



NATIONAL
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Make Natural Medicines
Learn to Treat Common Ailments
Choose Foods for Well-Being

Healing Remedies

A HOLISTIC APPROACH
TO HEALTH AND WELLNESS





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A HOLISTIC APPROACH
TO HEALTH AND WELLNESS

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Cover: Herbal medicines can be used to treat common ailments like colds, headaches, and digestive disorders.

Previous pages: Lavender flowers are not only beautiful to look at but can also help with occasional insomnia and restlessness.

Left: Thai basil, ginger, oregano, star anise, and rosemary make good medicine and delicious food.



INTRODUCTION

RECLAIMING THE POWER OF HEALING

The natural world is filled with healing plants and herbs that can help you stay healthy and embrace a sustainable, natural approach to your well-being. With this special issue, you'll begin to learn ways to treat yourself at home with healing foods and learn when it's time to seek medical attention. You'll learn to make medicines that are safe, gentle, and effective for many minor conditions. These remedies can be used as first-line therapies, allowing you to avoid harsher, more potent drugs until they are absolutely necessary.

Home is a sanctuary—a place to rest, to recover, and to separate ourselves from the chaos of an

often-busy life. Home is the place where most medicine should start and finish. Physicians, like myself, can certainly be an important part of healing, but they should not be the primary source for your well-being.

My hope and prayer is that you will be empowered to take responsibility and control of your own health. To own the knowledge of *healing* and recognize the power of our body to heal is perhaps the most extraordinary gift that we have lost. We can each reclaim the *self-healing* powers inside of us, as we heal our loved ones and ourselves with all that nature has to offer.

Top: Dark bottles help herbal medicines retain their potency. *Right:* Join me in reclaiming the self-healing powers inside, as we heal our loved ones and ourselves with all that nature has to offer.





In Love with Herbal Remedies and in Awe of Modern Medicine

My medicine road began when I was a child, and it has taken me from being an admirer of plants, to becoming an herbalist, a midwife, and eventually a physician. Some might say that the path I walked was unorthodox. It sure did have its share of turns and detours. But since the time I was very young, I've been fascinated by how plants could be used to help people heal their body.

I opened up my first herb shop and herbal company shortly after moving to Las Cruces, New Mexico, in 1982. I spent roughly the next 10 years making natural medicines and caring for those who sought my help. I felt good about the medicine I offered and my ability to be of service.

But the longer I practiced, the more I saw the limitations of natural medicine. I knew the time had come for me to pursue a medical education that would allow me to understand when, and how, to use the powerful tools of modern medicine.

And that's what I did. During my training at the University of New Mexico School of Medicine, my eyes were opened to the wondrous world of science. I learned how to diagnose and treat patients with a wide range of disorders and diseases during my family practice residency. I witnessed firsthand the miracles of emergency medicine, surgery, and intensive care. I was, simply put, in awe of what modern medicine could offer. And I saw very clearly its limitations.

For all its magic in treating serious disease and trauma, for minor problems, it can often be like using a chain saw when a paring knife would do. These limitations are, however, exactly the strengths of natural medicine. Minor, self-limited condi-

tions that are not life threatening are highly amenable to this approach.

The Gift of Plants

The brief summary of some of the most important herbs discussed in this issue is intended to provide background for my recommendations. It is not an exhaustive review of the scientific or historical evidence. References may be found at drlowdog.com.

BUTTERBUR (*Petasites hybridus*)

Use: Butterbur is a large-leaved plant that was used for centuries in Europe, northern Africa, and Asia to relieve coughs, congestion, and asthma. Scientists have found compounds in the plant that reduce smooth muscle constriction in the lungs and shrink swollen nasal membranes, providing evidence for its historical uses. Several European clinical trials have now shown that butterbur can be as effective as the leading drugs for seasonal allergies. It may be of benefit for those with asthma, as well. Butterbur extracts are not sedating and are very well tolerated in both kids and adults.

Butterbur is so effective for the prevention of migraine headaches in both children and adults that



Left: The simplest way to dry your plants is to tie them in small bundles and hang them in a shady area that gets plenty of warm air. **Right:** Butterbur has been shown to be safe and effective for preventing migraine headaches in children and adults.

it is now a first-line recommendation for migraine prophylaxis by the American Academy of Neurology, the American Headache Society, and the Canadian Headache Society.

Safety: Butterbur contains small amounts of pyrrolizidine alkaloids, compounds that can damage the liver over time. Only purchase high-quality, standardized extracts that say they are *free* of pyrrolizidine alkaloids. Safety in pregnancy is unknown, so butterbur should be avoided.

CHAMOMILE FLOWERS (*Matricaria recutita*)

Use: Chamomile flowers have been used as a medicine since ancient times by peoples all over the world. Two dominant chamomiles are traded on the market: Roman chamomile (*Chamaemelum nobile*)

and German chamomile (*Matricaria recutita*), each having differing chemical compositions. I only refer to German chamomile in this book. Tasty chamomile tea has been used to calm the nerves, ease spasms of the gut, and soothe inflammations of the skin and gastrointestinal tract.

Chamomile has long been considered a “children’s herb,” as it is soothing to the tummy and the nerves. Chamomile was studied in babies, roughly three weeks of age, and found safe and effective for relieving infant colic when given in combination with fennel seed and lemon balm. Clinical trials have shown chamomile extracts to be as effective as over-

Dong quai has been used in traditional Chinese medicine for centuries.



Dong quai has anti-inflammatory, analgesic, and antispasmodic properties and can help ease menstrual cramping.

the-counter steroid creams for childhood eczema.

And chamomile isn't just for babies. A randomized controlled trial found that German chamomile extract was highly effective for relieving anxiety in a study of 57 patients diagnosed with mild to moderate generalized anxiety disorder. This study also showed an improvement in depressive symptoms.

Safety: Chamomile has an amazing safety record that spans the past 25 centuries.

German chamomile is considered safe to use while pregnant or breast-feeding. However, Roman chamomile *should not* be used in pregnancy. Do not use in or around the eyes. A study in humans found that when chamomile tea is used as eyewash, it might induce allergic conjunctivitis. Allergic reactions, although rare, have occurred with both internal and topical use of chamomile.

DONG QUAI ROOT (*Angelica sinensis*)

Use: Dong quai has been used in traditional Chinese medicine (TCM) for at least 20 centuries. It is generally regarded as a tonic for those with fatigue or low vitality, or those who are recovering from illness, and is widely used to relieve pelvic pain and regulate the menstrual cycle. Modern-day studies have confirmed that dong quai has anti-inflammatory, analgesic, and antispasmodic activity. It most specifically benefits women who have menstrual cramping and light menstrual bleeding.

Safety: Dong quai should not be used during pregnancy or while breast-feeding. It should not be used in women with heavy menstrual periods. Some studies suggest that dong quai should not be used in women with breast cancer.

GINGER RHIZOME (*Zingiber officinale*)

Use: Ginger has been highly valued as a spice, flavoring agent, and medicine for centuries. The herb has been used for a variety of conditions, but it is chiefly known as an antiemetic, anti-inflammatory,



digestive aid, carminative, and warming agent. Ginger is excellent for relieving intestinal gas, bloating, and menstrual cramps. Numerous human studies have demonstrated the effectiveness of dried ginger rhizome/root in relieving morning sickness, motion sickness, and postoperative nausea. Ginger contains anti-inflammatory compounds called *gingerols*, which explains the strong historical use of ginger for improving symptoms of arthritis when consumed regularly. Ginger, fresh or dried, can help relieve a sore throat, and studies show it can help fend off cold viruses.

Safety: Do not exceed doses of 1,000 to 1,500 milligrams of dried ginger a day during pregnancy. Doses of greater than 3 grams of dried ginger a day may interact with blood-thinning/anticoagulant medications and may cause digestive upset and heartburn.

LICORICE ROOT (*Glycyrrhiza glabra*)

Use: Licorice has been held in high esteem as a medicinal agent since ancient times. The roots have



Peppermint boasts multiple benefits, aiding digestion, relieving cold symptoms, and soothing the skin.

disease, kidney disease, or high blood pressure. The German health authorities, long at the forefront of the use of natural remedies, limit the long-term use of licorice to no more than 100 milligrams of glycyrrhizin a day. That is roughly 1,000 to 1,200 milligrams a day of licorice root. DGL does not have these safety concerns.

OREGON GRAPE ROOT BARK

(*Mahonia aquifolium*)

Use: Oregon grape is related to barberry.

The indigenous peoples of the Pacific Northwest relied upon its medicine for centuries to treat skin and gastrointestinal ailments, as well as for fever and infection. Interestingly, modern research has confirmed its historical use for psoriasis.

The root bark is particularly rich in alkaloids, the dominant one being berberine, which has been shown to inhibit many of the bacteria and parasites that can cause intestinal infections, including the diarrhea-producing *Vibrio cholera*, *Escherichia coli*, *Giardia lamblia*, and *Entamoeba histolytica*.

Berberine also has significant antifungal activity against a variety of *Candida* species, making it a highly effective remedy for vaginal yeast infections. Two teaspoons of the root bark are simmered in three cups water for 20 minutes, strained, and allowed to cool. Douche once a day for five days, making the preparation fresh daily.

Safety: Berberine-containing plants are not recommended for internal use during pregnancy and breast-feeding.

PEPPERMINT LEAVES (*Mentha × piperita*)

Use: Peppermint is one of our most cherished herbal remedies. It relaxes the smooth muscles of the gastrointestinal tract and improves the flow of bile from the gallbladder, helping the body digest

potent anti-inflammatory activity and are widely used for digestive, respiratory, and skin complaints. It has been used to treat and heal stomach and duodenal ulcers for centuries and was popular for this purpose in conventional medicine until the 1960s. Its limitation long term was its ability to cause the retention of sodium and water, leading to hypertension, and the excretion of potassium, which can be dangerous if not closely monitored. Researchers removed the compound responsible for this adverse effect, and when deglycyrrhized licorice (DGL) was given at a dose of 380 milligrams three times a day to 169 patients with chronic duodenal ulcers, it was shown to be as effective as antacids or cimetidine. It remains popular today for this purpose and for the relief of gastroesophageal reflux (GERD).

Licorice has been shown to soothe sore throats, promote thinner mucus and thus ease chest congestion, and relieve cough. It also has significant activity against numerous respiratory viruses. This is why licorice is included in so many modern cough/cold products. It also can be highly effective for inactivating the herpes virus when applied topically during an outbreak.

Safety: Licorice is not recommended (except for topical use or short three- to four-day duration) for use during pregnancy or by those with liver

fats. This is why peppermint is commonly used to relieve intestinal gas and abdominal cramping. Studies show that enteric-coated peppermint oil capsules are superior to conventional treatments for treating irritable bowel syndrome (IBS), a condition that is characterized by recurring bouts of abdominal pain and constipation, diarrhea, or both. These studies also show that peppermint oil is very well tolerated.

Peppermint and its active constituent, menthol, can thin mucus, help loosen phlegm, and break up a cold. The Food and Drug Administration approves the use of mentholated ointments, lozenges, and steam inhalants for alleviating coughs. When applied to the neck and chest, the medicated vapors quickly relieve coughing. The mild anesthetic and cooling properties of menthol make it ideal for soothing a sore throat.

Peppermint applied topically has a soothing effect on the skin. It reduces itching caused by bug bites or poison ivy and relieves minor aches and pains, such as muscle cramps, arthritis, and headache.

Safety: Peppermint should not be used if you have GERD, because peppermint can worsen heartburn. Never apply peppermint or mentholated oil to the face of an infant or child under the age of five years. In infants or young children, it may cause spasms that inhibit breathing.

SAGE LEAVES (*Salvia officinalis*)

Use: The genus name *Salvia*, from the word *salvere*, “to save,” was likely given in honor of its place in medicine. The herb is said to clear the mind and improve memory, and the term “sage” is associated with wisdom or being a wise elder. Animal studies and small human trials suggest sage may improve mood and cognition in both healthy adults and those with Alzheimer’s dementia.

Sage is a useful remedy for sore throats and is commonly used to aid digestion, stimulate digestive enzymes, and alleviate intestinal cramping.



Sage is useful for treating sore throats and minor digestive issues.

This is one reason it's often cooked with beans or other gas-producing foods. Sage has antibacterial activity, which might also explain its use in gastroenteritis, or other minor infections of the GI tract.

Safety: Sage leaf is safe, but it should be consumed only as a culinary herb during pregnancy. The essential oil is high in thujones, which can be toxic if taken in sufficient quantity.

ST. JOHN'S WORT HERB (*Hypericum perforatum*)

Use: St. John's wort is best known today for its use in the treatment of depression, although this herbal remedy has been used for at least two millennia for a variety of health conditions. Early physicians used it to treat mental and menstrual disorders, nerve pain, and stomach ulcers, and topically for the healing of wounds and burns.

Modern science is confirming what the ancients knew. In 2009, researchers evaluated 29 clinical trials conducted on St. John's wort for mild to moderate depression and concluded that it is more effective than placebo and is as effective as standard prescription antidepressants in terms of effectiveness, with fewer adverse effects.

St. John's wort oil is also highly regarded as a topical agent. When the flowering tops are infused in oil, the oil turns a bright ruby red after sitting in the sun for several weeks. The oil is then massaged into the skin to relieve pain or made into an ointment and applied to skin to treat wounds, burns, and insect bites. St. John's wort is also highly effective against herpes simplex 1—the virus known to cause cold sores and fever blisters.

Safety: Although safe and effective, St. John's wort can interact with many medications. Always check with your health care provider or pharmacist before taking St. John's wort internally if you're taking prescription medications.

THYME HERB (*Thymus vulgaris*)

Use: Thyme is one of our most revered herbs for the treatment of upper respiratory infection, cough, and congestion, and herbalists widely recognize

its value as an adjunct therapy in asthma formulae. The German health authorities, leaders in the use of complementary and alternative medicine, approve thyme for treating symptoms of bronchitis, whooping cough, and congestion of the upper respiratory tract.

Thyme's antitussive, expectorant, antimicrobial, and antispasmodic actions are attributed primarily to its flavonoids and the volatile oils thymol and carvacrol. Thymol is a potent antiseptic and one of the main ingredients in Listerine mouthwash. Thymol is also a potent antifungal agent, which is why the diluted tincture is used for infant thrush and vaginal yeast infections.

Safety: It is safe to use thyme as a seasoning during pregnancy, but medicinal doses of thyme should not be used during pregnancy.

VALERIAN ROOT (*Valeriana officinalis*)

Use: Valerian has been used to ease anxiety, nervousness, and insomnia for centuries. By the 18th century, it was a widely accepted sedative and was listed in the *National Formulary* as a sleep aid and anxiety treatment until 1950, when it was replaced by pharmaceutical sleeping agents. Valerian remains the most widely used sedative in Europe, where more than a hundred valerian preparations are sold in pharmacies across Germany, Belgium, France, Switzerland, and Italy. Human studies of valerian have found it to improve sleep quality and shorten the time it takes to fall asleep. Valerian is a safe herbal choice for treating mild insomnia, with the best studies suggesting it is more effective when used continuously for a period of two to four weeks, and the combination with hops and/or lemon balm may be more effective than valerian alone.

Safety: Because of its sedative effects, one should not drive or operate heavy machinery, or take in combination with other sedatives.

St. John's wort is an effective proven treatment for mild to moderate depression.







MAKING MEDICINES AT HOME

TEAS, HONEYS, TINCTURES, SALVES, AND MORE

I believe that making your own medicines is an empowering act. When I take or give my child a remedy that I have made with my own hands in my own kitchen, I feel deeply connected to my healing. The remedies I'll teach you to make come in many forms, from infusions to tinctures to salves. In this chapter, I will guide you through the basics so that you can gain confidence in your skills.

Step-by-step instructions will teach you how to make your own infusions, decoctions, tinc-

tures, glycerites, medicinal honeys, oils, salves, and compresses. Although you might feel a little intimidated when making your first tincture—please be assured that I've taught thousands of people to make them at home in their own kitchen. If you can follow a simple recipe in a cookbook, I promise you can make your own herbal medicines. And treating yourself and your family with medicines of your own making is truly a gift of healing.

Left: If you can follow a simple recipe in a cookbook, you can make your own herbal medicines. Top: Thyme

GROWING YOUR OWN

I'm biased. I believe everyone should grow at least a few herbs at home. If you live in an apartment, you can have a couple of pots on your porch where you grow lemon balm, peppermint, sage, and thyme. These four herbs give you the ability to treat colds, coughs, sore throats, cold sores, nausea, diarrhea, upset stomach, gas, anxiety, insomnia, colic, bug bites, minor wounds, and even menopausal hot flashes!

Gathering Your Herbs

The timing of your harvest is critically important. Leaves should be gathered in the morning after the dew has evaporated, when fully developed and before flowering. Leaves from biennial plants should be harvested in the second year, when the

plant is not so heavily invested in developing its root system. Flowers should also be gathered in the morning after the dew has evaporated, just before they are fully open. Take fruits just before they are fully ripe, and harvest seeds when fully ripe. For those plants where all the aerial parts (leaves, stems, and flowers) are used medicinally (such as skullcap and California poppy), harvest the plant when it is in early flowering. Gather roots in the late fall after the aerial parts have died back. If the plant is a biennial, take the roots in the fall of the first year or early spring of the second. If a perennial, harvest the roots in the late fall when it is two to three years old. Barks can be harvested in the spring or fall, preferably from small or pruned

You can grow your own herbs in pots on a windowsill even if you live in an apartment.





branches. If harvesting the bark from the trunk of a tree, do not cut any more than a quarter of the trunk circumference to avoid harming it.

Drying and Storing Your Bounty

There are a variety of ways to dry your plants. One of the simplest is to make a small bundle of your herbs (no thicker at the base than the opening of a beer bottle), tie with a rubber band, and hang on a string in a shady area that does not get direct sunlight but gets plenty of warm air. We hang ours in the “mud-room” where it always stays warm and there is no morning dew to rehydrate our drying plants. For roots and flowers, the easiest way to dry them is to put a couple of metal screens on cinder blocks and cover them with an old sheet or muslin cloth. These should be placed in a shady area where they won’t

Whole dried herbs keep their potency longer; so, don’t cut the leaves or flowers.

get any direct sunlight but plenty of warm air above and below them. Do not cut your leaves or flowers. Whole dried herbs keep their potency much longer.

The exception for this is large and/or fleshy roots, which should be cut transversely into small pieces, as this hastens the drying process and saves a lot of effort when it comes time to grind them for medicine making. Small roots can be left whole. Roots can be dried on drying racks, but I often dry all but the smallest roots in the oven at a temperature between 120 and 150 degrees until thoroughly dried. Leave the door ajar and turn every few hours. Cut open the root. Is there any moisture? Dry it longer. All plant parts should feel brittle and break when crushed or snap when bent. When completely dry, put them in an airtight container.

PURCHASING MEDICINAL HERBS

Gathering herbs from your garden is fun and wonderfully therapeutic. If you have a yard, you can grow both veggies and medicinal herbs. There are few things in life more enjoyable than eating a tomato fresh or making cough syrup from thyme grown in your own garden. But you can also purchase fresh, organic culinary herbs, such as thyme, sage, garlic, oregano, or ginger, at many grocery stores. If you choose not to grow and harvest your own herbs or want to make a recipe from an herb that cannot be grown or located in your area, it's important to purchase from reputable suppliers. There are many online merchants.

You may live in a town or city large enough to have an herb store, food cooperative, or natural foods grocery store where you can purchase herbs on-site. Are the herbs being sold certified organic or have they been ethically wildcrafted, meaning that the gatherer follows guidelines for not overharvesting, only gathering in the proper season, and not

picking endangered species? Where are the herbs stored? Are they out of direct sunlight? Open the jar. Do the herbs look clean, colorful, and have a strong aroma? If you have any doubt, purchase elsewhere.

Compared with 20 years ago, it's easy to find companies on the Internet and order online or over the phone. In "Resources" I've provided the names of suppliers that sell certified organic/ethically wildcrafted herbs that you can purchase to make your home medicines. These are companies I trust. They have excellent quality control so you know you're getting the correct genus and species. Further, you can talk to people who are extremely knowledgeable about the herbs and their trade.

Store your herbs in airtight jars that you can keep in a dark, cool place. Be sure to label each jar with the name of the herb and date of purchase.

We've talked about growing your own herbs and purchasing them from reputable sellers, but there is another way to source medicinal plants: wildcrafting or foraging. I gather many plants in the wild on my ranch; however, you should never harvest unfamiliar herbs. If you want to learn how to wildcraft, go and learn to identify the plants with an expert who can teach you. Rangers, gardeners, botanists, and herbalists are great resources. Until you know what you are doing, stick with growing your herbs and/or purchasing from reputable suppliers.



Left: Store your herbs in airtight jars that you can keep in a dark, cool place. **Right:** When purchasing home medicine ingredients, look for certified organic and ethically wildcrafted herbs.



HERBAL TEAS: THE SIMPLEST HOME MEDICINES

Medicinal teas, or tisanes, are the oldest method for making herbal remedies and one of the easiest ways to become familiar with various herbs and their benefits. From the delightfully delicious mints and chamomile, to the more potent echinacea and licorice, these preparations span the range from beverage to medicine. The difference relates to the choice of herb, the amount used, the length of time infused or simmered, and the frequency of dose.

Although I keep and use a good number of herbal tinctures (alcohol extractions) on hand in my medical practice and at home, water-based extracts remain one of my favorite ways to deliver and receive plant medicine. Teas can be nourishing and health promoting and are great alternatives to sodas and juice. And they can be highly therapeutic. Drinking elderflower and mint tea is highly effective for easing a feverish cold, and hot chamomile tea is awesome for relaxation and sleep. My point is this: Don't underestimate the healing power of medicinal teas.

Before we get into the actual instructions for making these preparations, let's go over a few basics.

- **Fresh or dried.** Fresh herb teas are wonderful. I drink fresh lemon balm, mint, chamomile, and skullcap teas all throughout the summer. Many of the herbs mentioned in this book may be used fresh or dried.

- **Cut or powdered.** You'll want your herbs to be chopped into smallish pieces when preparing a tea. This allows a better extraction.
- **Container.** When you are making herbal teas, the best vessels for preparation are ceramic, porcelain, or glass. Herbs, particularly those that are rich in tannins, can interact with metals, like cast iron or aluminum.
- **Water.** Soft and distilled water are best for making herbal teas. "Hard" water from a well or spring can form precipitates with compounds in your herbs.
- **Cook time.** The longer you steep or simmer an herb, the stronger and more bitter it will become, which can be upsetting to sensitive stomachs. In general, hard roots and stems need to be cooked longer than leaves and flowers, and plants that are highly aromatic should either be steeped for only about 5 minutes or prepared as a cold infusion (see the section titled "Infusions," below).
- **Preservation.** Teas do not contain preservatives, so they should be made fresh daily or refrigerated and used within three days.

