



FACTS ABOUT

The *DASH* Eating Plan



Research has found that diet affects the development of high blood pressure, or hypertension (the medical term). Recently, two studies showed that blood pressure can be lowered by following a particular eating plan—called the Dietary Approaches to Stop Hypertension (DASH) eating plan—and reducing the amount of sodium consumed.

While each step alone lowers blood pressure, the combination of the eating plan and a reduced sodium intake gives the biggest benefit and may help prevent the development of high blood pressure.

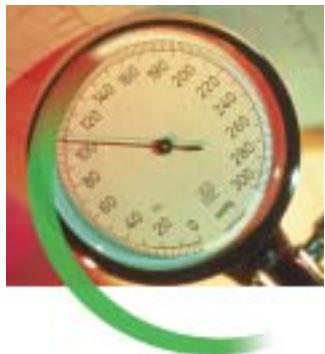
This fact sheet, based on the DASH research findings, tells about high blood pressure, and how to follow the DASH eating plan and reduce the amount of sodium you consume. It offers tips on how to start and stay on the eating plan, as well as a week of menus and some recipes. The menus and recipes are given for two levels of daily sodium consumption—2,400 milligrams (the upper limit of current recommendations by the Federal Government's National High Blood Pressure Education Program (NHBPEP) and the amount used to figure food labels' Nutrition Facts Daily Value) and 1,500 milligrams.

Those with high blood pressure may especially benefit from following the eating plan and reducing their sodium intake. But the combination is a heart healthy recipe that all adults can follow.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health
National Heart, Lung, and Blood Institute



WHAT IS HIGH BLOOD PRESSURE?

Blood pressure is the force of blood against artery walls. It is measured in millimeters of mercury (mmHg) and recorded as two numbers—systolic pressure (as the heart beats) over diastolic pressure (as the heart relaxes between beats). Both numbers are important. (See box 1 below.)

Blood pressure rises and falls during the day. When it stays elevated over time, it's called high blood pressure. High blood pressure is dangerous because it makes the heart work too hard, and the force of its blood flow can harm arteries. High blood pressure often has no warning signs or symptoms. Once it occurs, it usually lasts a lifetime. Uncontrolled, it can lead to heart and kidney disease and stroke.

High blood pressure affects about 50 million—or 1 in 4—adult Americans. High blood pressure is especially common among African Americans who tend to develop it at an earlier age and more often than Whites. It also is common among older Americans—individuals with normal blood pressure at age 55 have a 90 percent lifetime risk for developing hypertension.

High blood pressure can be controlled if you take these steps: maintain a healthy weight; be physically active; follow a healthy eating plan, which includes foods lower in salt and sodium; if you drink alcoholic beverages, do so in moderation; and, if you have high blood pressure and are prescribed medication, take it as directed. All steps but the last also help to prevent high blood pressure.

box 1

BLOOD PRESSURE LEVELS FOR ADULTS*

| CATEGORY | SYSTOLIC [†] (MMHG) [‡] | and | DIASTOLIC [†] (MMHG) [‡] | RESULT |
|-----------------|--|-----|---|--|
| Normal | Less than 120 | | Less than 80 | Good for you! |
| Prehypertension | 120–139 | or | 80–89 | Your blood pressure could be a problem. Make changes in what you eat and drink, be physically active, and lose extra weight. If you also have diabetes, see your doctor. |
| Hypertension | 140 or higher | or | 90 or higher | You have high blood pressure. Ask your doctor or nurse how to control it. |

* For adults ages 18 and older who are not on medicine for high blood pressure and do not have a short-term serious illness.
Source: *The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure*; NIH Publication No. 03-5230, National High Blood Pressure Education Program, May 2003.

† If systolic and diastolic pressures fall into different categories, overall status is the higher category.

‡ Millimeters of mercury.

WHAT IS THE DASH EATING PLAN?

Blood pressure can be unhealthy even if it stays only slightly above the normal level of less than 120/80 mmHg. The higher blood pressure rises above normal, the greater the health risk.

In the past, researchers tried to find clues about what in the diet affects blood pressure by testing various single nutrients, such as calcium and magnesium. These studies were done mostly with dietary supplements and their findings were not conclusive.

Then, scientists supported by the National Heart, Lung, and Blood Institute (NHLBI) conducted two key studies. The first was called “DASH,” and it tested nutrients as they occur together in food. Its findings showed that blood pressures were reduced with an eating plan that is low in saturated fat, cholesterol, and total fat, and that emphasizes fruits, vegetables, and lowfat dairy foods. This eating plan—known as the DASH eating plan—also includes whole grain products, fish, poultry, and nuts. It is reduced in red meat, sweets, and sugar-containing beverages. It is rich in magnesium, potassium, and calcium, as well as protein and fiber.

The DASH study involved 459 adults with systolic blood pressures of less than 160 mmHg and diastolic pressures of 80–95 mmHg. About 27 percent of the participants had hypertension. About 50 percent were women and 60 percent were African Americans.

Who Helped With DASH?

The DASH study was sponsored by the NHLBI and conducted at four medical centers. There was also a central coordinating center at Kaiser Permanente Center for Health Research in Portland, OR.

