Is there anything I shouldn't do? |
| ■ Might it interact badly with other drugs or with foods? | ■ When should I check back with you? |
| ■ What can I expect in the next few weeks and also over the long term? | ■ Should I avoid aspirin for a week or more before the procedure? |

Getting the Most Out of Your Visit to the Doctor

ASKING QUESTIONS

To use your time with the doctor effectively, make a list of your questions before the visit. Write out your questions. Date the list. Leave space to jot down answers while you're talking with the doctor. If someone is accompanying you on the visit, perhaps he or she can write down the answers for you. Take the list to your doctor and ask each question. Go over the list and the answers again after you get home. Save the list as part of your own records. A written record can be very useful for you.

Table 10 suggests some questions that you may want to ask your doctor. As you make up your list for a particular visit, run through this list and

Problem List for Dr. Johanson, June 19 Appointment

| Questions | Answers |
|---|--|
| 1. Dizziness when standing? | • Low blood pressure. Decrease Aldomet to 2/day. Will check blood counts. |
| 2. Wonder about aspirin or fish oil capsules for heart attacks? | • Not yet. Diet first. Will check cholesterol. |
| 3. Leg cramps? | • Warm baths and massage. |
| 4. Gray splotches on skin? | • Just age spots -OK. |
| 5. Move to Arizona for joint pains? | • Probably not. Try vacation to hot, dry area first; see if it feels better. |
| 6. Cost of blood pressure pills? | • Reducing dose anyway because of dizziness. Try AARP pharmacy services. |

see which questions you want to include. After the table has helped you get started, think of other questions that you may also find useful; don't just limit yourself to these.

The figure above shows what your list might look like if you made a visit to Dr. Johanson because of a problem with dizziness when standing. Your questions on the left will probably be handwritten in full and the answers on the right jotted down, so this example will give you a general idea of the process.

It's not necessary to limit a valuable doctor visit to your most recent problem. You may have a lot of questions. The doctor visit is a good place to begin thinking about them, together with a knowledgeable expert.

Table 11 lists a few of the subjects you may wish to discuss.

You must understand all instructions the doctor gives you. If you're confused, ask more questions: "Could you go over that again?" "I don't understand how to use this medication." "How long should I apply the ice pack?" "Are there any risks to this?" Ask your doctor to write out the instructions, or write them down yourself. Do *not* depend on your memory.

TABLE 11*Some Subjects to Discuss*

- | | |
|---|---|
| <ul style="list-style-type: none"> ■ Exercise ■ Sexual problems ■ Diet ■ Weight ■ Calcium ■ Smoking | <ul style="list-style-type: none"> ■ Drug or alcohol use ■ Estrogen for women after menopause ■ Medication program ■ Mammography for women ■ Screening tests ■ Any immunizations needed |
|---|---|

Understand the importance of each drug. In some instances it doesn't matter if you take the medicine regularly because the drug gives only symptomatic relief and should be discontinued as soon as possible. Be sure that you understand whether or not it's necessary to continue the medication after you feel well.

Consider the entire prescribed program. You may already be taking medications your doctor doesn't know about. Perhaps you have trouble taking a medication at work, or you anticipate trouble with a diet the doctor prescribes. If the doctor prescribes more than one medication, you may want to take them all at once—is this okay? An upcoming trip could interfere with a treatment program, or you may worry about starting exercise in the winter. When such questions arise, ask the doctor in advance. Often if you raise these questions with your doctor, your treatment program can be modified so that you feel more comfortable. Be frank. Don't say that you'll do something that you know you won't. Express your worries. You don't have to be a "perfect" patient; it's all right to be persistent until your questions are answered.

**CARRYING OUT
YOUR TREATMENT
PROGRAM**

After you and your doctor have agreed on a program, follow it closely. If you notice possible side effects from the program, call the doctor and ask about them. If the side effects are serious, return for an examination.