Herbal teas, such as fresh lemon balm, are nourishing, healthy, and great alternatives to sodas and juice.





■ **Sweetening.** Adding honey, maple syrup, sugar, or stevia will not adversely affect the medicinal properties of herbal teas. However, if you are drinking a “bitter” tea for its stimulating effect on the digestive system, adding too much sweetener will reduce its benefit. Honey should not be used as a sweetener for any child under one year of age due to a rare but dangerous risk of infantile botulism. Maple syrup and sugar may be safely used in this age group.

Infusions: Healing Teas, Hot or Cold

Infusions are liquid preparations made by steeping fresh or dried herbs in hot or cold water. The liquid used is most commonly water, but could technically be wine, juice, milk, nondairy milk alternative, and so forth.

Infusions are ideal for soft, delicate plant parts, such as flowers, leaves, and nonwoody stems. Infu-

Teas infused with dried herbs are a wonderful summer refreshment to keep you hydrated in the hot weather.

sions are also recommended for roots like valerian and osha that are high in volatile or aromatic oils, which can be destroyed by prolonged heat.

Water extracts the medicinal properties from the herbs and brings out their flavor. Some herbs, however, are rather unpleasant tasting, and only the heartiest would drink them. I generally recommend saving the more acrid-tasting herbs for capsules, tinctures, honeys, or glycerites.

Directions for Basic Hot Infusion

To prepare: Bring water to a boil and let sit for 30 seconds and then pour over herbs that have been measured and placed in a container with a tight-fitting lid. Infusions are generally made using 1 to 3

teaspoons of the herb for every cup of water. Cover and steep for 5 to 10 minutes. The length of steeping depends upon the herb and the desired strength. Next, strain the infusion and drink slowly. Refrigerate any extra infusion and use within three days. Most infusions may be taken hot or cold.

Cold Infusions: Slow and Steady

Although most infusions involve steeping an herb in hot water, some herbs are best extracted in room-temperature water and left to sit for 1 to 8 hours. These include herbs that are highly aromatic, such as peppermint, or rich in mucilage like marshmallow. And it doesn't matter if it is a leaf or a root. The medicinal value of these plants can be compromised by excessive or prolonged exposure to heat.

Directions for Basic Cold Infusion

To prepare: Place the herbs in a container with a tight-fitting lid and pour room-temperature filtered water over the herbs. Infusions are generally made using 1 to 3 teaspoons of herb for every cup of water. Let sit, covered, for 1 to 8 hours depending upon the herb and strength desired. Strain the infusion through a tea strainer. Use it immediately or store it for up to 72 hours in the refrigerator.

Decoctions: Drawing Out the Healing Power

“Decoction” is derived from the Latin *decoquere*, which means “to boil.” Decoctions are the most popular method for preparing herbal medicines worldwide, particularly in traditional Chinese medicine (TCM). A decoction is a liquid preparation that is made by simmering fresh or dried herbs in water, or another fluid.

Decoctions are suitable for hard, tough plant parts, including barks, woody stems, most roots,

ADVICE FROM DR. LOW DOG: Cold Infusions and Contamination

Be aware that cold infusions run a small risk of bacteria or mold contamination—for two reasons. First, you're not subjecting the plant to the disinfecting effect of boiling or hot water. Second, herbs are generally not washed the way fruits and vegetables usually are. The risk, however, is a problem only for people whose immune system is compromised, for example, if they are undergoing cancer treatment, taking steroids, being treated with immune suppressants, or are young babies. In such cases, prepare the cold infusion; after straining, gently heat the tea for 5 minutes, but do not boil.

and some berries. Prolonged heat is especially necessary to rehydrate dried roots and barks, which allows for maximum extraction of water-soluble parts of the plant. Roots and seeds that are highly aromatic, like osha or valerian, or that contain mucilage, such as marshmallow root and slippery elm bark, should not be decocted. The excessive heat will dramatically lessen the medicinal benefits.

Always begin your decoction with cold water. Immersing woody herbs immediately in hot water can congeal the albumin within the cell wall, impairing release of the herb's constituents into the water.

Directions for Basic Herbal Decoction

To prepare: Medicinal-strength decoctions are generally made by placing 1 ounce (a small handful) of finely chopped or newly powdered herb in 32 ounces of room-temperature water and letting it sit for 60 minutes. Then bring the mixture to a boil, simmer covered for 10 to 30 minutes, and then strain. Decoctions should be used immediately or stored up to 72 hours in the refrigerator.

I've found a French press to be incredibly useful for steeping and straining herbs.



HERBAL COMPRESSES: SOOTHING FROM THE OUTSIDE IN

Check the pharmacy shelves: There's certainly no shortage of over-the-counter (OTC) medicines to treat headaches, stuffy noses, or muscle aches. Unfortunately, many of these drugs may impede the body's natural ability to heal itself and can have side effects. Acetaminophen, an OTC painkiller, is now the leading cause of acute liver failure in the United States. High doses and/or prolonged use of ibuprofen, naproxen, and

aspirin can damage kidneys and cause the stomach to bleed. Nasal decongestant sprays can cause rebound, making your nasal passages swell and your stuffy nose even worse. Natural remedies, on the other hand, tend to have milder effects and fewer side effects, and gently support your body's recovery process.

As a massage therapist, I often applied hot peppermint compresses to relax tense muscles.



Herbal compresses are one of my favorite treatments and so simple to prepare.

One of my favorite treatments is the compress, also known as a fomentation, which is made by soaking a cloth in herbal liquid and applying topically to the skin. The liquid can be hot or cold, depending upon what you're treating. Cold compresses are used to soothe a headache, relieve the pain and swelling of a strain or sprain, or reduce swelling and bleeding from a wound. Hot compresses are used to relieve pain when there isn't significant swelling or inflammation. Moist heat penetrates more effectively than dry, making hot compresses very helpful for chronic back pain or muscle tightness.

Directions for Basic Herbal Compress

Begin with 2 tablespoons fresh herb or 1 tablespoon dried herb and prepare an infusion or decoction, depending upon the herb, as directed in the section above on herbal teas. Strain. Add a couple of ice cubes if the injury came on suddenly and you want to reduce pain, swelling, and inflammation. Soak a soft cotton or flannel cloth in the liquid, wring, and apply to the injury. If the injury is more than 24 to 48 hours old, apply the compress and then cover with a hot water bottle or heating pad set on low temperature.

Compresses are typically applied for 20 minutes and then removed for 10 to 20 minutes. The cloth is dipped into the liquid again and reapplied for an additional 20 minutes. Repeat this procedure 2 to 3 times a day, or as needed.

Some of my favorite herbal compresses are

- **Peppermint compress.** When I was a massage therapist, I often applied hot peppermint compresses to relax tense muscles in the neck and shoulders of my clients. Cold peppermint compresses for easing headache or sinus congestion are one of the basic preparations I teach the clini-



cians who come through the fellowship program at the Arizona Center for Integrative Medicine. *Note:* Do not use peppermint around the face or neck of children under the age of five.

- **Arnica compress.** Arnica became one of my closest herbal allies when I was taking tae kwon do (martial arts) classes. Occasionally during sparring, I'd bang my shin or forearm, and right after class, I'd head for my kitchen, put some arnica tincture in a bowl of water, throw in a few ice cubes, and apply the compress to my exquisitely painful, bruised tissue. After a couple hours, the swelling would subside, and the reddish blue hue of my skin would start to fade. The relief I felt was nothing short of magical. *Note:* Do not use arnica topically for more than 10 to 14 days. Discontinue use if your skin develops a sensitivity or rash. Do not use arnica on open wounds.

HERBAL HONEYS: HOW SWEET IT IS

Honey is prized as much for its medicinal properties as for its sweet taste. It has long been considered a healing agent. It is as effective as any over-the-counter cough remedy and relieves sore throats. It is an amazing wound healer, keeping abrasions and burns moist, preventing infection, stimulating tissue regeneration, and reducing scarring.

The delectable nectars in this section blur the line between food and medicine. When making honeys that I am going to use in cooking, I often use local clover honey as a base because of its mild flavor.



Otherwise, I love the dark-colored honeys for medicine. I recommend “local” because, like wine and produce, honey carries the unique flavor of the land where the particular bees live and of the flowers that grow there. Use only raw honey. Pasteurized honey sold at most grocery stores has been heated, destroying the enzyme glucose oxidase, which accounts for the honey’s powerful effects.

Directions for Basic Herb-Infused Honey

Begin with $\frac{1}{4}$ to $\frac{1}{2}$ cup fresh chopped herb (or half this amount if you are using dried) and 1 to $1\frac{1}{4}$ cups (8 to 10 ounces) honey.

Pour the honey into a saucepan and very gently heat. Add the herbs and stir. If you don’t like to fuss with sticky herbs, you can always put the herbs in a little cloth bag or tea ball to keep them contained and easier to strain.

Pour your gently heated herbal honey into a clean jar, cover with a lid, and let sit in a warm place (windowsill) for 2 to 3 weeks. Take off the lid and put the jar into a saucepan with water. Gently heat the jar until the honey just starts to become liquid. Pour through a fine-mesh strainer to remove the herbs. Then pour the honey into a clean jar, label, and store in a cool dark cabinet. Your herbal honey will keep for at least one year.

Note: Heating raw honey will destroy some of the naturally occurring enzymes, so some people prefer just to let the herb/honey mixture sit in a warm place for 2 to 3 weeks and then strain without heat.

Few elixirs are more lovely and luscious than lavender honey. It’s delicious with yogurt and makes a fine body scrub.



Some of my favorite herbal honeys are

- **Sage honey.** I grow sage year-round to use for both cooking and medicine. Sage is an amazing medicinal herb. For a sore throat, bring 1 cup water to a near boil, pour over 1 teaspoon sage honey, and add the juice of half a lemon. Drink slowly and enjoy. Repeat 3 to 4 times a day, as needed. You'll feel better in no time! Of course, you can also take the honey straight off the spoon. It's delicious! Sage honey makes a powerful and effective wound dressing. Once the wound has been thoroughly cleaned, you can apply this honey to a gauze dressing and cover.
- **Lavender honey.** Few elixirs are more lovely and luscious than lavender honey. I use ¼ cup lavender flowers when making mine, as lavender, while lovely, can be strong. I love a little mixed with a couple drops of pure vanilla extract and fresh berries in organic plain yogurt! Or take ¼ cup of your honey and mix with 1 cup sea salt or sugar

Herbal honey, long used as a healing agent, can also ease coughs and sore throats.

and 1 cup olive oil to make a lavender/honey body scrub that is nothing short of divine.

- **Thyme honey.** Here's an herbal powerhouse for fighting off upper respiratory infections. Just add 1 teaspoon thyme honey to a cup of hot water with lemon. For nutrition, it's a favorite around my house on cooked carrots or mixed with goat cheese and served with whole grain crackers or warm bread.

WARNING: Honey and corn syrup should not be given to babies under the age of 12 months due to the risk of botulism. Although infantile botulism is exceedingly rare, don't chance it. Use maple syrup instead. According to the Centers for Disease Control and Prevention, the risk of botulism from maple syrup is highly unlikely and is a much better choice for young infants.

HERBAL TINCTURES: THE ESSENCE OF HOME HEALING

Tinctures are herbal preparations produced using a mixture of alcohol and water as the solvent, or “menstruum” (the more precise term for a solvent used to extract compounds from a plant). They are still used in modern medicine and are also widely available at health food stores and herb shops. Tinctures are a highly convenient way of taking herbs, and the combination of alcohol and water

can dissolve and extract virtually all constituents in the plant. Alcohol is also a great preservative, giving your herbal medicine a long shelf life, often more than 10 years if stored in a cool, dark place. Tinctures are an important part of any home medicine chest, being invaluable for first aid and acute situations.

Tinctures can be made with grain alcohol, vodka, or brandy and either fresh or dried herbs.



California poppy is my go-to herb for those who are stressed-out, depressed, or unable to sleep because of pain.

Making Tinctures

Maceration and percolation are the two primary methods for making tinctures; however, I will only focus on the maceration method because it works well and doesn't require any special or expensive equipment. Maceration is the addition of a known quantity and strength of menstruum (solvent) to a known weight of herb. The herb is cut or ground to a coarsely ground powder and then mixed with the menstruum. The mixture is then allowed to sit for approximately two weeks. After two weeks, the herbs are pressed, and the liquid filtered and bottled. The "spent" herb, known as the "marc," may then be used as an excellent compost.

The menstruum, or solvent, that is generally used to make a tincture is alcohol and water, though it can also be vinegar, honey, or glycerin. (See glycerin tinctures, also known as glycerites, pages 32–35, and medicinal honeys, pages 105–106.) Here we will focus on alcohol.

Tincture Ingredients

Alcohol is a superior solvent and preservative, which makes it an excellent choice as a menstruum. The proportion of alcohol used in tinctures ranges from 25 percent to 90 percent, depending primarily on the active constituents we want to extract from the plant. Grain alcohol is 190 proof, which means it is 95 percent alcohol and 5 percent water. (Divide the proof by 2 to get the percentage of alcohol.) For ease and simplicity, just consider it 100 percent alcohol when making your extract—trust me, the math is easier, and it won't affect your home remedy. Grain alcohol is versatile because you can use it to make a tincture containing 25 percent alcohol or one that is 90 percent alcohol, simply by how much you dilute it with water. Vodka is another excellent menstruum because it is available as 80



and 100 proof, meaning it is 40 percent alcohol and 60 percent water, and 50 percent alcohol and water, respectively. I also use brandy (80 proof) as I prefer the taste.

Tinctures can be made from either fresh or dried plant material, and instructions are given below for both.

Tips Before Making Tinctures

The best vessels for making tinctures are wide-mouthed glass canning jars that have screw-down airtight lids that won't rust when they come into contact with alcohol, vinegar, or glycerin.

Tinctures being made with the maceration method must be agitated or shaken daily to keep the extraction process active.

You need to let your tincture sit for a minimum of 14 days to get maximum extraction. It won't hurt to let them steep longer. When I'm busy, I'll just keep shaking them on the kitchen counter until I have some free time to press, filter, and bottle.

Once you have pressed and bottled your herbs, make sure you label the bottle accurately and carefully with the herb name, date of tincture, and menstruum ratio (1:3, 1:5, and so on). Then store in a dark, cool cupboard. If alcohol/water mixtures are stored properly, the tincture will remain good for many years. I've had some for 10 years that were almost as good as the day I made them. Vinegar

tinctures keep for about 1 year, glycerin tinctures for 1 to 2 years.

Directions for Basic Fresh Herb Tincture

Some herbs are best tinctured when they are fresh, as some of their medicinal benefits are lost during the drying process. When making a tincture from fresh plant, you have to take into consideration the amount of water contained within the plant and adjust your specification accordingly.

Here are the steps for preparing a fresh herb tincture:

1. Gently rinse off dirt from the leaves and flowers, and scrub roots. Weigh the herb on your scale, then finely chop it with a knife and place it in the blender.
2. If your menstruum ratio is 1:5 and you have 100 grams of fresh herb, you will then need 500 milliliters of menstruum ($100 \times 5 = 500$ milliliters). For most plants, 50 percent alcohol will extract the medicinal compounds into solution. So, you would need 250 milliliters of grain alcohol plus 250 milliliters of water. Freshly harvested herbs contain about 75 percent of their weight in water, so your 100 grams of herb will be contributing 75

ADVICE FROM DR. LOW DOG: Fresh Versus Dried Herbs

There are lots of opinions out there about whether fresh or dried plant material is better, but I have to say that after 30 years of making both and giving them to patients, there are only a handful in which I've really noticed a difference. The main thing you have to keep in mind is that your finished tincture will only be as good as your starting material!

milliliters of water. Subtract 75 milliliters from the 250 milliliters, and this means you will be adding 175 milliliters of water to your grain alcohol. This will result in a 1:5 extract containing 50 percent alcohol.

3. Turn on the blender and mix well. If you don't have a blender, you can always put the fresh herb and alcohol into your jar and then mix well with a wooden spoon. Make sure that the alcohol completely covers the herb.
4. Pour the liquid into your canning jar (make sure it is of sufficient size). Leave an inch or two between your herb/alcohol mixture and the top of the jar. Place the lid on tightly; affix a label so you know what it is and when it was made. Let the mixture sit for 2 weeks. Shake your tincture every day, while keeping an eye on the alcohol. Make sure there is enough liquid to keep the herbs in solution. If it looks like the herbs have "sucked up" all the alcohol, add enough menstruum to completely cover them again. Make sure this is still the same ratio of 50 percent alcohol and 50 percent water. Fresh herbs that are not completely covered with alcohol can mold.



Rosemary, like peppermint and ginger, enlivens and awakens the nervous system without overstimulating it.

Over the years, I've treated at least a thousand people with echinacea tea or tincture as well as taking it myself and giving it to my children.

5. After 2 to 4 weeks, line your strainer with muslin or cheesecloth. Place the lined strainer over a bowl and pour the liquid into the cloth.
6. Squeeze and wring the cloth really hard to get as much of the liquid out as possible. This may be the time to get the strongest person in the house to help out!
7. Pour the strained liquid into a dark bottle, label the bottle, and store it in a dark cabinet.
8. Compost the leftover herb material in your garden or compost pile to nourish your soil.

Directions for Basic Dried Herb Tincture

Unlike fresh plant, dried herb has no water. Generally, you need 40 to 70 percent alcohol to extract most constituents out of your herb. If you need 50 percent alcohol, the other 50 percent is water. An exception is gums and resins (such as myrrh) that require a solvency of 90 to 95 percent alcohol, and pure grain alcohol is the best option.

1. Take your dried herb, weigh it, and then grind it in your coffee grinder to a fairly consistent coarse powder. "Coarse" is the operative word here. You don't want a fine powder; it's messy to work with.
2. Most tinctures are made in a 1:5 ratio. This means that you'll cover your weighed herb with five times the volume of menstruum. For example, if your herb weighs 50 grams, you will need 250 milliliters ($50 \times 5 = 250$) of solvent.
3. If the solvent required for your herb is 60 percent, this means that roughly 60 percent of the 250 milliliters must be alcohol and 40 percent water ($250 \times .60 = 150$ milliliters). So,



you would pour 150 milliliters of grain alcohol and 100 milliliters of water over the herb and stir well.

4. Place the lid on tightly; affix a label on the jar so you know what it is and when it was made. Let it sit for 2 to 4 weeks. Shake your tincture every day. Make sure that the liquid completely covers the herbs. If it appears that you need more, then add another 50 milliliters of menstruum to make a 1:6 ratio. Remember, 60 percent of that 50 milliliters needs to be alcohol, the balance water ($50 \times .60 = 30$ milliliters grain alcohol and 20 milliliters water). Stir well. If you find you still need more alcohol, then add another 50 milliliters of menstruum.
5. After 2 to 4 weeks, line your strainer with muslin or cheesecloth. Place it over a bowl and pour the liquid into the cloth.
6. Squeeze and wring the cloth really hard to get as much of the liquid out as possible. Once again, get the strongest person in the house to help with the wringing. You should be able to get about 150 milliliters of tincture by hand and up to 200 milliliters with a press.
7. Pour strained liquid into a dark bottle, label, and store in a dark cabinet.
8. Compost the leftover herb material in your garden or compost pile.

HERBAL GLYCERITES: BEST FOR CHILDREN

Are you falling in love with herbal remedies but cautious about giving them to your children? Don't worry: Glycerin tinctures are a great alternative. They're alcohol-free and convenient, ready to use whenever or wherever you need them. I also use glycerin tinctures when treating dogs and cats. A favorite is skullcap glycerite, which is very effective for calming highly excitable dogs.

Before we get into the actual instructions for making a glycerite, let's go through some of the basics.

Glycerin is a clear, thick liquid created by hydrolysis of animal or vegetable fats or fixed oils. (I recommend using vegetable glycerin derived from vegetable oil—usually palm—that is readily available at most natural food stores.) Glycerin is sweet and sticky, like a clear sugar, with a consistency somewhere between honey and molasses.

Glycerin chemically belongs to the “alcohol” group, hence its other name: glycerol. However, it is not an alcohol in the same sense as vodka or brandy. Those who are alcohol-sensitive, are recovering alcoholics, or have liver disease or stomach ulcers may all safely consume vegetable glycerin. Because it is sweet, it makes a good base for kids' medicines and is also safe for use in animals.

Glycerites are made using the maceration process, described in the section on making tinctures, pages 29–31. The only difference is that the menstruum is a glycerin/water mixture rather than an alcohol/water mixture.

Glycerites must be made with a minimum of 70 percent glycerin to prevent microbial overgrowth. If you are making a glycerite out of fresh herb, you have to account for the water in the plant, meaning that you have to use almost pure vegetable glycerin.

Glycerin is much more viscous and has a much

higher density than alcohol. So, whereas many roots and barks will sink in alcohol, they will tend to float on glycerin; it is often necessary to use a weight (I use pie weights) to make sure that the herb remains covered by the glycerin. For this reason, it is recommended that glycerites be made to a 1:8 ratio specification. That means if you have 100 grams of herb, you will use 800 milliliters of menstruum, and at least 70 percent of that must be vegetable glycerin.



Glycerites made from fresh or dried herbs, such as these chamomile flowers, are great for kids and those who wish to avoid alcohol.



Directions for Basic Fresh-Herb Glycerite

1. Rinse off any dirt from your herbs, and finely chop them with a knife. Let sit for 8 to 12 hours to help wick out some of the moisture. Fill a glass jar three-quarters full with herbs.
2. Pour enough pure vegetable glycerin to completely cover the herbs and leave an additional one-inch (2.54 cm) layer on top. This is important to ensure that uncovered herbs do not get moldy.
3. Take a wooden spoon or chopstick and stir well. Again, make sure that the glycerin completely covers the herb. If desired, you can take a small cloth bag and fill it with ceramic pie weights and drop it down on top of the herbs to weigh them down and keep them from floating to the top.
4. Place the lid on tightly; affix a label on the jar so you know what it is and when it was made. Let it sit for 2 to 4 weeks. Shake your tincture every day or two, keeping an eye on the glycerin. If it looks like the herbs have “sucked up” all the glycerin, add enough glycerin to completely cover them again.
5. After letting it rest for 2 to 4 weeks, take your jar of glycerite and place it in a pan of water, and gently heat. Stir occasionally until the glycerin is thin in consistency. By warming the glycerin, you’ll find that it is easier to strain.

I make chamomile glycerite to always have on hand. It’s amazing for adults and children, relieving indigestion, intestinal cramping, and nausea.

6. Line a strainer with muslin, or cheesecloth. Place the lined strainer over a bowl and carefully pour the warmed liquid into the cloth. (Don't burn yourself!)
7. Squeeze and wring the cloth really hard to get as much of the liquid out as possible.
8. Pour the strained liquid into a dark bottle, label, and store it in a dark cabinet. Your glycerin tincture will remain potent for roughly 2 years.
9. Compost the leftover herb material in your garden or compost pile to nourish your soil.