The four medical centers were: Brigham and Women’s Hospital, Boston, MA; Duke University Medical Center, Durham, NC; Johns Hopkins University, Baltimore, MD; Pennington Biomedical Research Center, Louisiana State University, Baton Rouge, LA.



DASH compared three eating plans: A plan similar in nutrients to what many Americans consume; a plan similar to what Americans consume but higher in fruits and vegetables; and the DASH eating plan. All three plans included about 3,000 milligrams of sodium daily. None of the plans was vegetarian or used specialty foods.

Results were dramatic: Both the fruits and vegetables plan and the DASH eating plan reduced blood pressure. But the DASH eating plan had the greatest effect, especially for those with high blood pressure. Furthermore, the blood pressure reductions came fast—within 2 weeks of starting the plan.

The second study was called “DASH-Sodium,” and it looked at the effect on blood pressure of a reduced dietary sodium intake as participants followed either the DASH eating plan or an eating plan typical of what many Americans consume. DASH-Sodium involved 412 participants. Their systolic blood pressures were 120–159 mmHg and their diastolic blood pressures were 80–95 mmHg. About 41 percent of them had high blood pressure. About 57 percent were women and about 57 percent were African Americans.

Participants were randomly assigned to one of the two eating plans and then followed for a month at each of three sodium levels. The three sodium levels were: a higher intake of about 3,300 milligrams per day (the level consumed by many Americans); an intermediate intake of about 2,400 milligrams per day; and a lower intake of about 1,500 milligrams per day.



Results showed that reducing dietary sodium lowered blood pressure for both eating plans. At each sodium level, blood pressure was lower on the DASH eating plan than on the other eating plan. The biggest blood pressure reductions were for the DASH eating plan at the sodium intake of 1,500 milligrams per day. Those with hypertension saw the biggest reductions, but those without it also had large decreases.

Those on the 1,500-milligram sodium intake eating plan, as well as those on the DASH eating plan, had fewer headaches. Other than that and blood pressure levels, there were no significant effects caused by the two eating plans or different sodium levels.

DASH-Sodium shows the importance of lowering sodium intake—whatever your eating plan. But for a true winning combination, follow the DASH eating plan *and* lower your intake of salt and sodium.

FOLLOWING THE DASH EATING PLAN

The DASH eating plan shown below is based on 2,000 calories a day. The number of daily servings in a food group may vary from those listed, depending on your caloric needs. Use this chart to help you plan your menus or take it with you when you go to the store.

| FOOD GROUP | DAILY SERVINGS (EXCEPT AS NOTED) | SERVING SIZES | EXAMPLES AND NOTES | SIGNIFICANCE OF EACH FOOD GROUP TO THE DASH EATING PLAN |
|---------------------------------------|-------------------------------------|--|--|--|
| Grains and grain products | 7–8 | 1 slice bread 1 oz dry cereal* 1/2 cup cooked rice, pasta, or cereal | Whole wheat bread, English muffin, pita bread, bagel, cereals, grits, oatmeal, crackers, unsalted pretzels and popcorn | Major sources of energy and fiber |
| Vegetables | 4–5 | 1 cup raw leafy vegetable 1/2 cup cooked vegetable 6 oz vegetable juice | Tomatoes, potatoes, carrots, green peas, squash, broccoli, turnip greens, collards, kale, spinach, artichokes, green beans, lima beans, sweet potatoes | Rich sources of potassium, magnesium, and fiber |
| Fruits | 4–5 | 6 oz fruit juice 1 medium fruit 1/4 cup dried fruit 1/2 cup fresh, frozen, or canned fruit | Apricots, bananas, dates, grapes, oranges, orange juice, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, prunes, raisins, strawberries, tangerines | Important sources of potassium, magnesium, and fiber |
| Lowfat or fat free dairy foods | 2–3 | 8 oz milk 1 cup yogurt 1 1/2 oz cheese | Fat free (skim) or lowfat (1%) milk, fat free or lowfat buttermilk, fat free or lowfat regular or frozen yogurt, lowfat and fat free cheese | Major sources of calcium and protein |
| Meats, poultry, and fish | 2 or less | 3 oz cooked meats, poultry, or fish | Select only lean; trim away visible fats; broil, roast, or boil, instead of frying; remove skin from poultry | Rich sources of protein and magnesium |
| Nuts, seeds, and dry beans | 4–5 per week | 1/3 cup or 1 1/2 oz nuts 2 Tbsp or 1/2 oz seeds 1/2 cup cooked dry beans peas | Almonds, filberts, mixed nuts, peanuts, walnuts, sunflower seeds, kidney beans, lentils, | Rich sources of energy, magnesium, potassium, protein, and fiber |
| Fats and oils† | 2–3 | 1 tsp soft margarine 1 Tbsp lowfat mayonnaise 2 Tbsp light salad dressing 1 tsp vegetable oil | Soft margarine, lowfat mayonnaise, light salad dressing, vegetable oil (such as olive, corn, canola, or safflower) | DASH has 27 percent of calories as fat, including fat in or added to foods |
| Sweets | 5 per week | 1 Tbsp sugar 1 Tbsp jelly or jam 1/2 oz jelly beans 8 oz lemonade | Maple syrup, sugar, jelly, jam, fruit-flavored gelatin, jelly beans, hard candy, fruit punch, sorbet, ices | Sweets should be low in fat |

* Equals 1/2 – 1 1/4 cups, depending on cereal type. Check the product's Nutrition Facts Label.