Make a chart of the days of the week and the times when you are to take medications. Note on the chart when you take them; such charts are universally used in hospitals to ensure that medication schedules are maintained accurately. At home you and your family are the custodians of your health. Don't view the task of taking medication more lightly than it is viewed by professionals. More important, if you find that you can't carry out the program, you and your doctor must make changes.

When you have pills left over at the end of a course of therapy, flush them down the toilet. A medicine chest containing old prescription medicines presents multiple hazards. Every year children and adults die from taking leftover drugs. Children take birth control pills, adults brush their teeth with corticosteroid creams, and people take the wrong medication because they mistake one bottle for another. If, for example, you give your leftover tetracycline to your children with their next cold, you may cause mottling (gray spotting) of their teeth. Taking outdated tetracycline may cause liver damage. When a new illness occurs and you take leftover medications, your condition may then confuse your doctor; sometimes it will be impossible to make an accurate identification of a bacterium by culture, or the clinical picture of the disease may be changed by the medicine.

The doctor-patient encounter is your most reliable protection against serious illness. Value the opportunity for such attention, use it effectively, and follow the program that you and your doctor develop to the maximum extent possible.

Choosing the Right Medical Facility

HOSPITALS

The hospital is expensive. It's not a home or a hotel. Lives are saved and lost here. At some times you must use the hospital, and at other times you must avoid it. To manage these contradictions, you and your family must carefully consider the need for hospitalization in each instance.

Don't use the hospital if services can be performed elsewhere. The acute (short-term) general hospital provides acute general medicine; it doesn't perform other functions well.

Don't use the hospital for a rest; it's not a good place to go for rest. It's busy, noisy, and populated with unfamiliar roommates. Its nights are punctuated with interruptions, and it has an unusual time schedule. It has many employees, a few of whom will be less thoughtful than others.

Don't use the hospital for the "convenience" of having a number of tests done in just a few days. It doesn't provide tests in the most efficient manner; indeed, many hospital laboratories and special X-ray facilities aren't open on the weekend, and just to schedule special procedures may require several days.

In our present age, evidence suggests that for many conditions, treatment at home may work better than treatment in the hospital. Even home treatment for minor heart attacks in the elderly has been reported

as possibly better than hospital treatment. It's apparent to most hospital visitors that the crisis atmosphere of the short-term acute hospital doesn't promote the calmest state of mind for the patient. Many therapeutic features of the home, such as familiar, comfortable surroundings, can't be duplicated in the hospital.

EMERGENCY ROOMS

The emergency room has become the "doctor" for many people. Those who can't find a doctor at night, or who don't know where else to go, increasingly go to emergency rooms. Thus, the typical emergency room is now filled with nonemergency cases. Various problems are all mixed together: trivial illnesses that could have been treated with the aid of this book, routine problems more easily and economically handled in a doctor's office, specialized problems that should have been dealt with at a time when the hospital facilities were fully available, and true emergencies. Although the emergency room isn't designed for the purpose it now serves, it does a surprisingly good job of delivering adequate care.

However, there are five major disadvantages to using an emergency room as your sole medical contact.

- Emergency rooms make little or no provision for continued care. You'll usually be seen by a different doctor each time. The emergency room doctor will attend to the chief problem you report but seldom has enough time to complete a full examination or to deal with underlying problems.
- Although simple X-ray facilities are available, procedures such as gallbladder studies and upper GI (gastrointestinal) series are difficult to arrange. Thus, emergency rooms aren't the right place for evaluating complicated problems.
- When a true emergency occurs, patients with less urgent problems are shunted aside. You can't estimate with any certainty how long you'll have to wait for treatment in an emergency room.
- Emergency room fees, because they support equipment required to handle true emergencies, are higher than those for standard office visits.
- Emergency room services aren't always covered by medical insurance, even when the policy states that the costs of emergency care are included. With many policies, the *nature of the illness* determines whether or not it's covered. In other words, the medical plan will pay for emergency room care only in a true emergency. You may end up paying a large bill out of your own pocket if you go to the emergency room with a sore throat.

The smoothly functioning emergency room provides one of the finest and most dramatic examples of a service profession at work. Following the procedures outlined in this book, you can use this valuable resource appropriately.