Basic Directions for Dried-Herb Glycerite

When making a glycerite out of dried herbs, you don't need to account for any water in the plant. The primary calculation here is to make sure you use a menstruum ratio of 1:8, and that at least 70 percent of the menstruum is vegetable glycerin.

1. Weigh your dried herb, and then grind it in your coffee grinder so that you have a fairly consistent coarse powder. "Coarse" is the operative word here. You don't want a fine powder; it's messy to work with.

2. You want to use a 1:8 ratio. This means that you'll cover your weighed herb with eight times the volume of solvent. For example, if your herb weighs 50 grams, you will need 400 milliliters ($50 \times 8 = 400$) of solvent.
3. For glycerites made from dried herb, you need at least 70 percent vegetable glycerin and 30 percent water. So, you would multiply $400 \times .70$ to get 280 milliliters of glycerin and 120 milliliters of water. If you are making a number of glycerites, I recommend mixing up a batch of 70 percent glycerin and 30 percent water and storing it in a container. This way, it is already premade in the correct percentage and you just have to pour it over the herb.
4. Cover herbs with the glycerin and water. Place the lid on tightly; affix a label on the jar so you know what it is and when it was made. Let it sit for 2 to 6 weeks. Shake your tincture every day. Make sure that the liquid completely covers the herbs. If it appears that you need more, add another 50 milliliters of solvent to make a 1:9 ratio. Remember, 70 percent of that 50 milliliters needs to be glycerin, the balance water ($50 \times .70 = 35$ milliliters glycerin and 15 milliliters water). Stir well. If you still need more glycerin, then repeat. (This is why I like to premake my glycerin/water blend; I can skip all the calculations and just add another 50 milliliters at a time.)
5. After 2 to 4 weeks, take your jar of glycerite and put it in a pan of water and gently heat, stirring occasionally until the glycerin is thin.
6. Line a strainer with muslin or cheesecloth. Place it over a bowl and pour the warmed liquid into the cloth. Squeeze and wring the cloth really hard to get as much of the liquid out as possible.
7. Pour the strained liquid into a dark bottle, label, and store in a dark cabinet. Your glycerite has a shelf life of roughly 2 years.
8. Compost herbs in your garden or compost pile.

Skullcap, a very safe and gentle treatment for anxiety, is ideal for making glycerite.

ADVICE

ADVICE FROM DR. LOW DOG: Some of My Favorite Herbs for Making Glycerites

- Skullcap. Skullcap is a very safe and gentle herb used to treat anxiety that I have used in clinical practice and at home for many years.
- Chamomile. If you have children, chamomile glycerite is one remedy you should definitely make and keep on hand to relieve indigestion, colic, intestinal cramping, and nausea, while calming the unhappiest toddler. It's amazing for adults too.
- Barberry. Like goldenseal and Oregon grape root, barberry (*Berberis vulgaris*) is high in berberine, a yellow-colored alkaloid that combats numerous bacteria, fungi, and parasites.



OILS AND SALVES: HERBAL MUST-HAVES

As a massage therapist, I made countless gallons of herbal massage oils to ease sore muscles and promote relaxation. As an herbalist and physician, I've made gallons of salves to alleviate eczema, soothe psoriasis, treat athlete's foot and skin irritations, and heal minor cuts and scrapes. As a mother, I've relied on herbal

oils and salves to soothe all kinds of boo-boos and, of course, as a chef, I delight in gathering fresh herbs from my garden and making infused oils for cooking. Infused oils are wonderful additions to both the kitchen cupboard and the medicine pantry.

Calendula flowers make a marvelous salve. See page 78 for the recipe.



Herbal salves alleviate itching and skin irritation and help heal minor cuts and scrapes.

Directions for Basic Herb-Infused Oil

1. Fill a quart glass jar three-quarters full with dried herb, preferably freshly dried.
2. Cover herbs with a fixed oil, filling the jar to within an inch of the top. You can choose whatever oil you'd like. Many people use olive, grape seed, or almond oil.
3. Cover with a tight-fitting lid and label the lid or jar with the name of the herb and the date it was prepared.
4. Place the jar in a paper bag and set on the windowsill or other sunny place. You want some gentle heat but not the light.
5. Shake your oil every day for 2 to 4 weeks. Top off with more oil if needed. You want the herb to be completely covered by the oil.
6. Layer a strainer with cheesecloth or muslin and place the cloth over a large bowl.
7. Pour the contents of the jar into a strainer and squeeze to get as much oil out as possible. Set the remaining herb material aside for composting in your garden.
8. Pour the infused oil into a bottle, cap or cork tightly, and label it. If stored in a cool, dark place, the oil will stay good for at least a year. If possible, store in your refrigerator or root cellar.

Basic Directions for Herbal Salve

1. Pour 8 ounces of infused herbal oil into the top of a double boiler. If you don't have a double boiler, you can use a saucepan, but just make sure to keep it on very low heat to avoid burning the oil.
2. Grate your beeswax using an inexpensive cheese grater. It's easier to use when grated and melts



more quickly. Just be prepared to essentially donate the cheese grater to your salve-making equipment, as the beeswax is a pain to clean off! Or, purchase beeswax granules, and you can skip this step altogether!

3. Add 2 ounces of beeswax to the oil and gently melt, stirring frequently. The tricky part is getting the salve to the right consistency. Dip a spoon into the mixture and put it on a paper towel and stick it in your refrigerator for 5 minutes. Take it out. If it's mushy, add 1 to 2 tablespoons more grated beeswax. If it's too hard (not likely, but possible) add 2 to 3 tablespoons of extra infused oil. Repeat this process until you get it to the right consistency. Bottom line: too mushy—needs more beeswax; too hard—needs more infused oil.
4. Remove the pan from the heat. If desired, add some vitamin E and/or essential oils. I like to add natural vitamin E (d-alpha tocopherol), because it's so nice on the skin, and it helps stabilize the oil. You can purchase this online or in most health food stores. If using essential oils, use 3 to 6 drops per ounce of oil.
5. Stir well and pour into salve containers or tins. Let them sit for 1 to 2 hours, until the salve is completely hardened. Place lids on the tins or glass jars and label.





COMMON AILMENTS

SUPPORT YOUR BODY'S HEALING PROCESS NATURALLY

Now that you've learned a bit about making medicines, let's explore how to manage everyday health problems.

I have intentionally limited the conditions to those that do not generally require a visit to a health care practitioner for a diagnosis and/or treatment. I want to help you feel comfortable taking care of sore throats, colds and coughs, mild fevers, indigestion, diarrhea, cuts and wounds, rashes, and menstrual cramps at home. I want

you to understand why using natural remedies that support your body's healing process is often better than using a more powerful intervention.

Just as important, though, as a doctor, I want you to recognize when to seek medical attention.

Each section lists symptoms that warrant immediate medical attention and those that require follow-up with a health care provider. But trust your intuition. If something inside says you should call a doctor or get urgent care—*do* it.

Left: Growing your own medicinal plants is empowering for the whole family. Top: Rosemary

UNDERSTANDING AND MANAGING INFECTIONS

Infection is one of the most common problems encountered by all members of the household. Ranging from the mild but annoying cold and upper respiratory infection to the potentially dangerous pneumonia or nephritis (kidney infection)—it is important to be able to distinguish between the minor and self-limited infections and those that can be deadly if not properly treated. Even minor infections can turn dangerous in young infants and elders if you aren't paying attention.

What Causes Infections?

Infections are caused by microbes—organisms too small to see with the naked eye. Microbes can be divided into basically four groups: bacteria, viruses, fungi, or protozoa. Bacteria are single-celled microorganisms that exist almost everywhere in the environment and also inhabit the human body. The

Lactobacilli that live in our gastrointestinal tract aid in the digestion of food and the production of vitamins and help fend off dangerous bacteria and even help fight cancer. The vast majority of bacteria are not harmful; less than one percent cause disease in human beings. Common bacterial infections include urinary tract infections, strep throat, and certain skin infections.

Viruses are smaller than bacteria and consist only of molecules of RNA or DNA surrounded by a protein coat. Unlike bacteria, most viruses cause disease. Viruses cannot survive without a host. The virus invades a healthy cell and, once inside, reprograms the host cell to reproduce more viral particles, until the cell eventually dies. Viruses cause many common infections, such as colds, flu, most coughs and bronchitis, and roughly 80 to 90 percent of sore throats.

A fungus is basically a primitive plant. Hundreds of thousands of different fungi share our world, and most are not harmful to us. When a fungus causes disease, it is called mycosis. Common mycotic infections include athlete's foot and ringworm, which I will discuss in the section on skin.

Protozoa are microscopic one-celled animals. When protozoa invade the human body, they generally cause disease. They are most often transmitted either by ingesting contaminated food or water, or by being bitten by mosquitoes or sand flies.

Washing our hands is something all of us can do to keep healthy. You can see here the bacteria that grew from the imprint of an unwashed human palm in nutrient medium.





The Body's Defenses

Because human beings have evolved with the trillions of microbes that also share our world, our bodies are extremely well designed to keep us from getting sick. Your skin provides a strong physical barrier. The mucus in your nose and lungs, and small hairlike structures called cilia, trap microbes. Coughing and sneezing then help the mucus move those germs out of your body more efficiently. Your stomach's powerful acid can destroy most disease-causing microorganisms. Healthy bacteria live on our skin and within our digestive tract, competing with harmful bacteria for nutrients. Of course, this is why you don't want to interfere too much with nature's design. Broad-spectrum antibiotics destroy both good and bad bacteria, leaving the body with fewer natural defenses.

Healthy bacteria live all around us as well as inside of us. They play a crucial role in our overall health.

But if some sneaky bacteria or parasites manage to get past all of these initial defenses, you have an exquisite immune system designed to keep you healthy. As a matter of fact, the body is so well designed for staving off infections that a growing body of research shows that if the immune system isn't challenged during early childhood, it can actually begin to work against us, seeing harmless things, like pollen, cat hair, or gluten, as foreign invaders. It may even view cells within our own body as dangerous, leading to autoimmune diseases.

Getting dirty, catching colds, and playing with puppies are all good for training the immune system to understand what is harmful and what is safe. I have long considered it a good day when the

children came home with grass in their hair and mud on their pants.

Prevention Is in Your Hands

We all know that one of the most effective ways to prevent infectious illness is to wash our hands. That's because the vast majority of microbes are transmitted from your hands to your nose and mouth. You should always wash your hands after using the bathroom or changing a diaper, before preparing or eating food, and whenever you are caring for someone who is sick.

You do not need to use antibacterial soap. Plain soap and water work just fine! So, make a habit of soaping up and washing your hands for 15 seconds. I taught my kids to sing the happy birthday song, which is about—you guessed it—15 seconds long.

Immune Boosters

A healthy body is well positioned to fend off harmful microbes. But are there things you can do to actually “boost” your immune response or help stave off harmful microbes? Many traditional systems of medicine had special herbs and/or foods that were recommended to help keep the body strong and reduce the risk of infection. Garlic, onions, and



HOMEMADE FOAMING SOAP

If you don't want the soap to foam, just use a soap bottle with a regular pump.

- 1 cup water
- ½ cup liquid castile soap
- 5 drops essential oil (optional)
- Soap bottle with foaming pump

Put the water and liquid castile soap into a soap bottle with a foaming pump, and you are good to go. It's that simple. You can give yourself a little extra protection naturally by adding 5 drops of your favorite essential oil. Citrus is really nice for the kitchen, while lavender or peppermint is great for the bathroom. Liquid castile soap can be purchased online and in many health food stores. I love the old classic Dr. Bronner's organic castile soap.

RECIPE

leeks have long been recommended, and modern science shows that they may indeed help keep you from catching a cold or getting diarrhea.

SUPPLEMENTS

If you seem to catch everything that goes around your school or office, I would suggest you consider taking a basic multivitamin that provides 15 to 20 milligrams of zinc and 200 to 400 milligrams of vitamin C for extra infection-fighting nutrients. Both of these nutrients are critically important for optimal functioning of the immune system. Studies have shown that healthy children who take zinc regularly have fewer colds, fewer school absences, and less antibiotic use. Taking vitamin C regularly can shorten the duration of colds by about 8 percent in adults and 14 percent in children.

IMMUNE-ENHANCING MUSHROOMS

For a real immune boost, you could include some medicinal mushrooms in your meals a couple times

Mushrooms help the body resist infection. Include them in your meals a couple times a week or take a supplement.

a week or take a supplement. Although mushrooms have many compounds that contribute to their beneficial effects on human health, it is the polysaccharides, large complex carbohydrates, that account for their potent antiviral and immune-enhancing properties. Mushroom polysaccharides have been scientifically shown to help the body resist infection and fight off tumor cells, making them an excellent addition to the diet any time of year, but especially during the long, cold winter months.

GARLIC FOR HEALTH

People have long believed that garlic can help ward off colds, infections, and of course vampires. While I'm not so sure about the vampires, I can say with confidence that adding garlic to your diet can certainly help you maintain a healthy respiratory and digestive tract, two areas that are vulnerable to infection.

The Power of Probiotics

Probiotics (a term that means “favoring life”) are healthy bacteria that normally inhabit the vagina and intestinal tract and are important for keeping harmful bacteria from wreaking havoc. Yogurt and oral probiotic supplements are good sources of these beneficial bacteria. Yogurts that say “live and active cultures” contain beneficial bacteria (probiotics) that help defend against harmful invaders. Fermented foods like sauerkraut, kefir, or miso soup have been part of the cuisine of traditional cultures for millennia. These foods are rich in prebiotics, substances that provide nourishment for the beneficial bacteria in your GI system. Regular intakes of these “live foods” and their associated

Including garlic in your diet helps to maintain healthy respiratory and digestive tracts.





Left: Miso soup. Like other fermented foods, miso is a good source of beneficial bacteria. **Right:** Chamomile flowers.

bacteria definitely have positive effects on our overall health.

Antibiotics are notorious for altering your inner ecology and decimating the vaginal and intestinal tracts of good bacteria. I always recommend that my patients take a probiotic while taking antibiotics to reduce the risk of antibiotic-associated diarrhea and yeast infection. Probiotics restore and maintain the balance between good and bad bacteria in your body.

Special Concerns

Natural medicines are designed to help support your body's own healing process, and that presumes a healthy immune system. Anyone who has been told that they are immune-compromised because of disease or due to medications should consult a medical professional and not treat any type of infection at home. In addition, two groups—children and elders—warrant special consideration when evaluating whether to treat infection at home or seek help from a health care provider.

CHILDREN AND INFECTION

Children are going to get sick. There will be numerous colds and upper respiratory infections, bouts of diarrhea and vomiting, and any number of bumps, cuts, and bruises. As I mentioned previously, this is in no small part how their immune system is stretched, worked out, and trained to respond appropriately. As a physician and a mother, I have cared for many sick children over the past three decades. I took hundreds of “mommy” calls in the middle of the night, helping parents decide if they should take their child to the urgent care center or wait until morning.

As important as knowing when to seek medical help is knowing when you can safely treat your

child at home. If you can answer “yes” to the statements in the following list, your child (more than two months old) is most likely fine to treat at home.

- Your child continues to drink fluids.
- Your child is eating some food, even if it is less than normal.
- Your infant is having six or more wet diapers a day.
- Your child is peeing regularly every few hours.
- Your child has tears when she cries.
- Despite feeling bad, your child is interactive.
- You are able to awaken your sleeping child.

FEVER TEA

Fever Tea has herbs that help the body fight viral infections. It is calming and relaxing and can help the body manage fever. It is safe for all.

- 1 teaspoon chamomile flowers
- 1 teaspoon elder flowers
- 1 teaspoon lemon balm (may use peppermint in those over 5 years of age)
- 1 teaspoon maple syrup or honey
- 2 cups water

Pour 2 cups of near-boiling water over the herbs and let the mixture steep for 5 minutes. Strain. You can add 1 teaspoon of maple syrup for a child under the age of 12 months, or honey for anyone older.

HOW TO USE:

Babies 3 to 6 months can be given 2 teaspoons every hour or two; children 6 to 12 months old may take 1 to 2 tablespoons every hour or two. Older children and adults may drink freely.



! FOR A CHILD'S INFECTION

It is important to know the “danger” signs for a child who has an infection. As a physician, I am deeply concerned if your child has any of the symptoms in the following list, and I would strongly recommend that you take your child immediately to the nearest emergency room or urgent care center.

- When a baby under two months of age (one exception is if your two-month-old just got her vaccinations and runs a low-grade fever within 36 hours) has a rectal temperature of 100.4°F or higher
- When the sudden onset of any fever is accompanied by pain in one leg or joint
- When a high fever with a red rash remains colored after you press down on it (could indicate a serious infection, including meningitis, a dangerous infection in the tissues surrounding the brain)
- When a fever is accompanied by a stiff neck and extreme lack of energy (could be meningitis)
- When any pain is persistent or worsens (such as ear pain, headache, or sore throat), despite the use of over-the-counter pain relievers and/or natural medicines
- When a child of any age has severe abdominal pain, or pain in the belly that is worsened when the child jumps up and down (could indicate appendicitis or intestinal obstruction)
- When diarrhea is bloody or there is blood in the vomit, which can indicate a severe infection. (Children may have a little bright blood in their stool from tiny anal tears that come from straining to pass a firm/hard stool—this is not an emergency.)
- When an infant has a stool that looks like grape or currant jelly (this could indicate an intestinal obstruction)
- When there is difficulty breathing, wheezing, or labored or noisy breathing
- When there is an inability to keep down enough fluids to pee at least once every six hours while awake, or if an infant doesn't have a wet diaper in eight hours.

(Dehydration is dangerous for young children—see the section on Diarrhea, pages 69–73, for strategies for preventing it.)

To a physician, these are all highly reassuring signs that your child is doing okay.

ELDERS AND INFECTION

I've cared for many elders who were very sick but lacked most or all of the signs that we'd normally see in someone younger. Because elders often fail to exhibit typical symptoms of illness or infection, it's very important to err on the side of caution when it comes to those who are 75 years of age and older. When something doesn't “feel right,” trust your intuition and make sure you seek proper medical care. It's normal for our immune system to weaken with advancing age. That's why one of the cardinal signs that normally alert us to the presence of an infection—fever—is highly unreliable in elders.

Pay particular attention to prevention with elders. The most common sites for infection are their urinary and respiratory tracts and the skin. Here are some tips for keeping infection at bay in elders:

Staying well hydrated, taking cranberry tablets and probiotics, and maintaining good hygiene can help reduce the risk of bladder infections.

Consider pneumonia and/or flu vaccinations, particularly if there is any underlying heart or respiratory disease that could make getting these illnesses dangerous.



Healthy broths, herbal teas, and plenty of liquids are among the best things to support the body's natural healing abilities.



Keep the skin moisturized. Dry skin is more likely to crack or tear, providing an opening for bacteria to enter. Virgin coconut oil is a great moisturizer and also has natural antibacterial properties.

Managing Fever

I know how scary high fevers can be. In my practice, I cannot count the number of parents who've brought their children in, or called me in the middle of the night, because they watched that fever climb and didn't know what to do. A high fever almost always means infection, and that can be worrisome.

It's important to remember that a fever is helping the body fight off an infection. You want to make the person comfortable but not eliminate the fever completely. If a child is able to play or an adult can still do daily activities, there is no reason to do anything more than provide support with healthy broths, herbal teas, and plenty of liquids. However, fevers of 103°F or higher tend to make both kids

Fever is the body's way of defending itself against infection. You want to make the person comfortable but not eliminate the fever.

and adults feel miserable, so using a pain and fever reliever makes sense. If the fever is accompanied by sore throat, diarrhea, or vomiting, follow the recommendations made in those sections. Remember: You are not treating the fever, you are supporting the body in defending against whatever is causing the fever.

The best thing you can do when fighting an infection is rest. Sleep when you can, and drink plenty of fluids. I find most people feel better if they dress lightly and comfortably, put on a blanket when chilled, and remove it when feeling hot.

Adults and children should make sure to take in plenty of liquids, soups, and broths to provide nourishment and calories, as well as fluid. Breast-fed babies should be encouraged to nurse frequently. Formula-fed babies should be offered their bottle on a regular schedule, with water or diluted juice offered in between feedings.

CARING FOR THE RESPIRATORY SYSTEM

The respiratory system is made up of the organs and tissues that are involved in breathing, essentially the nasal and sinus cavities, mouth, throat, and lungs. I'm going to focus primarily on the upper respiratory tract, as it is the site of many common problems that are highly amenable to home treatment. More serious problems, such as asthma, pneumonia, or influenza, are best cared for in partnership with your health care provider.

The Defense Team

The upper respiratory system is exquisitely designed to take in air, warm and moisten it, and then move it down through the trachea and into the lungs. But all this movement of air also makes it the most vulnerable interface between our external environment and our inner body.

Hot herbal tea helps you feel better when you're sniffly and sneezy from a cold or allergies.





The good news is that the respiratory tract was built for defense. The hairs in the nose act as a filter to trap larger particles like dust, while the mucosal membrane acts like flypaper, trapping smaller particles, such as viruses, bacteria, and pollen. We may sneeze these out, or remove them by blowing our nose or more commonly by swallowing them. Our stomach acid quickly and thoroughly destroys these microbes.

Keep Things Moist

Many viruses, especially those that cause colds and influenza, thrive in low humidity, which makes the nasal passages drier and the mucosal membranes less able to trap them. One of the most helpful things you can do to maintain upper respiratory health is to keep your nasal passages moist.

If you should get a stuffy nose, rinsing your nose with a buffered saline solution will reduce nasal swelling, thin the mucus, and make it easier to clear. For babies or infants, most of the distress of a stuffy nose is nasal obstruction, so using saline irrigation and physically removing the mucus can make it easier for them to breathe, nurse, and sleep. Everyone should know how to make a simple saline solution that young and old alike can use to relieve nasal congestion due to colds, seasonal allergies, and dust.

MAKING YOUR OWN SALINE SOLUTION

To make saline solution, mix 1 cup (8 ounces) of boiled or distilled water with $\frac{1}{4}$ teaspoon noniodized kosher salt and $\frac{1}{8}$ teaspoon baking soda in a clean

Most of my patients have found that using a neti pot dramatically reduces their need for cold and allergy medications.

jar. Stir it well, until the salt and soda have dissolved. (The solution can be stored up to 24 hours.) The baking soda acts as a buffering agent to make the saltwater less irritating to your nose, but if you don't have any on hand, it's OK to leave it out. I recommend noniodized kosher salt because iodine can be potentially allergenic, and sea salt can contain algae and other contaminants.

SALINE IRRIGATION FOR OLDER KIDS AND ADULTS

The most complete way to flush the nose of bacteria-filled mucus, pollen, and dust is with saline solution and a neti pot. Typically made of glass or ceramic and looking like a teapot, neti pots can be purchased at many pharmacies, health food stores, and online retailers, and come with instructions for use. Most of my patients have found that using a neti pot dramatically reduces their need for cold and/or allergy medications.