† Fat content changes serving counts for fats and oils: For example, 1 Tbsp of regular salad dressing equals 1 serving; 1 Tbsp of a lowfat dressing equals 1/2 serving; 1 Tbsp of a fat free dressing equals 0 servings.





How Do I MAKE THE DASH?

The DASH eating plan used in the studies calls for a certain number of servings daily from various food groups. These are given in box 2 on page 5 for 2,000 calories per day. The number of servings you require may vary, depending on your caloric need—box 4 gives the servings for 1,600 and 3,100 calories. If you’re trying to lose weight, check box 3 for tips on how to make the DASH eating plan lower in calories.

box 3

HOW TO LOWER CALORIES ON THE DASH EATING PLAN

The DASH eating plan was not designed to promote weight loss. But it is rich in lower calorie foods, such as fruits and vegetables. You can make it lower in calories by replacing higher calorie foods with more fruits and vegetables—and that also will make it easier for you to reach your DASH goals. Here are some examples:

To increase fruits—

- Eat a medium apple instead of four shortbread cookies. *You'll save 80 calories.*
- Eat 1/4 cup of dried apricots instead of a 2-ounce bag of pork rinds. *You'll save 230 calories.*

To increase vegetables—

- Have a hamburger that's 3 ounces of meat instead of 6 ounces. Add 1/2 cup serving of carrots and 1/2 cup serving of spinach. *You'll save more than 200 calories.*
- Instead of 5 ounces of chicken, have a stir-fry with 2 ounces of chicken and 1 1/2 cups of raw vegetables. Use a small amount of vegetable oil. *You'll save 50 calories.*

To increase lowfat or fat free dairy products—

- Have a 1/2 cup serving of lowfat frozen yogurt instead of a 1 1/2-ounce milk chocolate bar. *You'll save about 110 calories.*

And don't forget these calorie-saving tips—

- Use lowfat or fat free condiments.
- Use half as much vegetable oil, soft or liquid margarine, or salad dressing, or choose fat free versions.
- Eat smaller portions—cut back gradually.
- Choose lowfat or fat free dairy products to reduce total fat intake.
- Check the food labels to compare fat content in packaged foods—items marked lowfat or fat free are not always lower in calories than their regular versions.
- Limit foods with lots of added sugar, such as pies, flavored yogurts, candy bars, ice cream, sherbet, regular soft drinks, and fruit drinks.
- Eat fruits canned in their own juice.
- Add fruit to plain yogurt.
- Snack on fruit, vegetable sticks, unbuttered and unsalted popcorn, or bread sticks.
- Drink water or club soda.

box 4

DASH EATING PLAN—NUMBER OF SERVINGS FOR OTHER CALORIE LEVELS

| FOOD GROUP | SERVINGS/DAY | |
|--------------------------------|--------------------|--------------------|
| | 1,600 CALORIES/DAY | 3,100 CALORIES/DAY |
| Grains and grain products | 6 | 12–13 |
| Vegetables | 3–4 | 6 |
| Fruits | 4 | 6 |
| Lowfat or fat free dairy foods | 2–3 | 3–4 |
| Meats, poultry, and fish | 1–2 | 2–3 |
| Nuts, seeds, and dry beans | 3/week | 1 |
| Fat and oils | 2 | 4 |
| Sweets | 0 | 2 |

box 5

WHERE'S THE SODIUM?

Only a small amount of sodium occurs naturally in foods. Most sodium is added during processing. This table gives examples of the varying amounts of sodium in some foods.

| FOOD GROUPS | SODIUM (mg) |
|---|-------------|
| Grains and grain products | |
| Cooked cereal, rice, pasta, unsalted, 1/2 cup | 0–5 |
| Ready-to-eat cereal, 1 cup | 100–360 |
| Bread, 1 slice | 110–175 |
| Vegetables | |
| Fresh or frozen, cooked without salt, 1/2 cup | 1–70 |
| Canned or frozen with sauce, 1/2 cup | 140–460 |
| Tomato juice, canned 3/4 cup | 820 |
| Fruit | |
| Fresh, frozen, canned, 1/2 cup | 0–5 |
| Lowfat or fat free dairy foods | |
| Milk, 1 cup | 120 |
| Yogurt, 8 oz | 160 |
| Natural cheeses, 1 1/2 oz | 110–450 |
| Processed cheeses, 1 1/2 oz | 600 |
| Nuts, seeds, and dry beans | |
| Peanuts, salted, 1/3 cup | 120 |
| Peanuts, unsalted, 1/3 cup | 0–5 |
| Beans, cooked from dried, or frozen, without salt, 1/2 cup | 0–5 |
| Beans, canned, 1/2 cup | 400 |
| Meats, fish, and poultry | |
| Fresh meat, fish, poultry, 3 oz | 30–90 |
| Tuna canned, water pack, no salt added, 3 oz | 35–45 |
| Tuna canned, water pack, 3 oz | 250–350 |
| Ham, lean, roasted, 3 oz | 1,020 |



You should be aware that the DASH eating plan has more daily servings of fruits, vegetables, and whole grain foods than you may be used to eating. Because the plan is high in fiber, it can cause bloating and diarrhea in some persons. To avoid these problems, gradually increase your intake of fruit, vegetables, and whole grain foods.