OTHER MEDICAL FACILITIES

Short-term Surgery Centers

A number of facilities specially designed for short-term surgery (requiring only a short stay, overnight at the most) have recently appeared. Obviously the surgery performed is relatively minor, and the patient must basically be in good health. Because such centers can avoid some of the overhead of a hospital, they often charge less. But because they don't have the capability to handle difficult cases or complications, you should use them only for minor procedures. The growing experience with these centers has been positive.

Walk-in Clinics

Similarly, some medical problems can be managed at walk-in or "drop-in" clinics. If you have a new, uncomplicated problem (for example, a sore throat or a minor injury), such clinics can be excellent. The decision charts in Part II will help you to determine if you should visit the doctor. Appointments at walk-in clinics aren't usually necessary, and service is swift and efficient. Often these clinics are open for long hours, including evenings and weekends. When available, such clinics should be used for nonemergency care in preference to emergency rooms. The problem with these clinics is with follow-up and sometimes with cost. Costs are rising and now approach those of emergency rooms. If you've had your problem for more than six weeks, or if you expect that it will require multiple visits and more than six weeks to clear up, we think you should see your regular doctor.

Long-term Care Facilities

Nursing homes and various types of rehabilitation facilities provide for the patient who doesn't require hospital care but can't be adequately managed at home. The quality of these facilities ranges from superb to horrible. In the best circumstances, with dedicated nursing and regular doctor attendance, a comfortable and homelike situation for the patient can accelerate the healing process. In other cases, uninterested personnel, inadequate facilities, and minimal care are the rule. Before choosing a nursing home facility, visit the facility or have a friend or relative visit it for you. In the long-term care setting, your comfort with the arrangements is essential.

Hospice Care

For patients with terminal diagnoses (usually a life expectancy of less than six months), the hospice movement tries to provide humane, caring,

medically sound treatment without all the technological trappings of the hospital. This can occur either at home with professional personnel or in a hospice facility. The care approach emphasizes improving the patient's comfort. Hospice and home-care programs are becoming more available and are worthwhile. Check out a hospice facility in the same way you would a nursing home; most are good, but some aren't.

Reducing the Cost of Medications

Legal drugs are a multibillion-dollar industry, but your contribution to this industry is largely voluntary. The size of your contribution is determined by your doctor, your pharmacy, and you.

Drugs are at the same time lifesaving and dangerous, curative and fraught with side effects, painful and pain-relieving, and easy to misuse. Most drugs act to block one or more of the natural body defense mechanisms, such as pain, cough, inflammation, or diarrhea. Drugs can interact with other drugs, causing hazardous chemical reactions. They can have direct toxic reactions on the stomach lining and elsewhere in the body. They can cause allergic rashes and shock. They can have severe toxic effects when taken in excess. Some drugs can decrease the ability of the body to fight infections.

You don't want to take any medications you don't truly need. If you don't receive a prescription or a sample package of medication from your physician, consider this good news rather than rejection or lack of interest on the part of the doctor. Take the fewest possible drugs for the shortest possible time. When drugs are prescribed, take them regularly and as directed, but expect that your medication program will be thoroughly reviewed every time you see your doctor.

Most of today's drugs are "symptomatic medications"—that is, they don't cure your problem but give partial relief for the symptoms. The symptoms that may be relieved include pain, cough, inflammation, insomnia, stress, diarrhea, or constipation. If you report a different symptom every time you see your doctor and urgently request relief from that symptom, you're likely to be given additional medications. You're unlikely to feel much better as a result, and you may function at a lower level. Unless you have a serious illness, you'll seldom need to take more than one or two medications at a time. Many perceptive observers have argued that our present practice of using drugs to control symptoms is only a temporary phase in the history of medicine.

YOUR DOCTOR CAN HELP

Use generic drugs whenever you can. They are almost always just as good as the brand-name product. If your doctor prescribes a drug by its trade name, in some states the pharmacist must fill the prescription with that particular brand-name product. The brand-name product frequently costs many times more than its generic equivalent. Does your doctor know the relative cost of alternative drugs? Many doctors don't.