Fill the neti pot with room-temperature saline solution. Standing with your head over the sink, tilt your head about 45 degrees and insert the spout into your top nostril. The solution will flow through your nasal passage and drain out the other nostril. If it drains down your throat, just spit it out. Gently blow your nose to get rid of any remaining solution, refill the neti pot, and repeat in the other nostril. Do this once a day while you have symptoms. If you suffer from seasonal allergies, do this every day for 10 to 14 days and then three times a week. Thoroughly clean the neti pot with warm soapy water after each use. *Note:* There are now electric nasal irrigation devices that can be purchased online that some people find easier to use than a neti pot.

Cold Comfort

Get ready to be hit by at least one cold, maybe more, this year. Consider: The average adult gets two to



four colds a year. And if you've got kids, stock up on tissue and chicken soup. Children have an average of four to eight acute upper respiratory tract infections (URIs) a year, with the highest number occurring in children under the age of two.

GINGER TEA RELIEF

On those nights when I feel like I'm "coming down with a cold," I turn to ginger, one of my favorite

Ginger tea is delicious, easy to make, and safe and effective for anyone over the age of two.

herbal teas. Ginger has antiviral and anti-inflammatory activity, helping to destroy viruses that cause upper respiratory infections, shrinking nasal swelling, and soothing a sore throat. I prefer fresh ginger for colds and coughs, but you can use dried if that's what you've got. Ginger tea is delicious, easy to make, and safe and effective for anyone over the age of two. Teens and adults should drink one to three times a day. Children aged one to 12 years can drink one-quarter to one-half cup, one to three times a day, depending on age.

- 1 inch fresh ginger rhizome (root) cut into slices
OR ½ teaspoon dried ginger
- 1 teaspoon honey
- 1 teaspoon lemon juice
- 1½ cups (12 ounces) water

Put water into a saucepan, add ginger, and gently bring to a boil. Cover and simmer on very low heat

SEEK MEDICAL ATTENTION NOW!

! FOR COLD SYMPTOMS

- When there is shortness of breath, breathing difficulty, nasal flaring, or any wheezing
- When a baby under two months of age has a fever of 100.4°F or higher
- When an infant who has had a mild URI for a couple of days suddenly spikes a temperature over 102°F and has difficulty breathing (this may indicate pneumonia)
- When any child, teen, or adult with a mild URI suddenly develops a shaking chill followed by a rapid rise in temperature and hacking cough (this is a typical presentation for pneumonia)

for 15 to 20 minutes. Strain and add honey and lemon juice.

ECHINACEA

I've had a long and enduring relationship with echinacea, also known as purple coneflower. I've treated at least a thousand people with the tea or tincture over the years. I've taken it myself and given it to my children on countless occasions. It revs up the immune system, allowing the body to respond more rapidly and efficiently to eliminate viral and bacterial infections.

You can purchase echinacea tincture online or at health food stores, but it's cheaper to make your own. See the basic recipe in "The Eighteen Essentials," page 99.

Ease a Cough

Coughs let you know that something's wrong: that too much mucus, stomach acid, or smoke has irri-

tated nerves in the passages leading to your lungs. Coughing is your body's way of trying to get rid of the irritant. Acute coughs last for less than three weeks and are most commonly caused by upper respiratory infections and seasonal allergies. A cough is considered "chronic" if it lasts for more than eight weeks. Any chronic cough should be evaluated by a health professional.

MARSHMALLOW ROOT INFUSION

Few herbs are more healing for the throat, esophagus, and stomach than marshmallow leaves or root. Marshmallow contains mucilage, which protects and eases irritated mucosal membranes. The herb is completely safe and gentle enough for any age.

To make a soothing infusion, put a heaping teaspoon of dried and chopped marshmallow root in one cup of purified water at room temperature and let it sit for 2 to 3 hours. Then strain it

Marshmallow root is excellent for soothing the throat, esophagus, and stomach.



through a tea strainer and drink a half cup 2 or 3 times a day.

SLIPPERY ELM LOZENGES AND TEA

Slippery elm bark has been used to soothe throat irritation for centuries. The FDA recognizes slippery elm bark as a safe and effective oral demulcent (tissue soother). You can buy slippery elm lozenges at the store, make your own, or drink it as tea. Slippery elm is safe for all ages.

THYME COUGH SYRUP

Thyme is definitely my go-to acute cough syrup because it works quickly, tastes great, is very safe, and costs so little to make. The essential oil fraction of the herb—the compounds that give thyme its aroma—makes the mucus thinner and easier to expectorate or cough up and acts as an antiseptic and antibacterial in the lungs. To get the most benefit from thyme, use the fresh herb, which you should be able to find throughout the year in the produce section of most grocery stores.

- 2–4 tablespoons fresh thyme
- 1 teaspoon lemon juice
- 1 cup water
- ¼ cup honey, preferably raw and local

Pour near-boiling water over thyme and steep, covered, for 15 minutes. Strain. Add honey and lemon juice. Refrigerate for up to 1 week. For children 12 months and older: Give 1 to 2 teaspoons every 2 to 3 hours, as needed. Teens and adults can take 1 to 2 tablespoons every 2 to 3 hours, as needed.

HONEY FOR COUGHS

Studies have shown that honey is highly effective for relieving nighttime coughing in children over the age of one. Different types of honey have been used in this research, and all of them worked! The dose was 1 to 2 teaspoons before bed, and both children and their parents were able to get a good night's sleep! You can do this one even better, how-

ever, by using sage or thyme medicinal honey (see pages 105–106). Remember to use raw honey.

Sore Throat Soothers

Sore throats, medically known as pharyngitis, are very common, prompting between 16 million and 18 million visits to doctors' offices each year, according to the National Center for Health Statistics. A sore throat can be the result of bacterial or viral infections or noninfectious causes, such as smoking or hay fever. The vast majority of sore throats, however, are due to viral infections, such as the common cold. Viral sore throats are almost always associated with a runny/stuffy nose and a cough. Nasal irrigation and steams can be very helpful, as can some of the following timeless remedies.

SAGE GARGLE

A member of the mint family, sage is an old and time-honored remedy for irritation and inflammation of the mouth, throat, and tonsils. A sage gargle combines really well with echinacea tincture if you're fighting off a cold, and it can also be used safely with antibiotic treatment for strep throat.



FOR SORE-THROAT SYMPTOMS

While the majority of sore throats can be treated safely at home, the following symptoms could indicate a more serious condition and should be checked out immediately.

- If you have the sudden onset of a sore throat, with fever and no signs of a cold (this could indicate strep throat)
- If you develop a fever one to two days after feeling better
- If you develop a skin rash
- If you develop painful joints
- If you have shortness of breath or chest pain
- If your urine is very dark
- If you are unable to swallow and take in fluids

SEEK MEDICAL ATTENTION NOW!

Next time you have a sore throat, try gargling with sage.



Bring one cup of water to a boil, then turn off the heat and add a tablespoon of fresh sage leaves or two teaspoons of dried sage. Cover and let steep for 10 minutes, strain, pour into a tea mug, and add a quarter teaspoon of salt. Stir it up and gargle with it every 1 to 2 hours, as needed. (Don't swallow; just swish and spit.)

ECHINACEA TO THE RESCUE

I've had my share of sore throats. Some were doozies. Echinacea worked every time. Sometimes, when it was worse than usual, I'd take barberry tincture with my echinacea. The dose for barberry tincture is 2 to 3 milliliters taken 3 times per day.

Echinacea is one of my favorite herbs for sore throats. It not only helps the body fight off the infection, it also has a mild numbing effect, making it easier to swallow.

For best results, take 5 milliliters echinacea root tincture (see the recipe in "The Eighteen Essentials," page 99) every 2 to 3 hours at the first sign of a sore throat. Take this up to 6 times a day for 3 days. The dose can be decreased to 3 times a day for an additional 3 to 4 days, if needed.

Seasonal Allergies

Roughly 35 million Americans live with seasonal allergic rhinitis, or what we commonly call hay fever. For people with seasonal allergic rhinitis, their bodies perceive harmless pollens as dangerous and react accordingly. Immune cells mount an attack against the allergens, just like they would if the allergens were bacteria or viruses. Chemicals like histamine are released, causing you to sneeze, your nose to run, and your eyes to water. It can make you feel pretty miserable. The good news is that you can use a number of natural remedies to ease your symptoms!

NASAL IRRIGATION

Allergists are increasingly recommending buffered saline nasal wash using a neti pot. If I can convince someone to do it every single day for at least 2 weeks, they never fail to come back to the office saying how much better they feel. If I could give you only one recommendation, it'd be to use saline washes regularly. See the recipe and instructions on page 49.

QUERCETIN

When we have an allergic reaction to something, “mast cells” degranulate, which means they release histamine and other chemicals that cause our nose to get stuffy, our eyes to itch, and in more severe cases, the smooth muscle in our lungs to constrict. A natural compound called quercetin, found in many plants, including citrus fruits, dark berries, and red wine, has been shown to stabilize the membranes of mast cells and to reduce the release of histamine. Although eating more of these foods in your diet might help, I’ve found quercetin to be very useful if taken regularly at the start of the allergy season if you really suffer from allergies. The dose is generally 500 milligrams twice a day. *Note:* Although considered safe, the use of quercetin in pregnancy, particularly at these doses, is not recommended.

BUTTERBUR

Butterbur (*Petasites hybridus*) is a large-leaved plant that was used for centuries in Europe, northern Africa, and Asia to relieve coughs, congestion, and asthma. Scientists have found compounds in the plant that reduce smooth muscle constriction in the lungs and shrink swollen nasal membranes, providing evidence for its historical uses. European clinical trials have shown that butterbur is as effective as leading allergy medications.

Allergies can aggravate asthma, and butterbur can help here, as well. Butterbur extracts are not sedating and are very well tolerated in both kids and adults.

Purchase a product standardized to provide 7.5 milligrams petasin per 50 milligrams of extract and FREE of pyrrolizidine alkaloids. Quality matters! Take 1 capsule morning and night (100 milligrams total each day). Children 6 to 9 years should take 25 milligrams twice a day, while children 9 to 13 take 50 milligrams twice a day. *Note:* Butterbur should not be used during pregnancy.

Quercetin, which is found in citrus fruits, dark berries, and red wine, can be taken at the start of allergy season to ease the suffering.





CARING FOR THE NERVOUS SYSTEM

The human nervous system is an exquisitely complex information highway that controls all of our biological processes, movements, and thoughts. Because of its vast reach in the body, I feel it is important to focus in on one primary area—how the body responds to stress.

It's not that stress is bad. It's our response to it that determines how it will impact our health. What

we know is that the consequences of sustained levels of cortisol ("the stress hormone") increase our risk for obesity, heart disease, diabetes, irritable bowel syndrome, heartburn, low libido, infertility, hypothyroidism, infection, delayed healing, and even certain cancers. Scientists believe that pro-

Maintaining a healthy diet is one of the key things you can do to help you cope with stress.



For me, working in my garden is a wonderful de-stresser, spending time in nature, nurturing plants that heal and give pleasure.

longed elevation of stress hormones may shorten our life span by 15 years.

There are myriad ways you can increase your resiliency, or your ability to cope with the ups and downs of life. Eating a minimally processed diet, practicing daily meditation, spending time in nature, exercising regularly, listening to music, cultivating healthy relationships, extending forgiveness, and finding contentment all help to dampen the body's stress response. You'll feel calmer and more relaxed, and—no matter what problems you're dealing with in your life—you'll cope more effectively once you have learned to center and ground yourself.

Nothing can replace a healthy diet. The more stressed you are, the more likely you are to go for the junk food and sugar. Although this might temporarily make you feel better, you're fueling the fire. Make a conscious effort to ensure you are getting plenty of healthy protein, such as fish, chicken, eggs, dairy, soy, beans, nuts, and seeds, and avoid high-glycemic-load foods, such as white rice, potatoes, white bread, and sugary foods and drinks, that will just exacerbate blood sugar swings. And if you are under a considerable amount of stress and don't always eat right, you might want to consider taking a multivitamin to ensure that you are getting adequate levels of nutrients to ensure a healthy nervous system. Deficiencies in folate, vitamins B6 and B12, iron, and zinc can all contribute to fatigue and a depressed mood. Omega-3 fatty acids are also vital for maintaining a healthy mood and countering the adverse effects of stress.

You CAN learn to manage your stress without the use of prescription drugs. In addition to all the lifestyle choices I've listed, I want to share with you the abundance that nature has offered to help us better



cope with stress, relieve anxiety, lift our mood, improve our sleep, and ease our pain so that we can fend off many of the more chronic conditions that will need medical intervention.

Resiliency: The Role for Herbal Medicine

Nature has blessed us with many herbs that have a soothing effect on our nervous system and that help our bodies cope and adapt to stressful situations. It is extremely rare for me to see a patient whose health has not been compromised in some way by an inability to deal with stressful people and events in life. This is why I almost always recommend two classes of herbal therapies: nervines and adaptogens.

NERVINES

At its most basic definition, a nervine is simply an herb that has some effect upon the nervous system. This category of plants is broken down into three categories, based upon the physiologic effect of the herb.

Nervine stimulants. You probably had a dose this morning. Caffeinated coffee and tea are classic

examples of this class. I seldom recommend the daily use of herbs such as yerba maté, guarana, coffee, or tea, as many people already consume them, and most people are already overstimulated. However, herbs like peppermint, rosemary, and ginger are also nervine stimulants. While they enliven and awaken the nervous system, they do not overstimulate it.

HERBAL STRESS RELIEF

This basic formula is great for “taking the edge off.”

- 10 grams lemon balm herb
- 10 grams chamomile flowers
- 10 grams skullcap herb
- 150 milliliters brandy or vodka OR 170 milliliters vegetable glycerin and 70 milliliters water

Grind herbs into a coarse powder and put in a glass jar. Add vodka OR vegetable glycerin and water. Stir well. If you need to add more liquid, put in an additional 15 milliliters glycerin and 5 milliliters water. Cover and let sit for 2 weeks, shaking daily. Strain and pour liquid into a dark bottle, label, and store in a cabinet. Compost herbs.

HOW TO USE:

Herbal Stress Relief Tincture (made with brandy or vodka):

Adults: Take 1 teaspoon of the tincture 2 to 3 times a day, as needed to ease tension or anxiety.

Herbal Stress Relief Glycerite (made with vegetable glycerin):

- 40 to 60 pounds:
½ teaspoon 2 to 3 times a day, as needed
- 60 to 90 pounds:
1 teaspoon 2 to 3 times a day, as needed
- 90 to 120 pounds:
1½ teaspoons 2 to 3 times a day, as needed
- Over 120 pounds:
2 teaspoons 2 to 3 times a day, as needed



Nervine relaxants. These are the herbs that have a calming effect upon our nerves. Their effects range from mild and gentle, such as chamomile and lemon balm, to the more powerful sedative plants like hops and California poppy. I rely heavily on these plants in my practice, choosing the one that most closely fits the person’s constitution. Here are some insights into the personality of a few of the nervine relaxants:

- **German chamomile** is one of the best herbs for those who hold stress in their digestive tracts and skin. Chamomile’s anti-inflammatory activity eases eczema and digestive upset, while its antispasmodic effect quiets irritable bowel. It is the primary herb used for infant colic.
- **Lemon balm** is for the social butterflies among us who become irritable and cranky when they don’t have enough downtime. Lemon balm is for overstimulated extroverts with difficulty focusing, a good choice for kids and adults with ADHD or those that just go and go and go.
- **Valerian** is found in many sleep formulations because it can help release us into sleep. It is best for those who are tense and tired. It relaxes tension in the muscles, making it a good choice for those with spasms, cramps, and tension headaches. *Note:* It can take up to 10 days for the sleep-promoting effects to be realized.
- **California poppy** is my go-to herb for those who are stressed-out, depressed, and cannot sleep because of pain. It has mild pain-relieving properties, eases anxiety, and helps induce restful sleep. Effective and safe, it is not addictive like its cousin, the opium poppy.
- **Hops** are my choice for those who really need to sleep but find themselves lying awake at night worried about all kinds of things.

Nervine tonics. These are herbs that nourish and support the nervous system. We have no equivalent in Western medicine. Traditionally, these remedies were used when there was actual



Rosemary is a nervine stimulant. Drunk as a tea, it is energizing without overstressing the nervous system.

physical damage to the nerves and for those who were emotionally exhausted and overwhelmed. Here are three of my favorites:

- **Milky oats** is a classic nervine tonic. It is my go-to tonic for those who are mentally and spiritually tired—not depressed, just spent. I’ve seen this in many caregivers, healers, and pastors.
- **Skullcap** is best for those who are easily upset and easily overwhelmed. It is one of my top herbs for those who do not handle stress well. (*Note: Make sure you purchase from a reputable company as adulteration has occurred!*)
- **St. John’s wort** strengthens and nourishes those who are mildly depressed. I’ve found it to be highly beneficial for those who grew up with little sense of personal boundaries, always becoming enmeshed in the emotional needs of others and

then feeling overwhelmed and depressed. It’s best for those not taking prescription drugs as it can interact with many.

You can make teas or tinctures from these herbs based upon which one resonates with you. For young children, stick with chamomile, lemon balm, milky oats, and skullcap.

ADAPTOGENS

Adaptogens are the other category of herb that should have a prominent place in our modern herbal pharmacy. Soviet researchers coined the term back in the 1960s, while looking for substances that could increase the productivity of laborers, soldiers, and scientists without causing them harm.

Over the last 20 years, I have increasingly used adaptogens in my practice and have seen amazing results when taken over time. Although there are many adaptogens, I would like to share a few of my favorites with you.



While ginseng (left) and rhodiola (right) can help with stress in the short term, they should be part of a holistic approach to managing life's ups and downs.

- **Ginseng** is considered by many to be the classic adaptogen. In traditional Chinese medicine, Asian ginseng is prescribed for those with low energy, a tendency to feel cold, and a lack of sex drive. Studies have shown ginseng improves erectile dysfunction in men and mood and quality of life in women transitioning through menopause.
- **Ashwagandha** is considered a *rasayana*, or rejuvenating tonic, in Ayurveda, the traditional medical system of India. I think of ashwagandha for those who are wired and tired, exhausted by 7 p.m. but unable to sleep and suddenly wide-awake with a racing mind once they lie down.
- **Rhodiola** has been used in the traditional medicine systems of eastern Europe and Asia for more than 3,000 years, believed to increase energy, decrease depression, eliminate fatigue, and prevent high-altitude sickness. This is my go-to herb for those with fatigue, mental fog, maybe a bit of depression, and difficulty concentrating. I have had patients with chronic fatigue syndrome and fibromyalgia tell me it worked wonders for them.

You might find taking one of these adaptogens helpful if you're feeling under a great deal of stress. I generally recommend them for a period of 2 to 3 months, long enough to get the benefits. Can you take them longer? Well, yes, but they should be part of a holistic approach to managing stress. I don't think it's wise to use an herb or a drug in place of doing all the things that will allow us to experience good health.

Insomnia: Welcoming the Sandman

Roughly half of all Americans struggle with occasional insomnia. You might not be sleeping well for many reasons; however, the vast majority of



insomnia is due to lifestyle choices and stress. And what's more, chronic stress and insomnia can lead to many unhealthy daytime behaviors that further aggravate both problems. When tired, people often consume more caffeine and high-sugar/high-fat foods in an attempt to feel more energetic. Individuals are also less likely to exercise because they feel "too tired." Insomnia decreases one's ability to concentrate and focus, making job and school performance suffer. More alarming, it may increase the risk for heart disease and obesity. Studies published in leading medical journals suggest that sleep loss may increase hunger and affect the body's metabolism, making it more difficult to maintain or lose weight.

ADVICE FROM DR. LOW DOG: Dawn and Dusk Simulation

I have found that, although primarily used for people living with seasonal affective disorder, dawn and dusk simulation devices can be extremely helpful for those with sleep problems. At night, the light gradually fades as you fall asleep, mimicking sunset, and in the morning, about 20 to 40 minutes before it is time to wake up, the light gets brighter, simulating sunrise. Most have white noise available, which can help block out noise at night. I absolutely love mine and have recommended it to patients and have given them as gifts to family members and friends.

ADVICE

The good news, though, is that you can do many, many simple things that will help you manage your stress and improve sleep.

Practical Tips for Beating Insomnia

Light. The timing and type of light we're exposed to can have a dramatic influence on our sleep. Exposure to natural daylight is vitally important for keeping your internal clock in sync. The blue light of the sun suppresses the production of melatonin, telling your body it is time to be up and awake. As night begins to fall, it's just as important to start dimming the lights so your melatonin levels begin to rise. Dimmer switches on lamps and lights are a great way to accomplish this. Either commit to turning off your computers and mobile devices two to three hours before bed or install software that will shift from blue light to red light as evening approaches. (F.lux is one example of free software that you can use.) You can also purchase special blue-light blocking glasses online that are worn from around 7 p.m. to bedtime. Great option for those who must do late night work or studies. Invest in blackout curtains or thick drapes to shut out light at night, and, if you're a light sleeper, use a fan or white noise machine.

The vast majority of insomnia is the result of lifestyle choices and stress.



INSOMNIA

When experiencing insomnia, consider consulting a medical professional in these cases:

- Your insomnia lasts for more than four weeks after implementing lifestyle strategies.
- Your insomnia makes it difficult for you to stay awake during the day.
- Your insomnia triggers or exacerbates symptoms of depression.
- Your insomnia impairs your ability to function during the day. (Never drive if you feel you are unable to stay aware and awake!)



Alcohol. If you're waking up in the middle of the night and are having a hard time going back to sleep, it might be that second glass of wine you had with dinner! Although alcohol may help you fall asleep, it prevents you from going into the deepest stages of sleep, leaving you awake at night and tired in the morning. For two weeks, don't drink any alcohol within three hours of going to bed and limit yourself to no more than one serving if you're a woman and two servings if you're a man.

Exercise. Many people exercise at night after work because it's the only time in the day that really works. But exercise gets your adrenaline pumping and raises your body temperature, exactly the opposite of what you want to fall asleep. If you're having a problem sleeping and you exercise in the evening, do

a two-week trial of not exercising within three hours of bedtime. In other words, if you want to be in bed sleeping by 10 p.m., finish your workout by 7 p.m.

Medication check. Many medications can interfere with sleep. Drugs used to treat high blood pressure, heart disease, asthma, allergies, and depression are a few of the categories known to be problematic. You can usually take other options, so make sure to talk to your health care provider and/or pharmacist. Snoring. If someone has told you that you snore or snort at night and you wake up feeling tired most mornings—you might have a condition called sleep apnea. Treatments are available, so tell your physi-

If you have trouble sleeping and exercise in the evening, try not exercising within three hours of bedtime.