This fact sheet gives menus and recipes for both 2,400 and 1,500 milligrams of daily sodium intake. Twenty-four hundred milligrams of sodium equals about 6 grams, or 1 teaspoon, of table salt (sodium chloride); 1,500 milligrams of sodium equals about 4 grams, or $\frac{2}{3}$ teaspoon, of table salt. These amounts include all salt consumed—

that in food products, used in cooking, and added at the table. Only small amounts of sodium occur naturally in food. *Processed foods account for most of the salt and sodium Americans consume.* So, be sure to read food labels to choose products lower in sodium. You may be surprised at many of the foods that have sodium. They include soy sauce, seasoned salts, monosodium glutamate (MSG), baking soda, and some antacids—the range is wide.

Because it is rich in fruits and vegetables, which are naturally lower in sodium than many other foods, the DASH eating plan makes it easier to consume less salt and sodium. Still, you may want



box 6

TIPS TO REDUCE SALT AND SODIUM

- Use reduced sodium or no-salt-added products. For example, choose low- or reduced-sodium, or no-salt-added versions of foods and condiments when available.
- Buy fresh, plain frozen, or canned with “no-salt-added” vegetables.
- Use fresh poultry, fish, and lean meat, rather than canned, smoked, or processed types.
- Choose ready-to-eat breakfast cereals that are lower in sodium.
- Limit cured foods (such as bacon and ham), foods packed in brine (such as pickles, pickled vegetables, olives, and sauerkraut), and condiments (such as MSG, mustard, horseradish, catsup, and barbecue sauce). Limit even lower sodium versions of soy sauce and teriyaki sauce—treat these condiments as you do table salt.
- Use spices instead of salt. In cooking and at the table, flavor foods with herbs, spices, lemon, lime, vinegar, or salt-free seasoning blends. Start by cutting salt in half.
- Cook rice, pasta, and hot cereals without salt. Cut back on instant or flavored rice, pasta, and cereal mixes, which usually have added salt.
- Choose “convenience” foods that are lower in sodium. Cut back on frozen dinners, mixed dishes such as pizza, packaged mixes, canned soups or broths, and salad dressings—these often have a lot of sodium.
- Rinse canned foods, such as tuna, to remove some sodium.

to begin by adopting the DASH eating plan at the level of 2,400 milligrams of sodium per day and then further lower your sodium intake to 1,500 milligrams per day.

Boxes 6, 7, and 8 offer tips on how to reduce the salt and sodium content in your diet, and how to use food labels to find lower sodium products.

Next, read the “Getting Started” suggestions in box 10 on page 11.

How can you get started on the DASH eating plan? It’s easy. The DASH eating plan requires no special foods and has no hard-to-follow recipes. One way to begin is by

box 7

REDUCING SODIUM WHEN EATING OUT

- Ask how foods are prepared. Ask that they be prepared without added salt, MSG, or salt-containing ingredients. Most restaurants are willing to accommodate requests.
- Know the terms that indicate high sodium content: pickled, cured, soy sauce, broth.
- Move the salt shaker away.
- Limit condiments, such as mustard, catsup, pickles, and sauces with salt-containing ingredients.
- Choose fruits or vegetables instead of salty snack foods.

box 8

COMPARE FOOD LABELS

Read the Nutrition Facts on food labels to compare the amount of sodium in products. Look for the sodium content in milligrams and the Percent Daily Value. Aim for foods that are less than 5 percent of the Daily Value of sodium.

Compare the food labels of these two versions of canned tomatoes. The regular canned tomatoes (right) have 10 times as much sodium as the unsalted canned tomatoes.

CANNED DICED TOMATOES, NO SALT ADDED

| Nutrition Facts | |
|-------------------------------|---------------|
| Serving Size | 1/2 cup |
| Servings Per Container | approx. 3 1/2 |
| Amount Per Serving | |
| Calories | 25 |
| Calories from Fat | 0 |
| % Daily Value* | |
| Total Fat | 0 g |
| Saturated Fat | 0 g |
| Cholesterol | 0 mg |
| Sodium | 20 mg |
| Total Carbohydrate | 6 g |
| Dietary Fiber | 2 g |
| Sugars | 4 g |
| Protein | 1 g |
| Vitamin A 10% • Vitamin C 15% | |
| Calcium | 2% |
| Iron | 2% |