The drug-prescribing habits of different doctors can be divided into two types: the "additive" and the "substitutive." With each visit to an "additive" doctor you receive a medication in addition to those you already have. With a "substitutive" doctor, a medication you were previously taking is discontinued, and a new medicine is substituted. Usually the "substitutive" practice is better for your health as well as your pocketbook. Even better is a doctor who likes to *decrease* the number of medications you take.

Most of the time you can take medication by mouth. Sometimes a doctor gives medication by injection because of uncertainty that you'll take it as prescribed. However, as a thoughtful and reliable patient, you can assure your doctor that you will comply with an oral regimen. Taking medication by mouth is less painful, less likely to result in an allergic reaction, and usually far less expensive. There are exceptions, but whenever possible you should take medication by mouth rather than by injection.

If it's clear that you must take a medication for a prolonged period, ask the doctor to allow refills on the prescription. With many drugs it's not necessary to incur the expense of an additional doctor visit just to get a prescription written. However, under some circumstances the doctor may prefer to examine you or get a lab test before deciding whether the drug can be safely continued or is still required.

The careful doctor will ensure that you fully understand the nature of each drug you're taking, the reasons you're taking it, the side effects that may arise, and the length of time that you can expect to take it. You and your doctor should arrange a daily medication schedule that's convenient as well as medically effective. If the program is confusing, ask for written instructions. It's crucial that you understand the why and how of your drug therapy. Don't leave the doctor's office for the pharmacy without understanding your medications.

YOUR PHARMACIST CAN HELP

Studies indicate that the pharmacy you choose is a very important factor in drug costs. For the most part, the pharmacist no longer weighs and measures individual chemical formulations. Much of the activity in the pharmacy consists of relabeling and dispensing manufactured medication. Medication is thus usually identical at different pharmacies; you should

choose the least expensive and the most convenient place that your medical plan allows.

Comparison shop beforehand. Discount stores often sell the same medication at significantly lower prices. There are good mail-order sources. If a considerable sum of money is involved, you should compare prices by telephone before purchasing the medication. Don't buy from a pharmacy that won't give you price information over the phone.

Unfortunately, even when your doctor writes a prescription by generic name rather than brand name, the pharmacist often isn't required to give you the cheapest alternative. The pharmacy often stocks only one manufacturer's formulation of each drug. Thus, even though your doctor has been careful to permit a less expensive preparation, the pharmacist may substitute the more expensive alternative that's in stock. There's no way to detect this problem except to get direct price quotes from different pharmacies. Once you have found a pharmacy with fair prices and helpful pharmacists, stay with it.

Your pharmacist can help you understand your medications. If you forget to ask your doctor some key questions (see Table 10), the pharmacist can often help you with the answers. If you use the same pharmacy all of the time, the pharmacist can often spot problems in your overall treatment, such as taking two drugs that don't go well together.

YOU CAN HELP

Nowadays, visits to the doctor frequently are requests for medication. If your satisfaction with the doctor depends on whether or not you're given medication, you're working against your own best interest. If you go to a doctor because of a cold and request a "shot of penicillin," you're asking for poor medical practice. (Penicillin should only rarely be given by injection, and it shouldn't be given for uncomplicated colds.) Your doctor knows this but may give in to your request.

The most frequently prescribed medications in the United States, making up the bulk of drug costs, are tranquilizers, minor pain relievers, and sedatives. These drugs cause the greatest number of side effects, and they aren't really scientifically important medications. Our national prescription pattern arose, at least in part, because of ill-advised consumer demand. You can decrease the cost of medications by using some of the techniques discussed previously; you can eliminate them almost completely by decreasing your pressure to receive and take medications that you don't need.

Fortunately, our bodies heal most problems if we curb our impatience a little. The policy of "watchful waiting" without medication is usually the best one. Follow the guidelines of this book to identify the more serious situations. Doctors have a name for this most useful treatment of all; they call it "tincture of time."