The tea plant (*Camellia sinensis*) is a natural source of L-theanine, which helps when anxiety is making it difficult to sleep.

cian about your symptoms and ask if a sleep study would be right for you.

Restless legs. Restless leg syndrome (RLS) is a neurological condition characterized by unpleasant sensations (for example, crawling, creeping, pulling) in the legs and an overwhelming need to move them, particularly when trying to relax. The cause is not entirely known, but iron, folic acid, or magnesium deficiency can bring it on. Stretching and yoga postures can be very helpful, as can 400 to 600 milligrams of magnesium taken at night before bed. If symptoms persist, talk to your primary care provider.

Natural Remedies for Sleep

You can use a number of remedies to help you sleep better at night. But don't expect miracles if you're racing 100 miles an hour until your head hits the pillow and then you think a tincture or pill is going to magically knock you out. Medicines that can do that are almost always addictive and have side effects. The key is to prepare for sleep by getting plenty of sunshine and exercise during the day, eating lightly in the evening, and slowing down around two hours before bed.

MELATONIN

Melatonin is a hormone made by your body's pineal gland that is part of your internal clock. During the day, melatonin is barely detectable. As darkness falls, the pineal gland begins to secrete melatonin. Your body temperature begins to slightly drop, you feel less alert, and you get ready for sleep. Mela-

tonin levels stay elevated for 10 to 12 hours, falling as the sun rises.

People with delayed sleep phase syndrome have difficulty falling asleep until late at night or early in the morning. Think teenagers! Studies show that both melatonin and early morning bright light exposure can be helpful for correcting this type of sleep problem in kids and adults.

Some studies suggest that melatonin may be more effective for the elderly, who typically secrete less melatonin. Data from clinical studies showed that melatonin is quite safe when taken for up to a year, does not cause rebound insomnia when discontinued, and does not suppress the body's natural production of melatonin.

Doses as low as 0.3 milligram of rapid- or sustained-release melatonin taken two hours before bed (when possible, if you're home and not going back out) can be helpful. I usually recommend 1 to 3 milligrams sustained-release melatonin for at least 30 days before deciding whether or not it is going to be helpful. Safety in pregnancy is not known.

MAGNESIUM AND CALCIUM

Taking your magnesium and calcium before bed can be a winning combination for those with muscle tension and difficulty sleeping. Take 300 milligrams calcium and 300 milligrams magnesium about 30 to 45 minutes before bed.

L-THEANINE

L-theanine is a nonprotein amino acid that occurs naturally in the tea plant (*Camellia sinensis*) and contributes to its pleasant taste. In Japan and other Asian countries, it is widely used to treat anxiety symptoms and depressed mood, and its popularity is growing in the United States. I typically recommend L-theanine throughout the day for those who have difficulty sleeping because of tension and worry.

Take 100 to 200 milligrams 2 to 3 times a day for tension and anxiety and to promote better sleep.

HEALING THE GUT

More than 2,000 years ago, Hippocrates, the famous Greek physician, said that all disease begins in the gut. I'm pretty sure that not *all* diseases start in the gut, but I've found that many conditions improve when gut health is optimized.

The Second Brain

Our digestive system is complex: It has its own independent nervous system, called the enteric nervous system (ENS). Often referred to as “the second brain,” the ENS is composed of more than 100 million neurons embedded within the gut wall stretching from the esophagus to the anus. The ENS



is the conductor in the symphony that is digestion.

Because the gut is so richly innervated, emotions impact its function. When you feel scared or upset, your brain triggers the release of stress hormones, preparing your body to fight or flee. The ENS responds by slowing or shutting down digestion and elimination. This makes sense; it would be highly counterproductive to have to stop and go to the bathroom in the middle of a dangerous situation, or waste precious resources on processing dinner.

The ENS produces neurotransmitters, hormones, and other compounds that are very similar to those found in the brain. It's long been observed that people with anxiety and depression often complain of gastrointestinal (GI) problems, but research now suggests that it could be GI distress that triggers these mental states.

Make no mistake: Learning to manage your stress is a crucial part of improving your gut health, as well as enhancing your vitality overall. Learn to manage your stress by using meditation, movement, music, breath work, forgiveness, and wholesome foods. In addition to these strategies, many herbs can be of benefit.

The Gut Microbiome

It might surprise you to know that your intestines are composed of a vast, diverse, and enormously complex community of microbes, commonly referred to as your gut microbiota, and collectively referred to as the microbiome. More than 100 trillion microorganisms call the GI tract home. Microbes actually outnumber our own cells; in some respects, we're

Learning to manage stress is a crucial part of improving your gut health.



more bacteria than human. The microbiota are responsible for extracting and synthesizing vitamins and other nutrients from our food; regulating digestion, metabolism, and elimination; fine-tuning the immune system; preventing the overgrowth of harmful bacteria; and maintaining the integrity and barrier function of the intestinal wall.

There's a great deal you can do to improve your intestinal health. Science has shown that lifestyle and diet definitely affect the diversity of our gut microbiota. Removing any problematic foods in the diet is important. Because chronic stress suppresses the growth of beneficial bacteria, learning to manage stress is vital. Adding more fermented and fiber-rich foods to the diet and taking a probiotic/prebiotic supplement can also do wonders.

Fermented foods, including yogurt, kombucha, and kefir, are loaded with healthy microbes and can be easily added to your diet.

Making Friends with Healthy Microbes

Probiotics are living microorganisms that have a beneficial effect on intestinal health. These can be found in numerous dietary supplement products. Yogurt, kombucha tea, kefir, and other fermented foods are good sources of probiotics that can be easily added to your diet.

Prebiotics are a category of nondigestible nutritional compounds that promote the growth of beneficial gut bacteria. Prebiotic substances can be found in foods like garlic, onions, artichokes, asparagus, jicama, and burdock.

The term “synbiotic” is used to describe foods or products that contain both prebiotics and probiotics. Breast milk could be considered synbiotic.

I encourage all of my patients to include fermented foods and prebiotics in their diet. I recommend synbiotics for infants born by C-section, prematurely, or whose mothers received antibiotics during delivery. I also recommend them for those who have allergies, asthma, eczema, irritable bowel syndrome, constipation, or recurrent vaginal infections, or who travel internationally or have taken antibiotics. The simple truth is that I firmly believe most of us benefit from including these foods and/or supplements in our diet.

Nausea and Vomiting: Settle Your Stomach Naturally

Although unpleasant, the ability to vomit is a highly important part of our body’s defense system. This ancient and highly protective response is designed to defend the body against poisons. Messages are sent from the gut, the inner ear, and/or the chemoreceptor trigger zone (CTZ) to the vomiting center in your brain, which interprets the information and determines whether or not vomiting should be initiated. Nausea, that sick feeling you get before vomiting, is intended to prevent you from eating or drinking, in case something is wrong with the food or beverage.



! FOR NAUSEA AND VOMITING

- If you have vomited for longer than 48 hours (for adults and children), or 12 hours for children under the age of a year
- If you are unable to keep any liquids down after 12 hours
- If there is bloody vomit
- If you experience severe or progressively worsening abdominal pain
- If you have chest pain
- If you suffer from a headache, stiff neck, and fever
- If you show signs of dehydration, such as dry mouth, no tears, infrequent urination, or dark urine
- Infants under the age of two months of age who are vomiting (not typical spit-up) should be quickly evaluated by a health care practitioner.

SEEK MEDICAL ATTENTION NOW!

GINGER FOR PREVENTION

Plenty of science supports ginger as a terrific stomach settler. Ginger is a popular home remedy for indigestion and has been clinically studied and found effective for relieving morning sickness and motion sickness. Dried ginger is a more potent antiemetic than fresh ginger, although both can ease nausea.

If you don’t like the taste of ginger tea, candied ginger works really well. Just suck on it as you would a piece of hard candy. I’ve also had patients swear by old-fashioned ginger snap cookies.

PEPPERMINT ICE CUBES

Peppermint is an old and trusted remedy, especially as a tea, for easing nausea, vomiting, and diarrhea. But over the years, I’ve found that the smell and the taste of hot tea can be overwhelming for some folks. A wonderful alternative is peppermint ice chips. They go down easily, work amazingly well, and taste delicious. Make them ahead of time and keep them on hand in your freezer.

Ginger is an effective home remedy for indigestion and nausea.



Keep peppermint ice chips on hand in your freezer for when nausea strikes.

its course. However, diarrhea can be dangerous for the very young, the very old, and those with serious underlying disease.

STAYING HYDRATED

Preventing dehydration is the number one priority, and the kind of fluid you use is important. In infectious diarrhea, the lining of the intestine becomes inflamed, impairing its ability to absorb water. When you drink water, it travels down through the intestines, unabsorbed, resulting in even more diarrhea. If you put salt in the water, essentially the same thing happens.

Roughly 40 years ago, researchers discovered that the absorption of salt is linked to glucose, which means that by simply adding sugar, the salt and water are absorbed, and the body can be

Use peppermint infusion to make ice cubes, then put them in a blender to break them into pieces. Suck on them slowly or use a spoon and let a small amount melt in your mouth. Peppermint ice cubes help lower fever, ease nausea, and leave your mouth and throat feeling cool and fresh. I have used these for my patients, kids, and myself over the years. You can safely consume them during pregnancy, and they are perfectly safe for toddlers and children.

GERMAN CHAMOMILE

Chamomile is also a wonderful and soothing herb if you feel sick to your stomach, especially when the nausea is accompanied by diarrhea. Chamomile soothes, protects, and eases spasms in the stomach and intestines. It's also a nice calmative, making you feel a little better when you're feeling bad. Chamomile is very safe and is my herb of choice when looking for something to settle an infant's upset tummy.

Diarrhea: Gut Check

Most of us have battled diarrhea at some point. Those loose, watery stools are usually caused by infections that don't last long and are more of a nuisance than a danger for most healthy people. Gastroenteritis, an inflammation/infection of the GI tract, generally lasts one to three days, and can be easily managed by staying hydrated while it "runs"

ORAL REHYDRATION SOLUTION

The World Health Organization, UNICEF, the Centers for Disease Control and Prevention, and pediatric/medical societies around the world advocate the use of this simple rehydration solution, which costs only pennies to make and has saved the lives of millions of children around the world.

- 4½ cups (1 liter) clean water
- ½ teaspoon salt
- 6 level teaspoons sugar

Combine all ingredients. Stir until the sugar and salt have dissolved. You can add ½ cup orange juice, which improves the flavor and provides roughly 260 milligrams of potassium. Or substitute 2 teaspoons sugar with 2 teaspoons molasses, which provides roughly 350 milligrams of potassium. Make fresh daily.

HOW TO USE:

Give your infant or young child ¼–½ cup or more after every stool. For an older child or adult, give 1 cup or more after every stool.

rehydrated. This discovery led to the development of sports drinks, such as Gatorade, and children's oral rehydration solutions, like Pedialyte. (Babies should not be given sports drinks for rehydration because they do not contain the correct ratio of ingredients.)

In *addition* to these fluids, anyone suffering from diarrhea should also drink generous amounts of water, rice water, diluted fruit juice (one part juice to three parts water), and/or herbal teas. Rice water is excellent for hydrating the body and slowing diarrhea. It's also very easy to make.

RICE WATER

Not only is rice water good for humans, it is one of the best things you can give a dog with diarrhea. To make it, put 1 cup of white rice into 4 cups of water and bring to a boil. Cover, turn down the heat, and simmer for 20 minutes. Then strain the milky water and drink throughout the day. If it's just too bland for you (or your dog), you can add ½ cup chicken broth for flavor.

WHAT TO EAT WHEN TREATING DIARRHEA

If your newborn has diarrhea, continue breastfeeding or giving formula. Studies show that most infants can tolerate lactose formulas without worsening diarrhea. For older children and adults, I often recommend avoiding dairy products for a few weeks, with the exception of probiotic-rich



Try sticking with bananas, rice, applesauce, and toast when you have diarrhea. *Right:* Garlic can kill many of the bacteria that cause diarrhea.

yogurt, because diarrhea can cause temporary lactose intolerance.

Another diet “cure” is the BRAT diet (bananas, rice, applesauce, and toast). Mashed bananas are high in potassium, and the pectin in bananas and applesauce helps firm up stools. To ease nausea and intestinal cramping, add ¼ teaspoon ground cinnamon. As for white rice (served plain) and toast, they're both easy to digest. Most adults and older children can otherwise resume their normal diet within a couple days, but it's sensible to initially avoid spicy, greasy, and fatty foods.

GARLIC KILLS DIARRHEA-CAUSING BACTERIA

Garlic is a wonderful food for helping your body fight off diarrhea. Garlic can kill many of the bacteria that cause gastroenteritis and diarrhea. Garlic honey is an easy and effective way to take garlic, as raw garlic can sometimes be too much for a sensitive tummy.

PROBIOTICS SHORTEN DURATION AND REDUCE SEVERITY

Probiotics are vitally important for the health and integrity of the GI tract. Some of the best evidence for probiotics comes from research of children with diarrhea, particularly diarrhea caused by rotavirus. Probiotics, particularly *Lactobacillus*

FOR DIARRHEA

Diarrhea is more of a nuisance than a danger for most healthy people. But in some cases, it can be a sign of something more serious. Consult a health care professional for any of the following situations:

- If an infant or child with diarrhea isn't better in 24 hours
- If an adult with diarrhea isn't better in 3 days
- If you've been traveling or possibly drinking contaminated water







FOR DIARRHEA

Diarrhea can be dangerous for the very young, the very old, and those with serious underlying disease. Seek immediate medical attention for any of the following situations:

- Severe abdominal pain
- Blood in stool
- Fever in an infant under three months of age
- A fever of 103°F or higher in child or adult
- Dry mouth or crying without tears (dehydration)
- Skin that doesn't flatten when pinched and released (dehydration)

SEEK MEDICAL ATTENTION NOW!

reuteri and *Saccharomyces boulardii*, shorten the duration and reduce the severity of diarrhea. And if one person in the house has come down with gastroenteritis, then make sure you give everyone else in the household probiotics as well. For children in day care, families with several young ones in the home, or elders in nursing home facilities, I strongly suggest giving one of these strains as a daily probiotic supplement.

GERMAN CHAMOMILE EASES CRAMPING

A number of herbs are beneficial for diarrhea: peppermint, catmint (catnip), and ginger. But my hands-down go-to herb in these cases is German chamomile infusion, as it eases the cramping that accompanies diarrhea and quiets intestinal inflammation. Chamomile tastes pleasant and can be given to babies and elders.

Constipation: Cures That Will Move You

Constipation isn't the sexiest condition to talk about, but approximately 2.5 million Americans consult a doctor for this problem. Constipation is medically defined as having a bowel movement

German chamomile infusion is my hands-down go-to herb for diarrhea.

fewer than three times a week. Although not usually life threatening, the pain, bloating, fullness, and straining associated with constipation can make you beg for one thing—relief. If you're among those who suffer with constipation, take heart: You can treat it effectively with diet, lifestyle, and a few gentle, easy-to-make home preparations.

Ignoring the urge to have a bowel movement is a big reason many people struggle with constipation. Always heed the call of nature. If you don't like using a public restroom, allow time to use the bathroom at home every morning after breakfast.

Unhealthy dietary habits are another common cause. I'm mainly talking about having too little liquid and/or fiber in your diet. Constipation is often the result of dehydration, so drinking water keeps everything moving.

As for fiber, most of us fall far short of the 30 grams recommended by the American Dietetic Association. Provided you drink enough water daily, fiber eases constipation by making your stool softer

and bulkier. High-fiber foods include beans, bran cereals, whole grains, fresh fruits, and vegetables.

In many instances, constipation arises from the modern couch-potato lifestyle lacking in regular exercise. Physical inactivity can definitely lead to lazy and sluggish bowels.

LIFESTYLE CHANGES TO FEND OFF CONSTIPATION

You can take a number of lifestyle measures, along with natural remedies, to alleviate constipation without resorting to over-the-counter drug treatments.

- Drink a *minimum* of one quart (four cups) of water throughout the day if you have constipation.
- Walk for at least 30 minutes every day or do more vigorous exercise if you're up for it. Physical activity stimulates muscle contractions in the colon.

Dark green vegetables, such as kale, are loaded with constipation-fighting magnesium and fiber.



Yogurt with flaxseeds increases dietary fiber and healthy probiotics as well as improving regularity.

- Eat more vegetables and fruits—at least five servings or more a day. Dark green veggies such as kale, spinach, turnip greens, and others are really important because they're loaded with constipation-fighting magnesium as well as fiber.

MAGICAL MAGNESIUM: A NATURAL LAXATIVE

In addition to all the health benefits associated with magnesium, this mineral is an excellent and reliable stool softener and laxative that is not habit-forming. Whenever someone is struggling with chronic constipation, I recommend 300 to 600 milligrams of chelated magnesium (such as citrate, malate, or glycinate) taken at bedtime. Start with the lower amount for a few days and increase up to 600 mg, if necessary. It never fails. However, if you have poor kidney function, do not take supplemental magnesium without talking to your health care provider first.

JUST THE FLAX, PLEASE!

Flaxseeds make a wonderful addition to the diet, providing an excellent source of omega-3 fatty acids, lignans, and both soluble and insoluble fiber.

Flaxseeds are golden or brown; both contain similar levels of healthy components, so either is



fine. Whole and ground flaxseeds have the same nutritional value, but ground flaxseed is more easily digested. Buy whole flaxseeds and either grind them as you go, or grind and store them in an airtight container in your refrigerator for up to 60 days. One tablespoon of flaxseeds contains approximately 5 grams of fiber.

FLAX YOGURT AND SMOOTHIES

I suggest eating a cup of flax yogurt or a flax smoothie every day to increase dietary fiber and healthy probiotics, and to improve regularity. To make the yogurt, use a coffee grinder to grind 1 tablespoon of flaxseeds, then mix them into 1 cup (8 ounces) of live-culture Greek-style yogurt. Add a pinch of cinnamon, then pour it over a handful of washed fresh fruit in season.

To make a smoothie, grind the flaxseed as above, then put it in a blender along with 1 cup almond milk; ½ cup raspberries, strawberries, or blackberries; and 1 tablespoon almond butter, and blend on high for 30 to 45 seconds. This drink is high in fiber and protein, low in calories—and delicious! You can substitute dairy, soy, cashew, rice, or coconut milk for the almond milk.

FOR CONSTIPATION

While most cases of constipation can be treated at home, be aware that the following symptoms should be checked out by a professional:

- If you have blood in your stool, or dark tar-like stools
- If you have pain during or after bowel movements
- If you have constipation accompanied by unexplained weight loss
- If you notice a change in bowel habits, particularly after age 50 (you should be screened for colorectal cancer)

HELPING AND HEALING THE SKIN

The skin is our body's largest organ and serves as the interface between our internal and external world. It gives rise to our sense of touch, the only sense that does not diminish with age. Because our skin is what we present to the world, billions of dollars are spent every year on creams, lotions, and cosmetic surgeries. I have long been fascinated with the world of skin care,

learning a great deal about the physiology of the skin from the researchers and product developers at companies such as Bath and Body Works, Neutrogena, and Origins, with whom I've worked as a consultant over the past 20 years. In exchange, I shared my knowledge of how plants could be used

I grow calendula, not only for the beauty of its warm orange blossoms but also because it is my go-to herb for minor skin problems.



Compounds in oatmeal dramatically reduce redness and itch.

to restore barrier function and reduce oxidative damage, inflammation, and irritation. But over the many years I've cared for those with skin problems, I've also learned that it takes more than just applying moisturizer to have healthy skin.

There is always a risk for infection if our skin is cut or damaged. The body defends against this via the secretion of antimicrobial proteins (AMPs) by cells in our skin and sweat glands. These AMPs are capable of killing many bacteria, viruses, and fungi, and are also important for triggering an immune response if harmful organisms should penetrate the skin. These proteins are essential for both preventing and clearing infections. Although good hygiene is important, our modern obsession with showering, hand-washing, and antiperspirants may not be such a good idea. Excessive washing decreases the barrier function of our skin and washes away these important AMPs, increasing the risk for inflammation, irritation, and infection.

The nerves in our skin are also highly sensitive to our emotions. Scientists have shown that stress causes the release of chemicals that alter the barrier function of our skin. This loss of barrier function causes the skin to feel drier and to wrinkle more



easily, and it triggers flares of eczema in vulnerable individuals. I cannot remember a single patient with psoriasis or atopic dermatitis who didn't believe that stress made their condition worse. Knowing this relationship opens the doorway for improving the health of your skin by developing strategies to better manage stress. (See pages 56–65 on the nervous system.)

Skin Microbiome

You may not realize it, but your skin is actually a highly complex ecosystem that provides a home for trillions of bacteria, viruses, and fungi. Researchers at the National Institute of Allergy and Infectious Diseases have shown that these microbes are absolutely essential for the skin's defense systems.

Herbalists have been dealing with wounds since ancient times. Of the 300 medicinal herbs that German health authorities have evaluated, 47 were for dermatological conditions! Herbs can be used to reduce inflammation, ease itching, and promote healing—and many have antimicrobial properties.

Red Bumps and Itchy Spots: Skin Rash Treatments

A rash is technically an area of reddening, sometimes with raised spots, that appears on the skin. It can be localized or widespread, and it can itch,

FOR A RASH

Rashes have various causes and can be triggered by anything from a virus or bacteria to an insect bite or cold, dry weather. While usually just a minor discomfort, some rashes may indicate a more serious underlying situation. If you have any of the following symptoms, talk to your health care professional.

- If your rash worsens in 24 to 48 hours, despite basic treatment
- If a rash is painful
- If you have any skin blemish/mole that has become irregular, darker, or is changing in appearance

burn, swell, tingle, blister, or not be associated with any discomfort at all.

The causes of rashes vary. They can be triggered by anything from viruses or bacteria to an insect bite or cold, dry weather. Because there are too many rashes to discuss here, I'm going to focus on just a few, though the treatments recommended will work for most.

IRRITANT DERMATITIS

Dermatitis, which literally means "skin inflammation," occurs either from direct irritation by an external substance or an allergic reaction to it—offending agents might include shampoo, laundry detergent, or poison ivy. When possible, try to identify the culprit so you can avoid it in the future.

If you think you have been exposed to an irritant, I suggest using a vinegar wash to remove as much of the irritant as possible. You can also just use plain soap and water if you don't have apple cider vinegar. The point is this: You want to dilute any irritant that might be on your skin!

Apple cider vinegar is a versatile neutralizing agent. Some recommend using it undiluted, but I've found it can be irritating to skin that is already red and inflamed. To make an effective vinegar wash, mix 1 cup cider vinegar and 2 cups water. Rinse the irritated area with the mixture, then let your skin dry.

RED, ITCHY RASH

If a rash is itchy, red, or blistering, after rinsing with vinegar or water, you will want to apply a neutralizing poultice, which can be made from ingredients right in your kitchen cabinet. Oatmeal has been used

Apple vinegar diluted with water soothes many types of skin inflammations.