*Percent Daily Values are based on a 2,000 calorie diet

CANNED DICED TOMATOES

| Nutrition Facts | |
|-------------------------------|---------------|
| Serving Size | 1/2 cup |
| Servings Per Container | approx. 3 1/2 |
| Amount Per Serving | |
| Calories | 25 |
| Calories from Fat | 0 |
| % Daily Value* | |
| Total Fat | 0 g |
| Saturated Fat | 0 g |
| Cholesterol | 0 mg |
| Sodium | 200 mg |
| Total Carbohydrate | 6 g |
| Dietary Fiber | 2 g |
| Sugars | 4 g |
| Protein | 1 g |
| Vitamin A 10% • Vitamin C 15% | |
| Calcium | 2% |
| Iron | 2% |

*Percent Daily Values are based on a 2,000 calorie diet

box 9

LABEL LANGUAGE

Food labels can help you choose items lower in sodium and saturated and total fat. Look for the following labels on cans, boxes, bottles, bags, and other packaging:

| PHRASE | WHAT IT MEANS |
|---------------------------|--|
| Sodium | |
| Sodium free or salt free | Less than 5 mg per serving |
| Very low sodium | 35 mg or less of sodium per serving |
| Low sodium | 140 mg or less of sodium per serving |
| Low sodium meal | 140 mg or less of sodium per 3 1/2 oz (100 g) |
| Reduced or less sodium | At least 25 percent less sodium than the regular version |
| Light in sodium | 50 percent less sodium than the regular version |
| Unsalted or no salt added | No salt added to the product during processing |
| Fat | |
| Fat free | Less than 0.5 g per serving |
| Low saturated fat | 1 g or less per serving |
| Lowfat | 3 g or less per serving |
| Reduced fat | At least 25 percent less fat than the regular version |
| Light in fat | Half the fat compared to the regular version |

seeing how DASH compares with your current food habits. Use the “What’s on Your Plate?” form. (See box 11 on page 12.) Fill it in for 1–2 days and see how it compares with the DASH plan. This will help you see what changes you need to make in your food choices.

Remember that some days the foods you eat may add up to more than the recommended servings from one food group and less from another. Similarly, you may have too much sodium on a particular day. Don’t worry. Just be sure that the average of several days or a week comes close to what’s recommended for the f for your chosen daily sodium level.

Finally, use the menus that begin on page 13—or make your own.

One important note: If you take medication to control high blood pressure, you should not stop using it. Follow the DASH eating plan, and talk with your doctor about your drug treatment.



GETTING STARTED

It's easy to adopt the DASH eating plan. Here are some ways to get started:

Change gradually.

- If you now eat one or two vegetables a day, add a serving at lunch and another at dinner.
- If you don't eat fruit now or have only juice at breakfast, add a serving to your meals or have it as a snack.
- Gradually increase your use of fat free and lowfat dairy products to three servings a day. For example, drink milk with lunch or dinner, instead of soda, sugar-sweetened tea, or alcohol. Choose lowfat (1 percent) or fat free (skim) dairy products to reduce your intake of saturated fat, total fat, cholesterol, and calories.
- Read food labels on margarines and salad dressings to choose those lowest in saturated fat and trans fat. Some margarines are now trans-fat free.

Treat meat as one part of the whole meal, instead of the focus.

- Limit meat to 6 ounces a day (2 servings)—all that's needed. Three to four ounces is about the size of a deck of cards.
- If you now eat large portions of meat, cut them back gradually—by a half or a third at each meal.
- Include two or more vegetarian-style (meatless) meals each week.
- Increase servings of vegetables, rice, pasta, and dry beans in meals. Try casseroles and pasta, and stir-fry dishes, which have less meat and more vegetables, grains, and dry beans.

Use fruits or other foods low in saturated fat, cholesterol, and calories as desserts and snacks.

- Fruits and other lowfat foods offer great taste and variety. Use fruits canned in their own juice. Fresh fruits require little or no preparation. Dried fruits are a good choice to carry with you or to have ready in the car.
- Try these snack ideas: unsalted pretzels or nuts mixed with raisins; graham crackers; lowfat and fat free yogurt and frozen yogurt; popcorn with no salt or butter added; and raw vegetables.

Try these other tips:

- Choose whole grain foods to get added nutrients, such as minerals and fiber. For example, choose whole wheat bread or whole grain cereals.
- If you have trouble digesting dairy products, try taking lactase enzyme pills or drops (available at drugstores and groceries) with the dairy foods. Or, buy lactose-free milk or milk with lactase enzyme added to it.
- Use fresh, frozen, or no-salt-added canned vegetables.





box 11

WHAT'S ON YOUR PLATE?

Use this form to track your food habits before you start on the DASH eating plan or to see how you're doing after a few weeks. To record more than 1 day, just copy the form. Total each day's food groups and compare what you ate with the DASH eating plan. To see how the form looks completed, check the menus that start on page 13.



| Food | Amount (serving size) | Sodium (mg) | Number of Servings by DASH Food Group | | | | | | | |
|---|--------------------------|----------------------------|---------------------------------------|------------|-----------|-----------|----------------------------|-------------------------------|---------------|----------|
| | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils | Sweets |
| Breakfast | | | | | | | | | | |
| Example: whole wheat bread and soft margarine | 2 slices 2 tsp | 299 102 | 2 | | | | | | 2 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Lunch | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Dinner | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Snacks | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Day's Total | | | | | | | | | | |
| Compare yours with the DASH eating plan | | 2,400 mg or 1,500 mg | 7–8 daily | 4–5 daily | 4–5 daily | 2–3 daily | 2 or less | 4–5 a week | 2–3 daily | 5 a week |

* Read food labels to compare the sodium content of foods. See page 9 to learn how to find sodium information on food labels.