CALENDULA SALVE

- 1 cup dried calendula (pot marigold) flowers
- 2½ cups sunflower seed oil
- 4 ounces grated beeswax

Put herbs and oil in a Crock-Pot on its lowest setting and cook for 8 hours. Turn off heat and let cool. Strain through cheesecloth. Pour 2 cups of strained oil into a double boiler and add grated beeswax. Gently melt, stirring frequently. Dip a spoon into the mixture, lay the spoonful on a paper towel, and stick it in your refrigerator for 5 minutes. Take it out and test the consistency. If it's mushy, add 1 to 2 tablespoons more grated beeswax. If it's too hard, add 2 to 3 tablespoons more of your infused oil. (This is why we always make a little extra.) Test again. The texture should be firm. Pour into small glass containers or salve tins. Let completely cool and harden before putting on the lid.

for centuries as both porridge and medicine, particularly for skin problems. Oats contain many active ingredients, including a group of compounds called avenanthramides, that block the release of inflammatory compounds and histamines, dramatically reducing redness and itch. See the recipe for Oatmeal Relief in "The Eighteen Essentials," page 106.

TREATING DIAPER RASH

Wash your baby's bottom gently with water and blot dry. If your baby's bottom is looking bad, put ½ cup Oatmeal Relief (see the recipe in "The Eighteen Essentials," page 106) in a small tub and fill with tepid, not hot, water. Let your baby play under your



Calendula salve will help heal your baby's diaper rash while reducing risk of infection.

supervision for 15 to 20 minutes in the tub. Then blot dry and apply calendula salve. Calendula not only helps to heal the tissue, but it also reduces the risk of yeast and bacterial infection. Plus, the salve acts as a natural barrier against moisture. After applying the salve, place your baby on a towel with bottom up to expose it to air for 30 to 45 minutes. This entire process should be repeated twice a day. I also recommend giving the baby the probiotic *Lactobacillus rhamnosus* GG. It can be easily added to breast milk or formula.

A Fungus Among Us: Jock Itch, Ringworm, and Athlete's Foot

Fungi grow and thrive in hot, moist areas. This explains why they often occur in the groin area, in the armpits, between the toes, or under a

! FOR SKIN RASH

- If you are taking a medication and develop a rash with mouth ulcers, you should SEEK IMMEDIATE MEDICAL ATTENTION. Some medications can occasionally cause a severe allergic reaction known as Stevens-Johnson syndrome with a rash that often blisters. Ulcers start in the mouth and can form in the respiratory tract.
- If a child has a high fever, lethargy, and a rapidly spreading rash that turns into purple bruising, he or she should be TAKEN IMMEDIATELY to the emergency room, as this might indicate a meningococcus infection.
- If any rash is accompanied by shortness of breath or difficulty breathing
- If red streaks appear, extending outward from the affected area
- If any rash is accompanied by a fever of 103°F or higher
- If a baby less than two months of age develops any rash, other than a diaper rash
- If a rash develops and spreads after being bitten by a flea or tick

SEEK MEDICAL ATTENTION NOW!



Left: Remember, a healthy body is well designed for staving off infection and healing itself. **Right:** Neem oil may smell bad, but its antifungal and anti-inflammatory properties work.

woman's breasts. Highly contagious, these infections are spread by sharing towels, combs, or brushes; walking around in public showers/locker rooms; or handling infected dogs or cats.

To prevent jock itch, athlete's foot, or fungal infections under the breasts, make sure you wash the area with soap and water and then dry thoroughly. Do NOT share towels. Wear loose-fitting clothing and natural fibers.

NEEM OIL

I'm a huge fan of neem (*Azadirachta indica*), an evergreen tree that grows in the more arid regions of India, Southeast Asia, and parts of Africa. The seeds are used to make oil rich in potent antifungal and anti-inflammatory compounds. Research shows that it can effectively destroy 14 different types of dermatophytes, making it an amazing remedy for tinea infections.

Neem oil is commercially available in this country. The main drawback to neem oil is that it does not smell good. OK, it smells bad, but it works. Scented neem soap is a great idea if you're prone to jock itch or athlete's foot.

TEA TREE OIL

Tea tree (*Melaleuca alternifolia*) is a small tree native to the northeast coast of New South Wales, Australia. Indigenous peoples of Australia used the leaves for treatment of fever and wounds and as a beverage tea. The leaves are also used to produce tea tree oil. Research has demonstrated that tea tree oil has considerable antifungal and antibacterial activity. I've used and recommended a blend of tea tree oil and witch hazel tincture to treat athlete's foot for years.

TEA TREE OIL AND WITCH HAZEL TINCTURE

A 25 percent tea tree oil solution is effective without being irritating to sensitive skin. You can make it



by pouring 3 tablespoons (45 milliliters) of witch hazel tincture and 3 tablespoons (45 milliliters) of water into a dark bottle and adding 2 tablespoons (30 milliliters) of tea tree oil. Shake well and label the bottle "EXTERNAL USE ONLY." Adults apply to affected area twice a day. *Note:* Do not use near the eyes, mouth, or genital areas.

NATURAL ANTIFUNGAL POWDER

Antifungal powder can be shaken into socks and shoes daily, especially if you are prone to yeast. To make it, combine in a jar ½ cup baking soda or cornstarch, 4 drops tea tree oil, 4 drops thyme essential oil, and 4 drops oregano essential oil. Shake well to mix the oils and baking soda. (Making your powder in small batches helps preserve the power of the essential oils.)

Managing Acne: Lifestyle and Cleansing Choices

Acne is one of the most common skin conditions that drive people to the dermatologist. Plugged pores (blackheads and whiteheads), pimples, and deeper lumps (cysts or nodules) can occur on the face, neck, chest, back, shoulders, and upper arms. These are acne-prone areas because they contain a high number of sebaceous glands, the glands that secrete sebum into the hair follicles and lubricate the skin and hair.



The skin becomes oilier after puberty, as androgenic hormones rev up sebum production, allowing a foothold for the acne-causing bacteria, *Propionibacterium acnes*, to proliferate. Women who are prone to acne often see it flare up seven to ten days before their period. This is, in part, because progesterone rises midcycle, increasing sebum production and water retention, making the skin puffy and the pores more compressed.

A number of acne treatments are available. Topical benzoyl peroxide is often used for mild forms of acne; oral antibiotics are used for more moderate acne; and isotretinoin (Accutane) is prescribed for severe acne. Although these treatments can be effective, they all have side effects. Treatments for acne must be individualized, but using the least harmful remedies first just makes common sense.

Eating a healthy diet is an important part of battling acne. Eating too many refined carbs and dairy products aggravates acne.

THE ROLE OF DIET

Just about everyone believes that eating certain foods can make acne get better or worse. The best evidence to date suggests that high-glycemic-load diets, meaning lots of refined carbs and dairy products, aggravate acne. A diet high in refined carbs can lead to insulin resistance and increased androgenic hormones, which explains why teenagers who drink soda and eat French fries, candy bars, doughnuts, and potato chips may fare worse.

Three studies in the *American Journal of Clinical Dermatology* have reported a link between milk and acne. One study found that teens drinking more than two glasses of milk each day had a 44 percent

greater chance of developing severe acne. This may be due to the hormones present naturally in cow's milk as well as hormone supplements that are given to cows to increase milk production. Although there are links between dairy and acne, there has been no association with fermented dairy, such as Greek-style yogurt or kefir, a fermented dairy drink, which you should include in your diet.

CLEANSING THE SKIN

It's important to cleanse the skin, but it must be done gently and not too frequently. I recommend using plain glycerin soap and water to wash the face once each day.

I've also been prescribing the Vinegar Green Tea Toner for more than a dozen years and have had fabulous results. Vinegar contains roughly 10 percent acetic acid, which gently exfoliates the skin, removes dead skin cells, dissolves the oil clogging your pores, and makes it hard for bacteria to thrive. Green tea has been shown to improve acne by decreasing sebum production. Tea tree oil has both antimicrobial and anti-inflammatory activity.

BLUE LIGHT

Ten minutes a day in the sun can be highly beneficial for those with acne, but if you are very fair skinned or concerned about the damaging effects of UV light, you can now purchase blue light devices without UV for home use. The evidence was strong enough that the FDA has approved the use of blue light therapy for the treatment of acne.

Sure Cures for Wound Care

Life is filled with cuts, scrapes, and bumps. Some definitely need evaluation and treatment by a health professional. Others, however, can easily be tended at home. To help you discern whether you should attempt to treat the wound at home or head to the local urgent care center, I've included a list of things to watch for at the end of this section.

I want to reassure you that a healthy body is well designed for staving off infection and healing itself. When treating minor wounds at home, remember two primary goals: prevent infection and promote healing. Irrigation of the wound is paramount. You can use clean water, or, depending on what you

VINEGAR GREEN TEA TONER

I suggest trying this toner on a very small area of the neck to make sure you don't have any sensitivity to it. If it burns or causes redness, wash it off immediately.

- 2 tablespoons (1 ounce) organic apple cider vinegar
- $\frac{3}{4}$ cup (6 ounces) brewed green tea
- $\frac{1}{2}$ teaspoon (2.5 milliliters) tea tree essential oil

Pour 6 ounces of near-boiling water over about 2 tablespoons (roughly three tea bags) green tea leaves and steep for 20 minutes. Remove tea bags. Pour into an 8-ounce bottle, blend in other ingredients, shake well, cap tightly, and store in refrigerator. Use within a week.

HOW TO USE:

After washing your skin, pat dry and use a cotton pad to gently apply the toner. Allow it to dry and then apply your moisturizer. I recommend using it daily for 14 days for the most dramatic effects. Then you can use it 3 to 4 times a week, or as needed. Always try a small amount on the neck first to ensure you do not have any sensitivity to the ingredients.



have in the cupboard, you can make an antiseptic wash. Try one of the following mixtures, which can be poured into a squeeze bottle, shaken vigorously, and then used to irrigate a wound. Repeat until the mixture is gone.

- 1 teaspoon (5 milliliters) tea tree OR lavender essential oil
- 1¼ cups (300 milliliters) bottled or clean water
- 1 tablespoon (15 milliliters) Oregon grape root OR sage OR echinacea OR witch hazel OR yarrow tincture (use if bleeding is an issue)
- 1¼ cups (300 milliliters) clean water

HOW TO PREVENT INFECTION

The following steps for treating a wound at home will go a long way toward avoiding infection in those with a healthy immune system:

Step 1: Thoroughly clean the wound with water or an herbal wash. If the wound is dirty, it's important to flush out bacteria, dirt, and other debris. A large 60-milliliter syringe is the best tool for this; you can pick one up at any pharmacy. Otherwise, keep a good squeeze bottle in the kitchen. Wash the wound repeatedly with small bursts of water/herbal wash. This is THE most important part of wound care.

Step 2: Next, wash the skin all around the edge of the wound with soap and water. Let the skin dry for 5 minutes.

Step 3: Use raw honey or sage honey (see recipe in “The Eighteen Essentials,” page 106) or antiseptic cream. Apply it to a clean gauze dressing and tape it over the wound. You may want to keep some adhesive strips, sometimes called butterfly bandages (for example, the brand Steri-Strips), on hand for those cuts that don't need stitches but where you want to bring the edges together for better healing.

HONEY TO THE RESCUE

Raw honey is one of the best treatments we have for wounds and burns. When applied topically, honey is able to pull out debris, infection, and bacteria from wounds while drawing in white blood

Honey is one of the best treatments we have for wounds and burns. Just be sure to use raw, uncooked honey.

(immune) cells. The white blood cells contribute to a faster healing process. Honey dressings keep wounds moist and prevent gauze from sticking. Make sure you use raw, uncooked honey.

How to Use: Paste about ½ ounce honey on a 3 × 3 gauze pad and apply, making sure to completely cover the wound and the surrounding skin. I generally cover this with a 4 × 4 gauze pad and secure with first aid tape or use a waterproof bandage to keep the honey from oozing through the underlying gauze pad. Change the dressing daily. You can also purchase MediHoney dressings that are premade and ready to use on wounds.

HOW TO PROMOTE HEALING

If a wound is minor, meaning not very large or deep, all you need to do is keep it clean. Change the bandage daily. If there is swelling, you should keep the area elevated and apply ice to the affected area for the first 24 to 48 hours. Remember, ice for 10 to 15 minutes and then remove for 10 minutes to encourage healthy circulation and waste removal. A healthy body's natural healing ability will do the rest.



FOR A CUT OR WOUND

- If you cannot control the bleeding after 10 minutes of *sustained, steady, firm* pressure. Most people stop pressure after only a few minutes, but most bleeding will stop if you don't let up the pressure for 10 minutes!
- If you're unable to adequately clean the wound because of embedded glass, metal, or other debris
- If the injury resulted from a deep puncture wound, such as stepping on a nail
- If the wound appears deep or “gaping” and you think it's going to need stitches
- If you suspect a nerve or tendon was damaged; for instance, if you cannot move a finger or your skin feels numb
- If you suspect there is a broken bone

SEEK MEDICAL ATTENTION NOW!



EASING WOMEN'S PROBLEMS

I believe most women are intuitively drawn to natural medicine. Women repeatedly report that they want a greater say in their treatment, they would prefer to use gentle remedies first, and they want more personal control. It is beyond the scope of this book to dive deep into women's health, but I do want to share with you some of the things I've learned over more than 30 years of caring for women.

Monthly Woes: Mending Menstrual Cramps

As a physician, I've learned how to help women prevent or dramatically reduce the impact of menstrual cramps. Medications like ibuprofen, naproxen, and aspirin alleviate menstrual cramps, and although they are relatively safe when used on occasion, they do increase the risk for gastric bleeding. If using one of these analgesics for menstrual pain, consider

chewing 1 to 2 tablets of DGL (deglycyrrhizinated licorice, a safe and special form of licorice) with each dose. DGL has been shown to help protect the stomach in those taking these types of analgesics.

These analgesics can temporarily relieve the pain, but they do not get at the underlying problem of excessive inflammation. One of the best first steps you can take to reduce inflammation naturally is to start following a low-glycemic-load (LGL) Mediterranean-style diet. Focus on getting your carbohydrates from fruits, vegetables, and whole grains. Skip the white bread, white potatoes, potato chips, white rice, spaghetti, soda, and processed foods.

ESSENTIAL FATTY ACIDS

Fatty acids are acids produced when fats and oils break down. Essential fatty acids (EFAs) are those that must be obtained in the diet because the body cannot make them on its own. EFAs play an important role in regulating pain, inflammation, and swelling, as well as regulating smooth muscles (like the uterus), and much more. The most important EFAs are the omega-6 linoleic acid (LA) and the omega-3 alpha-linolenic acid (ALA). The evidence shows that the American diet is woefully low in omega-3 fatty acids, which are found in fish, nuts, and seeds, such as flax, pumpkin, and walnut.

Several studies have shown that taking 1 to 2 grams a day of fish oil for just three months can dramatically reduce

Because stress dramatically worsens PMS, make sure you are incorporating lifestyle strategies for keeping it in check.





menstrual cramping. For this reason, I strongly recommend that women with menstrual cramps take a fish oil product that provides 800 to 1,200 milligrams a day of EPA and 400 to 800 milligrams a day of DHA in the fewest number of pills. Store your fish oil capsules in the freezer and take with your largest meal of the day as dietary fat enhances absorption.

If you are a vegetarian and do not want to take fish oil, there are EPA and DHA sources derived from algae in the marketplace.

MAGNESIUM

Magnesium is wonderful for reducing menstrual cramps, as well as easing menstrual-related headaches and the flu-like feeling some women experience right before their period. Magnesium is a natural muscle relaxant. Foods rich in magnesium

Eating magnesium-rich foods helps reduce menstrual cramps and other menstrual-related discomforts.

include dark-green leafy vegetables, beans, nuts, seeds, and whole, unrefined grains.

Take 300 to 600 milligrams every day, not just during menstruation.

Note: If you have poor kidney function, do not take supplemental magnesium without first speaking with your health care provider. Magnesium glycinate is least likely to cause loose stools. Start with the lowest dose and titrate upward if needed.

DONG QUAI: A GIFT FROM ASIA

Dong quai is a fragrant perennial found throughout China, with related species in Japan and Korea. The roots of this plant have been used in traditional

Dong quai is one of my absolute favorite herbs for women who have light periods with painful cramps.



Chinese medicine (TCM) for more than 20 centuries for a variety of ailments, including menstrual pain, scanty periods, and as a female tonic. Modern science confirms that dong quai exerts significant anti-inflammatory and analgesic activity, which would explain why it is one of my absolute favorite herbs for women who have light periods with painful cramps. Note that it shouldn't be used during pregnancy or if you have heavy menstrual bleeding.

To make a tincture, grind 25 grams of dong quai root and put the grounds in a jar. Add 125 milliliters of 80- to 100-proof brandy and put the lid on tightly.

Let the mixture steep in a warm place for 2 to 4 weeks. Then strain it, label the jar, and store in a dark cabinet. Take $\frac{1}{2}$ teaspoon of tincture every 4 to 6 hours, as needed for menstrual cramps. *Note:* Do not use during pregnancy.

BLACK HAW OR CRAMP BARK

Cramp bark and its cousin black haw have long been used by indigenous peoples of North America and early American physicians to relieve painful menstrual cramps among other things. Over the years, I've used black haw and cramp bark to relieve menstrual cramps in hundreds of women. Both herbs work wonders, especially when taken in conjunction with daily magnesium. Science shows that both herbs act to tell the uterine smooth muscle to relax, alleviating cramping. See the recipe for Cramp Bark Tincture in "The Eighteen Essentials," page 99.

Premenstrual Syndrome: An Integrated Approach

Premenstrual syndrome (PMS) is defined as a recurrent, cyclical set of physical and behavioral symptoms that occur 7 to 14 days before the menstrual cycle and are troublesome enough to interfere with some aspects of a woman's life.

The causes of PMS are not known. Hormonal, neuroendocrine, and nutritional factors are all likely at play. The reality is that PMS is multifactorial. I've found that lifestyle adjustments, herbal medicines, and natural supplements can have a balancing effect on the female system. Equipped with some simple remedies that have been used for centuries, you can easily turn things around so that your hormones no longer have the upper hand over your life.

TAKE OFF THE EDGE

Stress dramatically worsens PMS; so, make sure you are incorporating lifestyle strategies for keeping it in check. Regular exercise, yoga, a healthy diet, and getting enough sleep are good places to start.

Roller-coaster blood sugar can definitely worsen PMS symptoms. Prior to and during your period, shun sugary and processed foods that send your blood sugar soaring. Get off the white bread, white pasta, white rice, and sugary drinks and foods, and focus on eating lots of veggies, fruits, whole grains, and lean meats. Protein is crucial during this time.

Cut your sweet craving with a protein smoothie in the morning or some almonds in the afternoon.

Watch your caffeine intake, too. Studies have shown that caffeine can trigger anxiety and increase breast tenderness. If you drink four cups of coffee or cola a day, you'll need to cut back throughout the month, not just before your period! Sudden caffeine withdrawal can worsen irritability and trigger nasty headaches.

Don't forget the importance of omega-3 fatty acids. Make sure you include more cold-water fish like salmon, tuna, and halibut, and/or take a fish oil supplement that provides 800 to 1,200 milligrams a day of EPA and 400 to 800 milligrams a day of DHA. If you are a vegetarian, consider taking 2,000 milligrams a day of flaxseed oil.

Many herbs can help take off the edge. Chamomile, skullcap, and lemon balm are all wonderful for those few days before your period when you may be feeling more irritable or not sleeping as well.

CHASTEBERRY: PMS PROBLEM SOLVER

The dried fruits of the chaste tree (*Vitex agnus-castus*) have been shown repeatedly to relieve the symptoms of PMS and to normalize irregular menstrual cycles. Multiple studies have demonstrated that these berries reduce irritability, improve mood, and ease bloating and breast tenderness that often occur before the menstrual cycle. I absolutely adore this plant. Take 400 to 500 mg of chaste tree (*Vitex*)



FOR PMS

Seek professional advice for treating PMS symptoms if any of the following situations apply.

- If you have emotional or physical premenstrual symptoms that interfere with your daily activities and life.
- If you feel markedly depressed or anxious before your period and self-care/home remedies don't make them better.
- If you're pregnant, talk to your midwife or doctor before using ANY herbal remedy.

each morning for 90 days to see if it works for you.

Note: Safety of chaste tree in pregnancy is not known.

THE MENSTRUAL MINERALS: CALCIUM AND MAGNESIUM

Some very solid science has shown that calcium can ease both the psychological and the physical symptoms of PMS. I generally tell women to steer clear of calcium carbonate, as it is very constipating and may not be as easily absorbed.

Research has found that women with PMS have low levels of magnesium in their red blood cells compared to controls. Studies have shown that magnesium can ease PMS-related mood swings, as well as breast tenderness, water retention, and bloating.

Look for a product that provides 300 milligrams of calcium citrate and/or malate and 300 milligrams of magnesium citrate and/or malate. Take twice a day for a total of 600 milligrams each of calcium/magnesium. I have found that women generally do not need to take 1,200 milligrams of calcium a day, the dose used in a number of the studies, if they eat a healthy diet and take the calcium with magnesium.

Note: Supplemental magnesium should not be used without medical supervision if you have poor kidney function.

Dried chasteberries reduce irritability and ease bloating and breast tenderness that often occur before the menstrual cycle.

Keeping Bladder Infections at Bay

If you've had a bladder infection, commonly referred to as a urinary tract infection (UTI), you're not alone. UTIs are the second most common type of infection in the body, right behind colds/upper respiratory infections. They are particularly common in women from adolescence through our elder

years. UTIs are relatively rare in men, but if a man gets one, it can often be serious. Because UTIs are so common, prevention is really important, and knowing how and when to use natural remedies for treatment makes good sense. UTIs can be dangerous in children, pregnant women, men, and women over age 65. I do not recommend using home treatments in these cases.

The best way to prevent UTIs is a healthy lifestyle. Drink plenty of water (six to eight cups of pure water daily) to keep the bladder flushed, and urinate when you feel the urge. And if you're prone to bladder infections, take showers instead of baths. In addition to these basic "to-dos," the following strategies can be particularly helpful and may help you sidestep antibiotics.

A BERRY GOOD CURE: CRANBERRY AND D-MANNOSE

Cranberry has been scientifically shown to reduce the risk of getting a UTI. Yes, you can drink cranberry juice as a preventive, but many people find it

Cranberry juice or extract is a good preventive for UTIs. Since cranberry juice is loaded with calories, cranberry extract is a better option.

ADVICE

ADVICE FROM DR. LOW DOG: Know the Difference Between Bladder and Kidney Infections

Symptoms of a Bladder Infection (Cystitis)

- Sudden onset
- No fever, chills, or nausea
- No upper back pain
- Burning on urination, frequent need to urinate

Symptoms of a Kidney Infection (Pyelonephritis)

- Gradual onset
- Fever, chills, nausea
- Pain in upper back, on one side, upper rib cage
- Urinary symptoms (burning, frequency) may not be present





Uva ursi, also known as bearberry, provides gentle relief of uncomplicated bladder infections.

tedious to drink it every single day (not to mention that it's loaded with calories).

There is a better solution: cranberry extract capsules. I suggest purchasing a good brand of cranberry extract. Also, take it with D-mannose, a nondigestible sugar that acts as a decoy inside your bladder. *Escherichia coli*, the most common bacterial source of UTIs, attaches to the D-mannose rather than to the bladder wall and is flushed out when you urinate.

Take about 400 milligrams of cranberry extract with 500 to 1,000 milligrams of D-mannose twice a day. A number of excellent brands provide this level of both ingredients in two capsules. Cranberry and D-mannose are safe, even during pregnancy.

BARBERRY BARRIER FOR PROPHYLAXIS

Vaginal intercourse makes it easier for bacteria to reach the bladder through the urethra. The risk for bladder infection increases with frequent sex. What I've found works for many women is to apply a tincture of barberry root bark or Oregon grape root

BLADDER TEA

The herb uva ursi is a highly effective antibacterial agent and has been used to treat bladder infection and inflammation for centuries.

- 30 grams (about 1 ounce) uva ursi leaves
- 15 grams (about ½ ounce) corn silk
- 4 cups (32 ounces) water

Pour 4 cups near-boiling water over the herbs and let the mixture steep for 20 minutes. Strain. You can store the tea for 2 days in a covered jar in the refrigerator.

HOW TO USE:

Here is the most effective way I've found to use bladder tea.

The first 48 hours:

Drink ½ cup of bladder tea every 2 to 3 hours during the day (6 doses). The tea can be taken warm or cold. Sip slowly.

Hydration is key to flushing out bacteria. Drink at LEAST 8 ounces of water every 2 hours.

Take 200 milligrams of vitamin C every 2 to 3 hours during the day (6 doses). The extra vitamin C will help your body rid itself of the infection.

Most of the time, your symptoms will improve within 8 to 10 hours. If symptoms worsen or do not improve in 24 hours, you should see your health care provider. If symptoms improve, after 48 hours:

Days 3 through 5:

Drink ½ cup bladder tea 3 times a day.

Mix 2 ounces of cranberry juice in 6 ounces of water and drink 4 times a day. You still need to stay hydrated. Drink plenty of water.

Take 200 milligrams of vitamin C 3 times a day.

After 5 days, discontinue tea and continue drinking plenty of fluids and taking vitamin C for 2 to 3 more days.

Note: Uva ursi should not be taken longer than 4 weeks and should not be used by pregnant or breast-feeding women.



bark around the urethra after intercourse (see the recipe in “The Eighteen Essentials,” page 98). It’s inexpensive, topical, and effective. For women who really struggle with recurrent bladder infections, I have them use this treatment as a preventive two to three times a week.

How to Use: Apply the tincture with a clean cotton ball to the urethral opening (the opening where you urinate) after intercourse. Barberry can stain clothes and sheets, so it’s usually a good idea to

For morning sickness, try vitamin B6 and doxylamine. *Right:* Bearberry is a highly effective antibacterial agent.

do this in the bathroom while seated on the toilet. The tincture dries quickly once applied. Use a clean cotton ball if you need to reapply.

BLADDER TEA: A GENTLE SOLUTION

Herbal therapies can be safely used to treat uncomplicated bladder infections in healthy, nonpregnant women. I have used bladder tea successfully in my practice for many years. It relies heavily upon the herb *uva ursi*, also known as bearberry, a highly effective antibacterial agent. *Uva ursi* (*Arctostaphylos uva ursi*) has been used as a diuretic and treatment for bladder infection and inflammation for centuries.

I also include corn silk, the long silky strands that you find when you peel the husk back from an ear of corn. Although it lacks the antimicrobial power of *uva ursi*, it soothes the irritation, pain, and burning that often accompany a bladder infection. See also the recipe for *Uva Ursi–Corn Silk Tincture* in “The Eighteen Essentials,” page 102.

! IF YOU THINK YOU HAVE A BLADDER INFECTION AND...

- Are pregnant
- Are under the age of 12
- Are over the age of 65
- Are a male (bladder infections are relatively rare in men; so, it may indicate something serious)
- Have diabetes or kidney problems
- Have a weak immune system or take immune-suppressing drugs
- Have fever, chills, nausea or vomiting, or pain in one side of your back under your ribs

Natural Remedies for Morning Sickness

As a physician, midwife, herbalist, and mother, I've experienced being pregnant and I've been privileged to walk beside and partner with women as they brought their children into the world.

Whether a first or a fifth pregnancy, each journey is as unique as the child. Some of us will experience morning sickness, hemorrhoids, bladder infections, or insomnia, and then, of course, seasonal allergies, colds, stomach upsets, and other problems that may come along. It's important to consider the safety of whatever remedies you use while pregnant. You should always talk with your midwife or doctor about any health concerns you have; however, I'd like to share with you a couple of the remedies I've been recommending for morning sickness for almost 30 years. I trust their gentle and reliable therapeutic effects.

VITAMIN B AND DOXYLAMINE: THE DYNAMIC DUO

A number of studies have shown that the combination of vitamin B6 and doxylamine (an over-the-counter antihistamine) is highly effective for morning sickness. According to the American College of Obstetricians and Gynecologists, "taking vitamin B6 or vitamin B6 plus doxylamine is safe and effective and should be considered a first-line treatment" for relieving nausea and vomiting in pregnancy.

How to Use: Take 10 to 25 milligrams of vitamin B6 every 8 hours. This is often enough just by itself. If you need more help, ask your pharmacist to help you find doxylamine in the store. The dose is 25 milligrams of doxylamine at bedtime, and 12.5 milligrams each in the morning and afternoon.

Tip: Sometimes, taking prenatal vitamins can worsen morning sickness. If so, I recommend





switching to a children's chewable multivitamin. Just chew two at night before bed for a few weeks until you're feeling better.

GINGER

Ginger is a spicy culinary herb with a long history of relieving nausea and indigestion. Ten studies have shown that ginger is highly effective and safe for relieving moderate to severe morning sickness in pregnant women.

You can take ginger in a number of ways, but remember, dried ginger is a stronger antinausea remedy than fresh. It doesn't mean fresh won't work, just that the constituents responsible for settling your stomach concentrate upon drying. Fresh ginger, however, is awesome for colds!

Ginger candy. Just eat or suck on one every few hours, as necessary, when that queasy feeling hits.

Capsules. If taking capsules, make sure you purchase those that say they only contain ground ginger rhizome/root, usually 400 to 500 milligrams

per capsule. You can take up to 1,000 milligrams of dried ginger a day. Many ginger products in the marketplace are highly concentrated ginger extracts. They are NOT safe in pregnancy.

Ginger tea. You can purchase ginger tea bags, which make preparation easy, especially when you already aren't feeling well. Or you can make your own by pouring 1 cup of near-boiling water over ¼ teaspoon ginger powder. Let it steep for about 10 minutes and then pour off the liquid. Discard the powdered sediment. Sip on this tea, hot or cold, throughout the day.

Ginger ale. Keeping a couple bottles of natural ginger ale in the cupboard is a good idea during the first trimester. Although I'm not an advocate of soda, I definitely make an exception in this case. The blend of ginger and carbonation is a winning combination for easing nausea. Just be aware that many commercial ginger ales only contain ginger flavoring, along with high-fructose corn syrup and other things you don't want.



Left: Whether a first or a fifth pregnancy, each journey is as unique as the child.
Right: Ginger is highly effective and safe for relieving morning sickness.





THE EIGHTEEN ESSENTIALS

NATURAL REMEDIES EVERY HOME SHOULD HAVE ON HAND

When a treatment works 80 to 90 percent of the time without adverse effects, there is little need to experiment with every new supplement that comes along. This is why I've included only those treatments that I've found most effective and safe in my practice. Having said that, just because a remedy isn't listed in this special issue, it should not be inferred that it doesn't work. I've simply narrowed my recommendations to those that I have the most experience with and confidence in.

With all of the quality issues surrounding herbal supplements in the marketplace, not to mention the cost, learning to make your own medicines at home has many advantages. You know exactly what is in your remedy and how and where it was made: in your own kitchen with your own hands.

Here is a list, with recipes, of the 18 preparations I recommend you make ahead of time and store in your pantry to always have on hand.

Left: I may be biased, but I believe everyone should grow at least a few herbs at home. Top: Chamomile



When you make your own medicines, you know exactly what is in them and how and where they were made.

TINCTURES

Arnica Tincture

For sprains, strains, and bruises

This should be a first aid remedy in all households. We use a lot of arnica tincture on the ranch. It can be mixed with clay for bug bites or used as a compress for strains and sprains. I even rub it on my mare's tendons after a long ride. Remember to keep it out of reach of children! Some folks can be sensitive to arnica when applied topically—discontinue if it causes a rash.

- 25 grams *Arnica montana* flowers
- 125 milliliters vodka (80 to 100 proof)

Grind arnica flowers to a coarse powder and put them in a wide-mouthed jar. Add vodka (80 to 100 proof). Stir to make sure that the spoon moves freely. If necessary, add another 25 milliliters of vodka. Put a lid on tightly and shake daily for 2 to 4 weeks. Strain the contents of the jar through muslin cloth. Store the liquid in a dark glass bottle. Label: EXTERNAL USE ONLY. Compost the remaining herb.

How to Use: Put 30 milliliters of tincture in 300 milliliters of water and apply as a compress to sprains, strains, painful spider bites, or any acute injury where there is pain and swelling. It should not be used on open wounds, however, as it is only for topical use.

Barberry or Oregon Grape Root Tincture

For minor wounds and infections

Barberry and Oregon grape root are highly reliable and effective antimicrobial agents against a broad range of bacteria, protozoa, and amoeba. They have both been a mainstay in my practice for decades. I've used them internally to treat diarrhea and other gastrointestinal (GI) infections, as an antiseptic for wounds, to gargle for infected gums, to douche for vaginal yeast infections, and more.

- 25 grams barberry or Oregon grape root bark, dried
- 125 milliliters vodka (80 to 100 proof)

Grind or chop the barberry root bark into very small pieces and put in a canning jar. Add 125 milliliters of vodka (80 to 100 proof). Stir. If you need more liquid, add an additional 25 milliliters of vodka. Put on a lid and shake daily for 2 to 4 weeks. Strain. Put the liquid in a dark tincture bottle and label.

How to Use: Adults can take 3 milliliters 3 times a day for acute minor infections. Use 30 milliliters of the tincture dissolved in 300 milliliters of water as a wash for cuts and wounds.

Note: Berberine-containing herbs should not be used while pregnant or breast-feeding.

Cramp Bark Tincture

For menstrual cramps, leg cramps, and muscle spasms

Cramp bark is one of my favorite herbs for relieving painful menstrual cramps, leg cramps, and muscle spasms of the back. It relaxes muscles gently but effectively. The trick is taking small, frequent doses.

- 25 grams black haw or cramp bark
- 125 milliliters vodka (80 to 100 proof)

Grind the herb and put the grinds in a jar. Add the vodka (80 to 100 proof). Put a lid on tightly. Let steep for 2 to 4 weeks. Strain and put the liquid in a dark-colored jar. Label and store in a dark cabinet.

How to Use: Take ½ teaspoon of tincture every 2 to 3 hours, as needed for menstrual cramps. For leg cramps, take 1 teaspoon of tincture an hour before going to bed.

Note: If you have had a history of calcium oxalate kidney stones, use cramp bark instead of black haw. If you are pregnant, always discuss the use of black haw, cramp bark, or any herb with your midwife or doctor before using.

Echinacea Tincture

For colds and coughs and topically for minor wounds

Echinacea was held in high esteem by many indigenous North American peoples for the treatment of fever, cough, sore throat, infections, wounds, and venomous bites. Although it isn't a "cure" for the common cold, it's the closest thing I've found to getting better faster. I've never found echinacea capsules very effective; the tincture and tea work best.

Black haw relaxes muscles gently but effectively with small, frequent doses.

- 50 grams *Echinacea purpurea* herb or *E. angustifolia* root, dried
- 250 milliliters solvent, 40 to 60 percent alcohol

Grind the herb to a coarse powder and put the grounds in a wide-mouthed jar. Add 80-proof vodka or brandy. If you want a stronger tincture, use 60 percent alcohol. In this case, you'd multiply 250 (milliliters) × 0.6 (60 percent), which equals 150. That means you would use 150 milliliters of grain alcohol and 100 milliliters of water. I've made them both ways and find they both get the job done. Put a lid on tightly and shake daily for 2 to 4 weeks. Strain the contents of the jar through muslin cloth. Store the liquid in a dark glass bottle. Label. Compost the remaining herb.

How to Use: At the first sign of a cold or upper respiratory infection, adults should take 5 milliliters of the tincture every 4 hours (4 times a day) for 2 to 4 days, as needed.



Grindelia Compound Tincture

For cough, postnasal drip, and congestion

Commonly referred to as gumweed, grindelia was widely used by Native Americans to treat bronchial problems and is still recognized for this by the German health authorities. It is one of my go-to herbs for upper respiratory infections with cough, congestion, and postnasal drip. Yerba santa, or holy herb, coats and soothes a sore throat while gently loosening phlegm, making it easier to expectorate. Horehound has been used for many centuries to open the bronchioles and ease children's croupy cough. Licorice remains one of our best medicines for soothing an irritated throat and cough. It is still found in many popular cough and cold medicines. Put them all together and you have a fabulous cold and cough remedy. One of my absolute favorites!

- 10 grams grindelia flowering tops
- 5 grams horehound herb
- 5 grams licorice root
- 5 grams yerba santa leaves
- 125 milliliters grain alcohol, diluted with water according to instructions

Grind herbs in a coffee grinder and put in a wide-mouthed glass jar. Pour 85 milliliters of grain alcohol and 40 milliliters of water over the herbs. Make sure you can move a spoon easily through the liquid. If you need more liquid, add 15 milliliters grain alcohol and 10 milliliters water. Put a lid on tightly and let steep for 2 weeks, shaking daily. Strain liquid through a muslin cloth and pour the decanted

Grindelia is one of my go-to herbs for upper respiratory infections with cough, congestion, and postnasal drip.



Dandelion root is great for overall digestive health. It's one of the key ingredients in my Herbal Bitter Aperitif.

liquid into a dark amber bottle. Put a lid on tightly and label. Compost the leftover herb matter.

Your tincture is ready to be used to make syrup at any time.

To make the syrup: Simply warm 4 ounces of honey in a double boiler. Add 40 milliliters of the tincture to the honey, cover, and heat for 10 minutes on the very lowest setting. Place the warm, raw honey and tincture in a jar. Take 1 teaspoon every 2 to 4 hours as needed. Amazingly effective!

Note: This recipe contains licorice, but in a very small amount. It is quite safe when used in the amount recommended for 4 to 6 weeks. But if you have high blood pressure or are concerned, you can remove it from the recipe and increase the horehound to 10 grams.

Herbal Bitter Aperitif

For gas and bloating, and to enhance overall digestive health

Aperitifs are taken before meals to stimulate the appetite and prepare the GI tract. I've used the following formula for more than 30 years in my practice, with great results.

- 10 grams dandelion root, dried and cut
- 10 grams gentian root, dried and cut
- 10 grams chamomile flowers, dried
- 5 grams Oregon grape root, dried and cut
- 5 grams fennel seeds
- 200 milliliters brandy or vodka OR 225 milliliters vegetable glycerin plus 95 milliliters distilled water

Grind the herbs to a coarse powder in an electric coffee grinder. Put the ground herbs into a jar and add liquid. You can make this with brandy or you can make it alcohol free with vegetable glycerin and water. Secure the lid, label, and let sit for 14 days.



Make sure you can move the spoon freely through the ingredients. If you need to add more alcohol, add another 40 milliliters brandy or vodka. If you used vegetable glycerin, add another 30 milliliters vegetable glycerin and 10 milliliters water. Shake every day. Strain and put in a clean jar. Label. Compost the herbs.

How to Use: Put 1 teaspoon in $\frac{1}{2}$ cup water (still or carbonated) and drink 15 to 20 minutes before your largest meal of the day, if you used brandy or vodka, or take 2 teaspoons right off the spoon if you made it with glycerin.

Licorice Relief Tincture

For topical treatment of cold sores and to ease inflammation

Licorice roots have potent anti-inflammatory properties and are widely used for skin complaints. They can be highly effective for inactivating the herpes virus when applied topically during an outbreak.

- 25 grams licorice root, cut
- 125 milliliters vodka (80 proof)

Grind licorice to a coarse powder and put in a jar. Add vodka. Stir. The liquid should completely cover the herb, and your spoon should be able to move freely. If you need more liquid, add an additional 25 milliliters of vodka, put on a lid, and shake daily for 14 days. Strain. Pour the liquid into a dark tincture bottle and label.

How to Use: Insert a clean cotton swab into the tincture and apply to the herpes (cold sore) outbreak. Reapply using a clean cotton swab every hour, while awake, during the first 24 to 48 hours. If applied frequently, it works like magic—there’s no other word for it. There are no safety concerns with this topical use of licorice.

Uva Ursi–Corn Silk Tincture

For minor urinary tract infections

There is nothing that works better for minor, uncomplicated bladder infections than a combination of uva ursi and corn silk. Uva ursi helps fight off the infection, and corn silk soothes and relieves the irritation.

- 25 grams uva ursi leaf
- 15 grams corn silk
- 200 milliliters vodka (80 to 100 proof)



Grind uva ursi and corn silk and put in a jar. Cover with the alcohol. If necessary, add another 40 milliliters vodka to ensure your spoon moves readily through the mixture. Let it sit, covered, and shake daily for 14 days. Strain. Pour into dark bottle, label, and store.

How to Use: Take 3 milliliters in $\frac{1}{4}$ cup water or juice every 2 to 3 hours (up to 6 doses) during first 48 hours of symptoms. Then 3 times per day for 72 hours.

Note: Uva ursi should not be taken longer than 4 weeks and should not be used by pregnant or breast-feeding women.

Witch Hazel Tincture

For topical use on bites, rashes, and hemorrhoids

Trust me, your own homemade witch hazel tincture will far surpass anything you find on a pharmacy shelf. That’s because distilled witch hazel has no tannin, and that’s what gives the herb its fabulous astringent and medicinal benefits.

- 50 grams witch hazel bark (*Hamamelis virginiana*)
- 250 milliliters solvent, 20 percent

Grind the herb and put the grounds in a canning jar. To get 20 percent alcohol strength, just multiply 250 (milliliters) \times 0.2 (20 percent), which equals 50. Pour 50 milliliters grain alcohol over the herb and 200 milliliters water. Put a lid on tightly and shake daily for 2 to 4 weeks. Strain the contents of the jar through muslin cloth. Squeeze tightly to remove as much liquid as possible. Store the liquid in a dark glass bottle. Label.

How to Use: You can use witch hazel tincture on insect bites, skin rashes, and hemorrhoids. Just apply the tincture with a cotton ball several times throughout the day.

Uva ursi is just the thing for minor bladder infections as it helps fight off the infection.



I make chamomile glycerite to have at the ready for upset stomach and anxiety-induced insomnia.

GLYCERITES

German Chamomile Glycerite

For upset stomach, colic, anxiousness, and insomnia

In today's crazy, chaotic world, I think many of us could benefit from the use of this gentle herb. Researchers at the University of Pennsylvania found it was highly effective for relieving anxiety, while a study at the University of Michigan found that chamomile helps participants fall asleep faster and wake up fewer times at night compared to those who were given a placebo. You will see that I use chamomile in many recipes throughout this book.

- 50 grams German chamomile flowers
- 280 milliliters vegetable glycerin
- 120 milliliters water

Purchase high-quality chamomile flowers and grind them in your coffee grinder. Place the ground herb in a wide mouthed jar and cover with vegetable glycerin and water. Replace the lid. If you need to add more liquid, add an additional 35 milliliters vegetable glycerin and 15 milliliters water. Shake daily for 2 to 4 weeks. Gently heat glycerite in a water bath and then pour the contents of the jar into fine cheesecloth and strain, squeezing firmly to remove liquid. Compost the herbs. Pour liquid into a dark glass bottle and label. The glycerite will keep for 2 years.

How to Use: Take 1 drop per pound of bodyweight up to 60 pounds and then 1 teaspoon for children 60 to 100 pounds, up to 4 times a day, as needed. Teens and adults can take 1 tablespoon up to 4 times a day, as needed.

Echinacea Glycerite

For colds, coughs, and sore throats

I've had a long and enduring relationship with echinacea and have relied upon it heavily for minor colds, sore throats, and congestion. I prefer to use the glycerite for children, or for adults who cannot tolerate alcohol. The taste is mild and sweet.

- 50 grams echinacea herb or root
- 280 milliliters vegetable glycerin
- 120 milliliters water

Purchase high-quality echinacea herb and/or root and grind in your coffee grinder. Place the ground herb in a wide-mouthed jar and cover with vegetable glycerin and water. Replace the lid. If you need to add more liquid, add another 35 milliliters vegetable glycerin and 15 milliliters water. Shake daily for 2 to 4 weeks. Gently heat glycerite in a water bath and then pour the contents of the jar into fine cheesecloth and strain.

How to Use: Children for up to 5 days:
15 to 25 pounds: ½ teaspoon every 2 to 3 hours

25 to 50 pounds: $\frac{3}{4}$ teaspoon every 2 to 3 hours
50 to 75 pounds: $1\frac{1}{2}$ teaspoon every 2 to 3 hours
75 to 100 pounds: 1 teaspoon every 2 to 3 hours
100 to 150 pounds: 2 teaspoons every 2 to 3 hours

Note: While echinacea has an excellent safety profile, a small number of adverse reactions have been reported in those with severe daisy allergy.

OILS

Calendula Flower Oil

For soothing, moisturizing, and cleansing the skin

I grow calendula in my garden, not only for the beauty of its warm orange blossoms, but also because it is my go-to herb for minor skin problems. Calendula is an edible flower, meaning it's OK to use on chafed and sore nipples when nursing. Calendula is wonderful baby oil—much better than many commercial products that contain preservatives and/or mineral oil. Massage a thin layer of oil after bathing. It seals in moisture, has mild antibacterial activity to help prevent secondary infections, and reduces itching.

- Calendula flowers, dried or freshly dried
- Olive, grape seed, or sunflower seed oil (carrier oil)

Fill a jar $\frac{2}{3}$ full with calendula flowers and then cover with the carrier oil. Put on a lid so that it fits tightly. Let it steep in a paper bag in a warm place

for 2 to 4 weeks. Strain, bottle, label, and store the oil in a cool dark place.