A Week With the DASH Eating Plan



Here is a week of menus from the DASH eating plan. The menus allow you to have a daily sodium level of either 2,400 mg or, by making the noted changes, 1,500 mg. You'll also find that the menus sometimes call for you to use lower sodium, or reduced fat or fat free, versions of products.

The menus are based on 2,000 calories a day—serving sizes should be increased or decreased for other calorie levels. To ease the calculations, some of the serving sizes have been rounded off. Also, some items may be in too small a quantity to have a listed food group serving.

Recipes for starred items are given on the later pages. Some of these recipes give changes that can be used to lower their sodium level. Use the changes if you want to follow the DASH eating plan at 1,500 milligrams of sodium per day.

DAY 1

Abbreviations: oz = ounce, tsp = teaspoon, Tbsp = tablespoon, g = gram, mg = milligram

| 2,400 mg Sodium Menu | Sodium (mg) | Substitutions To Reduce Sodium to 1,500 mg | Sodium (mg) | Number of DASH Food Group Servings | | | | | | |
|--|-------------|---|-------------|------------------------------------|------------|------------------|------------------|-------------------------|----------------------------|------------------|
| | | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils |
| Breakfast | | | | | | | | | | |
| 2/3 cup bran cereal | 161 | 2/3 cup shredded wheat cereal | 3 | 1 | | | | | | |
| 1 slice whole wheat bread | 149 | | | 1 | | | | | | |
| 1 medium banana | 1 | | | | | 1 | | | | |
| 1 cup fruit yogurt, fat free, no sugar added | 53 | | | | | | 1 | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | |
| 2 tsp jelly | 5 | | | | | | | | | 2/3 |
| Lunch | | | | | | | | | | |
| 3/4 cup chicken salad* | 201 | remove salt from recipe | 127 | | | | | 1 | | 1 |
| 2 slices whole wheat bread | 299 | | | 2 | | | | | | |
| 1 Tbsp Dijon mustard | 372 | 1 Tbsp regular mustard | 196 | | | | | | | |
| salad: | | | | | | | | | | |
| 1/2 cup fresh cucumber slices | 8 | | | | 1 | | | | | |
| 1/2 cup tomato wedges | 1 | | | | 1 | | | | | |
| 2 Tbsp ranch dressing, fat free | 306 | 2 Tbsp yogurt salad dressing* | 84 | | | | | | | |
| 1/2 cup fruit cocktail, juice pack | 5 | | | | | 1 | | | | |
| Dinner | | | | | | | | | | |
| 3 oz beef, eye of round | 52 | | | | | | | 1 | | |
| 2 Tbsp beef gravy, lowfat | 163 | 2 Tbsp beef gravy, lowfat, unsalted | 5 | | | | | | | |
| 1 cup green beans, cooked from frozen | 12 | | | | 2 | | | | | |
| 1 small baked potato: | 7 | | | | 1 | | | | | |
| 2 Tbsp sour cream, fat free | 28 | | | | | | | | | |
| 2 Tbsp grated cheddar cheese, natural, reduced fat | 86 | 2 Tbsp cheddar cheese, natural, reduced fat, low sodium | 1 | | | | 1/4 | | | |
| 1 Tbsp chopped scallions | 1 | | | | | | | | | |
| 1 small whole wheat roll | 148 | | | 1 | | | | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | 1 | | | | | | 1 | |
| 1 small apple | 0 | | | | 1 | | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | |
| Snack | | | | | | | | | | |
| 1/3 cup almonds, unsalted | 5 | | | | | | | 1 | | |
| 1/4 cup raisins | 2 | | | | 1 | | | | | |
| 1 cup orange juice | 2 | | | | | 1 ^{1/3} | | | | |
| Totals | | | | 5 | 5 | 5 ^{1/3} | 3 ^{1/4} | 2 | 1 | 2 ^{2/3} |

| SODIUM LEVEL | | |
|-------------------------------------|----------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Calories | 2,024 | 1,998 |
| Total fat | 51 g | 50 g |
| Percent calories from fat | 23% | 23% |
| Saturated fat | 9 g | 9 g |
| Percent calories from saturated fat | 4% | 4% |
| Cholesterol | 164 mg | 164 mg |

| SODIUM LEVEL | | |
|-------------------|----------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Sodium | 2,363 mg | 1,320 mg |
| Calcium | 1,257 mg | 1,338 mg |
| Magnesium | 572 mg | 589 mg |
| Potassium | 4,780 mg | 4,745 mg |
| Fiber | 34 g | 34 g |

* Recipe on page 20.