How to Use: Apply to affected area as needed, 1 to 4 times a day.

Mullein Flower Ear Oil

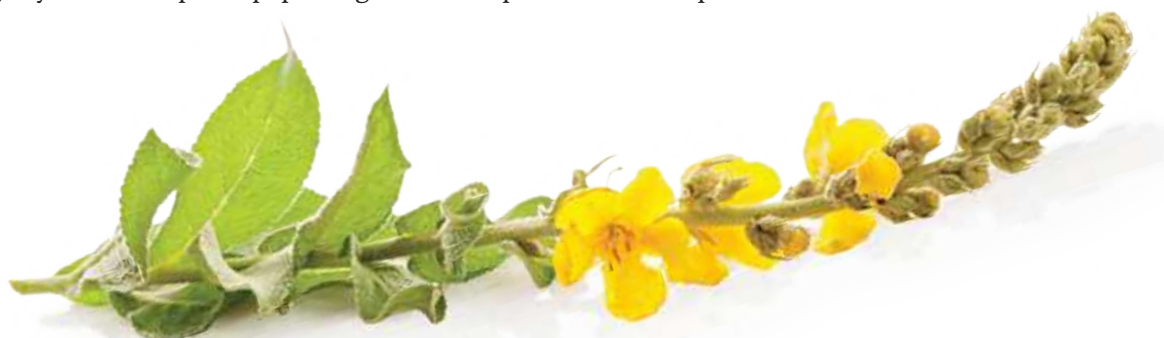
For minor earache relief

Whenever possible, harvest fresh mullein flowers in late summer. If you don't have access to fresh mullein, you can use dried mullein flowers.

- Mullein flowers
- Extra-virgin olive oil

Let the flowers sit overnight to remove some of the moisture. Place them in a glass jar and completely cover them with olive oil. Make sure the oil is roughly 1 inch higher than the flowers. Place the jar in a brown paper bag, put in a warm sunny place, and let it sit for 2 to 4 weeks. Strain. Put the liquid into a dark bottle, label, and store for up to 1 year.

How to Use: Lie on side with affected ear facing up. Put 2 to 3 drops directly into the ear canal and then gently push and pull the outer ear to work the oil down into the canal. Lie in this position for about 5 minutes. You can put a small ball of cotton in the ear to keep the oil in the ear canal. Repeat this procedure 2 to 3 times a day. Never put oil in the ear if you see drainage or suspect that the eardrum has ruptured.



Fresh mullein flowers are best for relieving earaches, but dried will work too.



St. John's Wort Oil

For the topical relief of sore muscles, nerve pain, and sunburn

St. John's wort oil is one of my favorite massage oils for relieving sore or overexerted muscles. I have also found it very handy for sunburn (or other burns) and when applied topically for postherpetic neuralgia. In addition, it soothes the pain that can linger after the outbreak of shingles.

- St. John's wort herb (fresh or dried)
- Extra-virgin olive oil

Whenever possible, harvest fresh St. John's wort herb in flower. Let it sit overnight to remove some of the moisture. If you don't have access to fresh St. John's wort, you can use dried. Place the plant material in a glass jar and completely cover with olive oil. Make sure the oil is roughly 1 inch higher than the flowers. Place the jar in a brown paper

Used topically, essential St. John's wort oil soothes burns, including sunburn.

bag, put in a warm sunny place, and let it sit for 2 to 4 weeks. Strain. The oil will be a deep ruby red. Beautiful! Put the liquid into a dark bottle, label, and store for up to 1 year.

How to Use: Apply to sore muscles and massage into skin. Can be used in a similar way for postherpetic neuralgia and sunburn. Apply 2 to 3 times per day.

MEDICINAL HONEYS

Thyme Honey

Soothes the respiratory tract and helps heal minor wounds

One of the most versatile medicinal honeys you can have around the house. Not only is it great for cooking, but you can use it to soothe a cough or apply it topically to a wound. If you have a young child in the house (under 12 months of age) substitute maple syrup for the honey in the recipe.

- ½ cup fresh or ¼ cup dried thyme
- 8 ounces raw honey

Put honey in saucepan and very gently heat. Add the thyme and stir for about 10 minutes. Pour your heated thyme honey into a clean canning jar, put on the lid, and let it sit in a warm place (a windowsill, for example) for 2 to 3 weeks. Using a spatula, scoop out the contents of your jar into a saucepan and gently heat until the honey has become liquid. Using a fine-mesh strainer, pour the honey into a clean jar. Label and store it in a cool, dark cabinet. Your herbal honey will stay good for roughly 1 year.

How to Use: For coughs and colds, put 1 teaspoon thyme honey into 1 cup hot water and stir. Add some fresh lemon if desired. You can also just take

1 teaspoon thyme honey straight off the spoon to stop a cough. For wounds, spread a thin layer on a 3 × 3 bandage or gauze and apply. Change daily.

Sage Honey

A strong antiseptic for internal and topical use

Sage honey is another of my kitchen must-haves. Also great for cooking, sage is strongly antiseptic and can be applied topically to a wound or used to ease a sore throat and upper respiratory infection. If you have a young child in the house (under 12 months of age) substitute maple syrup for the honey in the recipe.

- ½ cup fresh or ¼ cup dried sage
- 8 ounces raw honey

Follow the recipe for Thyme Honey (see page 105), substituting sage herb for the thyme.

How to Use: For coughs and sore throat, take 1 teaspoon sage honey and put in 1 cup hot water and stir. Add some fresh lemon if desired. You could also just take 1 teaspoon sage honey straight off the spoon to relieve a sore throat. For wounds, spread a thin layer on a 3 × 3 bandage or gauze and apply. Change daily.



TOPICAL PREPARATIONS

Oatmeal Relief

For itch relief

By using just two common ingredients in your kitchen, you can provide your family with an amazing anti-itch remedy. Use it in the tub to soothe chicken pox, poison ivy, or mosquito bites. Or make it into a paste and apply to a bad bug bite. Totally safe and effective!

- 4 cups oatmeal, powdered
- ½ cup baking soda or cornstarch

Grind the oatmeal into as fine a powder as you can in a blender or electric coffee grinder. Pour the powder into a jar and add baking soda or cornstarch. Mix well. Put on a lid, label, and store in a dark cupboard.

How to Use: This mixture can be made into a paste and applied topically or added to a bath for itch relief. For more nasty rashes, like poison ivy/oak/sumac, I recommend adding a couple tablespoons cool water to ½ cup Oatmeal Relief to make a paste. Spread a thin coat over the affected area, cover it with plastic wrap or a towel, and let it dry for 30 to 60 minutes. (You don't need the plastic wrap; it just keeps the poultice from falling off and making a mess!) Rinse off the paste with cool or tepid water. Hot water will make you itch. Repeat as often as necessary to relieve itching and inflammation.

For a bath, mix 1 cup Oatmeal Relief into your bathwater. Make sure the bath is warm, not hot. Soak for 20 to 30 minutes. Repeat as necessary.

Note: For those with celiac disease or gluten intolerance, oatmeal can be safely used topically to treat skin irritations.

Ground oatmeal with baking soda or cornstarch is as simple as it is effective for chicken pox, bug bites, and poison ivy.

Calendula oil cream is amazing for soothing irritated skin.



Natural Anti-Inflammatory Cream

To soothe itching, relieve eczema, and help heal minor wounds

I prefer to use creams, not salves, oils, or ointments, for red, blistering areas. Creams are a little harder to make, so you may want to purchase an herbal cream made from licorice, calendula, chamomile, and/or other soothing herbs from the local health food store or natural grocer. If you're up for a little adventure, though, you can make this one at home. Unlike steroid creams that can cause thinning of the skin with persistent use, this cream has no adverse effects. It's absolutely amazing for relieving itch, soothing irritated skin, and increasing the skin's natural barrier function.

This recipe requires some prepared ingredients whose recipes you will find elsewhere in the book. Read through the full set of instructions before you begin and follow the steps carefully.

STEP 1

- $\frac{3}{4}$ cup infused calendula oil OR chamomile oil
- $\frac{2}{3}$ cup coconut oil
- 2 teaspoons beeswax, grated
- 6 ounces Licorice Relief Tincture (see page 101)

Put the first 3 ingredients (infused herbal oil, coconut oil, and beeswax) into a double boiler and gen-

tly melt, stirring frequently. When melted, pour into your blender and let cool for about 5 to 10 minutes. It will start to get solid around the edges, but when you shake the blender, it should still be liquid. Use a spatula to scrape the sides to break up any areas that have hardened. Now turn your blender on low; slowly drizzle your licorice tincture into the oil. Use your spatula to scrape down the sides every now and then. Keep drizzling in your licorice until it has all been added.

STEP 2

- 1 teaspoon vitamin E oil
- $\frac{1}{2}$ teaspoon lavender essential oil

These last two ingredients are optional, but they are both healing and soothing to the skin. If you choose to use them, add them to the cream last, gently mixing them into the cream with your spatula.

STEP 3

Pour the cream into jar(s) and store in your refrigerator. Vitamin E prevents the oils from going rancid, and the essential oil keeps down microbial growth. Other than those two ingredients, this cream has no actual preservatives. It will keep 6 months if in the fridge, or about 3 months if kept in the cupboard.

How to Use: Apply to the affected areas 3 to 4 times a day, as needed.

STOCKING THE PANTRY

I've always been a self-reliant person, and I believe in being prepared. Having the remedies and tools you need, when you need them, makes life that much simpler and far less stressful. Every family should have a designated shelf in a cabinet where all first aid supplies are kept, and everyone of a responsible age should know the basics for how to care for minor ailments.

Determining what you need to stock in your home pharmacy will take some time and consideration on your part. I have provided step-by-step instructions for making your own natural medicines at home. Now you have to decide what conditions you're most likely to encounter in your own household. Do you have children at home? How easy is it to get to a pharmacy, natural grocer, health food store, and supermarket? What is your budget? I keep a well-stocked but strategic set of supplies to meet the needs of my family and our critters.

The Durable Basics

These items will last many years if stored in an appropriate moisture-free container. A toolbox, fishing tackle box, or just a decent-sized plastic storage container works well. The main thing you have to monitor is replacing the stock once it's used up.

- Digital thermometer—for checking and monitoring fever
- Tweezers—for removing splinters, stingers, and ticks
- Scissors—to cut bandages and tape
- Box of adhesive bandages (assorted sizes)—to dress minor wounds
- Adhesive strips (butterfly bandages)—for closing wounds
- Box of nonadherent pads (various sizes)—for burns

- Box of sterile gauze pads (3 × 3 inches)—to stop bleeding and dress minor wounds
- Two absorbent compress dressings (5 × 9 inches)—to stop and control bleeding
- Compression wrap bandages (2 and 3 inches wide)—for sprains
- One rolled gauze bandage (3 inches wide)—for dressing wounds
- One adhesive cloth tape (10 yards × 1 inch)—for dressing wounds
- Triangular bandage—to immobilize fractures or dislocations
- Cotton balls—for eardrops and to apply tincture
- Rubbing alcohol—for disinfecting and outer ear rinse
- Nonlatex gloves (three to four large pairs)—for protection when working with body fluids
- Antibacterial soap—for cleaning wound area and hands
- 60-milliliter syringe or squeeze bottle—for irrigating wounds

Basic Medications

You'll want to keep these in relatively small supplies and check periodically for expiration dates. Generics work fine and are far less expensive. Obviously, if you don't have young children in the house, you can omit the children's medications from your kit:

- Acetaminophen (325-milligram tab/cap)—for minor pain and fever
- Acetaminophen (children's)—for minor pain and fever
- Diphenhydramine (25-milligram tab/cap)—for minor allergic reactions
- Diphenhydramine (children's)—for minor allergic reactions

- Aspirin (81-milligram) chewable—for chest pain, analgesia
- Ibuprofen (200-milligram tab/cap)—for minor pain and fever
- Eyedrops—to assist in removing foreign matter from the eye
- Probiotics (shelf stable; *Lactobacillus* GG and/or *Saccharomyces boulardii*)—for diarrhea, irritable bowel syndrome, and to take if on antibiotics
- DGL (deglycyrrhizinated licorice)—for heartburn
- Vitamin C (100- to 250-milligram tablets)—for colds, minor infections
- Zinc lozenges (5- to 10-milligram zinc gluconate or glycinate per lozenge)—colds, upper respiratory infections

Kitchen Items

For making natural medicines at home, you'll need some basic kitchen equipment and supplies, many of which you probably already have:

- Measuring spoons and cups—for measuring your ingredients
- Wooden spoon and plastic spatula—for stirring and blending
- Knife and cutting board—for chopping herbs
- Cheese grater—inexpensive, handheld grater for beeswax
- Funnels of different sizes—for pouring liquids into bottles
- Tea/coffee mugs—for drinking all your wonderful herbal teas
- Tea ball or tea strainer—convenient for small batches of infusions/decoctions
- Large strainer—for straining larger batches of tinctures, oils, and honeys
- Cotton or muslin cloths—for pressing tinctures and oils
- Large mixing bowls of various sizes—for holding strained liquids
- Ice cube tray—for making medicinal ice cubes

- Kitchen scale—basic scale that can measure grams and ounces
- Kitchen blender—basic electric blender works fine; Vitamix works awesome
- Electric coffee grinder—for grinding herbs; keep one dedicated to herb work
- Double boiler—really a must-have to prevent scorching oils and salves
- Saucepans with lids; glass/stainless steel preferred—for making decoctions and salves
- Wide-mouthed quart canning jars—for making tinctures, oils, and honeys
- Dark glass bottles, some with eyedroppers—for finished tinctures
- Small jars or tins—for salves and ointments
- Labels for jars—so you know what's what
- Electric cooking pot (like a Crock-Pot, though optional)—if you have a double boiler, you don't need this

Cupboard Items

When possible, purchase oils that are organic and/or expeller pressed. Remember, using the best-quality ingredients you can find and afford will make the best medicine. Have the following on hand:

- 16 ounces almond, grape seed, or sesame oil
- 16 ounces virgin coconut oil
- 16 ounces sunflower seed oil
- 16 ounces olive oil, extra virgin
- 1-pound box baking soda
- 1-pound box cornstarch
- 1-pound box kosher salt, noniodized, not sea salt (for nasal irrigation)
- 1 quart honey, raw and/or local
- 1 jar maple syrup
- 1 box oatmeal, instant
- 1 quart apple cider vinegar, organic
- 1 pint white vinegar
- Lemon juice
- Onions and garlic

Essential Oils

Purchase these in dark amber bottles (0.5 to 1.0 fluid ounce):

- Eucalyptus
- Lavender
- Oregano
- Peppermint
- Tea tree
- Thyme

Herbs

I have provided the botanical name for each of these herbs so you can ensure you are purchasing the correct genus and species. As you go through the recipes, you can focus on those that are most relevant for you and your family and then select from the herbs below, provided in recommended amounts; you may need more or less depending upon your household. Some of these herbs, such as calendula, peppermint, sage, skullcap, and thyme, can be easily grown in your garden or in pots on your porch, and you can make your medicines out of the fresh plant:

- 4 ounces arnica flowers (*Arnica montana*)
- 4 ounces barberry root bark (*Berberis vulgaris*)
OR Oregon grape root bark (*Mahonia aquifolium*, *Berberis aquifolium*)
- 4 ounces calendula flowers (*Calendula officinalis*)
- 4 ounces chamomile flowers (*Matricaria recutita*)
- 1 ounce cinnamon powder (*Cinnamomum zeylanicum*, *C. verum*, *Cassia cinnamomum*)
- 2 ounces corn silk (*Zea mays*)
- 2 ounces cramp bark (*Viburnum opulus*) or black haw bark (*Viburnum prunifolium*)
- 2 ounces dandelion root (*Taraxacum officinale*)
- 4 ounces echinacea root (*Echinacea purpurea*, *E. angustifolia*)

- 1 ounce elderflowers (*Sambucus nigra*)
- 2 ounces fennel seed (*Foeniculum vulgare*)
- 1 ounce ginger rhizome (*Zingiber officinale*)
- 1 ounce grindelia flowering tops (*Grindelia robusta*, *G. camporum*)
- 1 ounce horehound herb (*Marrubium vulgare*)
- 1 ounce lemon balm herb (*Melissa officinalis*)
- 4 ounces licorice root (*Glycyrrhiza glabra*)
- 2 ounces peppermint leaves (*Mentha × piperita*)
- 2 ounces sage leaves (*Salvia officinalis*)
- 2 ounces skullcap herb (*Scutellaria lateriflora*)
- 2 ounces St. John's wort herb (*Hypericum perforatum*)
- 2 ounces thyme herb (*Thymus vulgaris*)
- 4 ounces uva ursi leaves (*Arctostaphylos uva ursi*)
- 2 ounces yarrow flowering tops (*Achillea millefolium*)
- 1 ounce yerba santa leaves (*Eriodictyon californicum*)
- 4 ounces witch hazel bark (*Hamamelis virginiana*)

Odds and Ends

- 6 ounces beeswax—for salves and creams
- 6 ounces bentonite or French green clay—for insect bites
- Neti pot or neti bottle—for nasal irrigation
- Bulb syringe—for infant nasal irrigation
- 1 quart vegetable glycerin—for making alcohol-free tinctures
- 1 liter grain alcohol (190 proof)—for tincture making
- 1 liter vodka and/or brandy (80 to 100 proof)—for tincture making
- 1 ounce vitamin E oil (d-alpha tocopherol)—antioxidant for creams, oils, and salves

RESOURCES

You will be able to find many of your ingredients at local grocery stores, pharmacies, natural grocers, and health food/herb shops. You can pick up grain alcohol and vodka at any store where alcohol is sold. If you're lucky enough to have a nearby hobby or fabric shop, you can pick up muslin or cotton pressing cloths at low cost. Farmer's markets and local beekeepers are great resources for raw honey and beeswax. There isn't much you cannot find on Amazon. I have included some additional resources. I am a price-comparison shopper. I want good quality at a good price. Many vendors that sell online offer free shipping.

The one area where I am super-picky is when it comes to purchasing herb seeds and bulk herbs for medicine making. I trust the following resources I've listed. I know that I am getting the correct genus and species and the herb is of high quality. Your medicine will only be as good as the raw material you start with!

The Container Store

www.containerstore.com

For dark bottles, salve containers, and canning jars

eBeeHoney

www.ebeehoney.com

This source is a nice place to purchase honey and high-quality beeswax. Check for sources of locally grown honey, as well.

Essential Depot

www.essentialdepot.com

This vendor sells USP-grade kosher vegetable glycerin at good prices.

Frontier Natural Products Co-op

www.frontiercoop.com

Here is wonderful one-stop shopping for wildcrafted and organic herbs, vegetable glycerin,

natural flavorings, green clay, beeswax, and other supplies. It's a member-owned cooperative.

Mountain Rose Herbs

www.mountainroseherbs.com

Here's my go-to source for high-quality wildcrafted and USDA-certified organic herbs for medicine making. They're based in Eugene, Oregon.

Strictly Medicinal Seeds

www.strictlymedicalseeds.com

Founded by Richo Cech, this company is the very best place to purchase organic medicinal herb seeds. They also have a selection of medicinal plants for sale and provide lots of valuable information on growing and harvesting your herbs.



Always purchase your herbs from a trusted source. Your medicine will only be as good as the raw material you start with!

HEALING REMEDIES

Tieraona Low Dog, M.D.

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Right: The natural world has many healthy plants and herbs.

About the Author

Tieraona Low Dog, M.D.'s exploration of natural medicine began more than 35 years ago as she studied midwifery, herbal medicine, massage therapy, and martial arts before earning her medical degree from the University of New Mexico School of Medicine. An internationally recognized expert in the fields of integrative medicine, dietary supplements, and women's health, Dr. Low Dog was appointed by President Bill Clinton to the White House Commission on Complementary and Alternative Medicine Policy, served as the elected Chair of the US Pharmacopeia Dietary Supplements and Botanicals Expert Information

Panel, and was appointed to the Scientific Advisory Council for the National Center for Complementary and Alternative Medicine.

She has been an invited speaker to more than 550 scientific/medical conferences, and has published 40 peer-reviewed articles, written 22 chapters for medical textbooks, and authored five books, including three National Geographic books, *Fortify Your Life*, *Healthy at Home*, and *Life Is Your Best Medicine*. She has appeared on CNN and ABC's *20/20* and is a frequent guest on *The Dr. Oz Show* and NPR's *The People's Pharmacy*.

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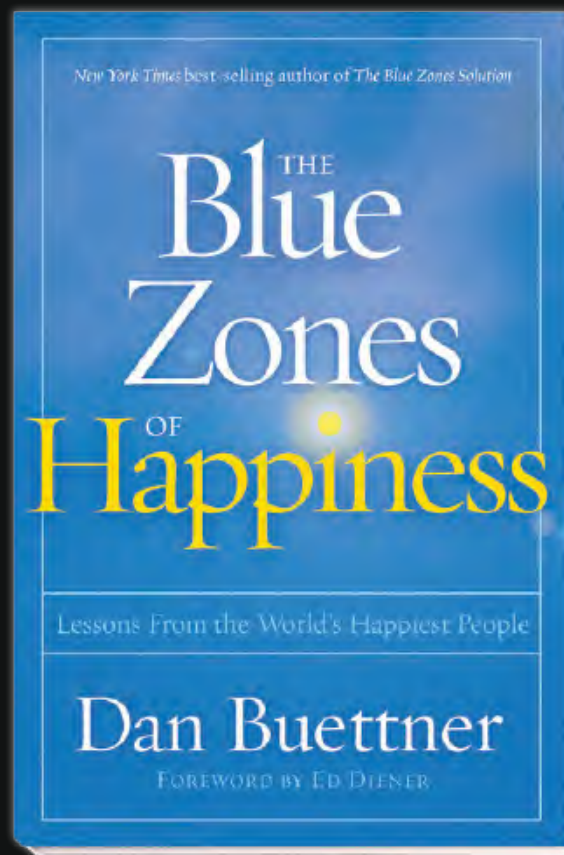
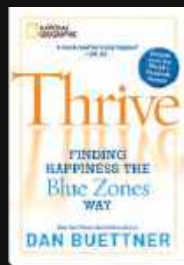
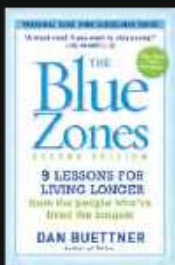
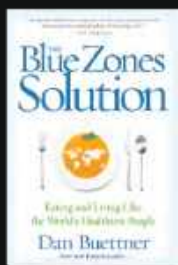
LIVE YOUR LIFE THE BLUE ZONES WAY



New York Times best-selling author Dan Buettner has spent years studying “Blue Zones” around the world—places where people live the longest, healthiest, and happiest

lives. His groundbreaking books reveal the secrets of longevity and happiness, and include practical ways to create your own blue zone.

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