DAY 2

| 2,400 mg Sodium Menu | Sodium (mg) | Substitutions To Reduce Sodium to 1,500 mg | Sodium (mg) | Number of DASH Food Group Servings | | | | | | | |
|---|-------------|---|-------------|------------------------------------|------------|--------|-------|-------------------------|----------------------------|---------------|--------|
| | | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils | Sweets |
| Breakfast | | | | | | | | | | | |
| 1/2 cup instant oatmeal, flavored | 104 | 1/2 cup regular oatmeal, with 1 tsp cinnamon | 1 | 1 | | | | | | | |
| 1 mini whole wheat bagel | 84 | | | 1 | | | | | | | |
| 1 medium banana | 1 | | | | | 1 | | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | | |
| 1 Tbsp cream cheese, fat free | 75 | | | | | | | | | | |
| Lunch | | | | | | | | | | | |
| chicken breast sandwich: | | | | | | | | | | | |
| 2 slices (3 oz) chicken breast, skinless | 65 | | | | | | | 1 | | | |
| 2 slices whole wheat bread | 299 | | | 2 | | | | | | | |
| 1 slice (3/4 oz) American cheese, reduced fat | 328 | 1 slice (3/4 oz) Swiss cheese, natural | 54 | | | 1/2 | | | | | |
| 1 large leaf romaine lettuce | 1 | | | | 1/4 | | | | | | |
| 2 slices tomato | 4 | | | | 1/2 | | | | | | |
| 1 Tbsp mayonnaise, lowfat | 90 | | | | | | | | 1 | | |
| 1 medium peach | 0 | | | | | 1 | | | | | |
| 1 cup apple juice | 7 | | | | | 1 1/3 | | | | | |
| Dinner | | | | | | | | | | | |
| 3/4 cup vegetarian spaghetti sauce* | 459 | Substitute no-salt-added tomato paste (6 oz)* | 260 | | 1 1/2 | | | | | | |
| 1 cup spaghetti | 1 | | | 2 | | | | | | | |
| 3 Tbsp Parmesan cheese | 349 | | | | | 1/2 | | | | | |
| spinach salad: | | | | | | | | | | | |
| 1 cup fresh spinach leaves | 24 | | | | 1 | | | | | | |
| 1/4 cup fresh carrots, grated | 10 | | | | 1/2 | | | | | | |
| 1/4 cup fresh mushrooms, sliced | 1 | | | | 1/2 | | | | | | |
| 2 Tbsp vinaigrette dressing† | 0 | | | | | | | | 3/4 | | |
| 1/2 cup corn, cooked from frozen | 4 | | | | 1 | | | | | | |
| 1/2 cup canned pears, juice pack | 4 | | | | | 1 | | | | | |
| Snack | | | | | | | | | | | |
| 1/3 cup almonds | 5 | | | | | | | 1 | | | |
| 1/4 cup dried apricots | 3 | | | | | 1 | | | | | |
| 1 cup fruit yogurt, fat free, no sugar added | 107 | | | | | | 1 | | | | |
| Totals | | | | 6 | 5 1/4 | 5 1/3 | 3 | 1 | 1 | 1 3/4 | 0 |

| SODIUM LEVEL | | |
|-------------------------------------|----------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Calories | 1,977 | 1,967 |
| Total fat | 60 g | 59 g |
| Percent calories from fat | 27% | 27% |
| Saturated fat | 12 g | 13 g |
| Percent calories from saturated fat | 6% | 6% |
| Cholesterol | 107 mg | 112 mg |

| SODIUM LEVEL | | |
|-------------------|----------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Sodium | 2,152 mg | 1,577 mg |
| Calcium | 1,351 mg | 1,494 mg |
| Magnesium | 502 mg | 509 mg |
| Potassium | 4,513 mg | 4,440 mg |
| Fiber | 32 g | 34 g |

* Recipe on page 20.

† Recipe on page 21.

DAY 3



| | Sodium (mg) | Substitutions To Reduce Sodium to 1,500 mg | Sodium (mg) | Number of DASH Food Group Servings | | | | | | |
|---|-------------|--|-------------|------------------------------------|------------|--------|-------|-------------------------|----------------------------|---------------|
| | | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils |
| 2,400 mg Sodium Menu | | | | | | | | | | |
| Breakfast | | | | | | | | | | |
| 3/4 cup wheat flakes cereal | 199 | 2 cups puffed wheat cereal | 1 | 1 | | | | | | |
| 1 slice whole wheat bread | 149 | | | 1 | | | | | | |
| 1 medium banana | 1 | | | | 1 | | | | | |
| 1 cup fat free milk | 126 | | | | | 1 | | | | |
| 1 cup orange juice | 5 | | | | | 1 1/3 | | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | 1 | | | | | | 1 | |
| Lunch | | | | | | | | | | |
| beef barbecue sandwich: | | | | | | | | | | |
| 2 oz beef, eye of round | 35 | | | | | | | 2/3 | | |
| 1 Tbsp barbecue sauce | 156 | | | | | | | | | |
| 2 slices (1 1/2 oz) cheddar cheese, reduced fat | 260 | 2 slices (1 1/2 oz) Swiss cheese, natural | 109 | | | | 1 | | | |
| 1 sesame roll | 319 | | | 1 | | | | | | |
| 1 large leaf romaine lettuce | 1 | | | | 1/4 | | | | | |
| 2 slices tomato | 22 | | | | 1/2 | | | | | |
| 1 cup new potato salad* | 12 | | | | 2 | | | | | |
| 1 medium orange | 0 | | | | | 1 | | | | |
| Dinner | | | | | | | | | | |
| 3 oz cod: | 89 | | | | | | | 1 | | |
| 1 tsp lemon juice | 1 | | | | | | | | | |
| 1/2 cup brown rice, long grain | 5 | | | 1 | | | | | | |
| 1/2 cup spinach, cooked from frozen | 88 | | | | 1 | | | | | |
| 1 small corn bread muffin | 363 | 1 small white dinner roll | 146 | 1 | | | | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | 1 | | | | | | 1 | |
| Snack | | | | | | | | | | |
| 1 cup fruit yogurt, fat free, no added sugar | 107 | | | | | | 1 | | | |
| 1/4 cup dried fruit | 6 | | | | | 1 | | | | |
| 2 large graham cracker rectangles | 156 | | | 1 | | | | | | |
| 1 Tbsp peanut butter, reduced fat | 101 | 1 Tbsp peanut butter, unsalted | 3 | | | | | | 1/2 | |
| Totals | | | | 6 | 3 3/4 | 4 1/3 | 3 | 1 2/3 | 1/2 | 2 |
| | | | | | | | | | | 0 |

| | SODIUM LEVEL | |
|-------------------------------------|--------------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Calories | 1,984 | 1,958 |
| Total fat | 44 g | 46 g |
| Percent calories from fat | 20% | 21% |
| Saturated fat | 12 g | 13 g |
| Percent calories from saturated fat | 5% | 6% |
| Cholesterol | 146 mg | 137 mg |

| | SODIUM LEVEL | |
|-------------------|--------------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Sodium | 2,303 mg | 1,519 mg |
| Calcium | 1,490 mg | 1,502 mg |
| Magnesium | 495 mg | 526 mg |
| Potassium | 4,752 mg | 4,759 mg |
| Fiber | 29 g | 30 g |

* Recipe on page 21.

DAY 4

4



| 2,400 mg Sodium Menu | Sodium (mg) | Substitutions To Reduce Sodium to 1,500 mg | Sodium (mg) | Number of DASH Food Group Servings | | | | | | |
|---|-------------|---|-------------|------------------------------------|------------|--------|-------|-------------------------|----------------------------|---------------|
| | | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils |
| Breakfast | | | | | | | | | | |
| 3/4 cup cornflakes | 223 | 1/2 cup corn grits, with 1 tsp nonfat margarine, unsalted | 1 1 | 1 | | | | | | |
| 1/2 cup fruit yogurt, fat free, no added sugar | 53 | | | | | | 1/2 | | | |
| 1 medium apple | 0 | | | | | 1 | | | | |
| 1 cup grape juice | 8 | | | | | 1 1/3 | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | |
| Lunch | | | | | | | | | | |
| ham and cheese sandwich: | | | | | | | | | | |
| 2 oz smoked ham, lowfat, low sodium | 469 | 2 oz roast beef, lowfat | 35 | | | | | 2/3 | | |
| 1 slice (3/4 oz) cheddar cheese, natural, reduced fat | 130 | | | | | | 1/2 | | | |
| 2 slices whole wheat bread | 299 | | | 2 | | | | | | |
| 1 large leaf romaine lettuce | 1 | | | | | 1/4 | | | | |
| 2 slices tomato | 22 | | | | | 1/2 | | | | |
| 1 Tbsp mayonnaise, lowfat | 90 | | | | | | | | 1 | |
| 1 cup carrot sticks | 43 | | | | 2 | | | | | |
| Dinner | | | | | | | | | | |
| chicken and Spanish rice* | 367 | substitute no-salt-added tomato sauce (4 oz)* | 226 | 1 | | | | 1 | | |
| 1/2 cup green peas, cooked from frozen | 70 | | | | | 1 | | | | |
| 1 cup cantaloupe | 14 | | | | | 2 | | | | |
| 1 small whole wheat roll | 148 | | | 1 | | | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | 1 | | | | | | 1 | |
| Snack | | | | | | | | | | |
| 1/3 cup almonds, unsalted | 5 | | | | | | | 1 | | |
| 1/2 cup fruit cocktail | 5 | | | | | 1 | | | | |
| 1 cup apple juice | 7 | | | | | 1 1/3 | | | | |
| Totals | | | | 5 | 3 3/4 | 6 2/3 | 3 | 1 2/3 | 1 | 2 |
| | | | | | | | | | 0 | |

| Nutrients Per Day | SODIUM LEVEL | |
|-------------------------------------|--------------|----------|
| | 2,400 mg | 1,500 mg |
| Calories | 2,011 | 2,050 |
| Total fat | 51 g | 52 g |
| Percent calories from fat | 23% | 23% |
| Saturated fat | 9 g | 9 g |
| Percent calories from saturated fat | 4% | 4% |
| Cholesterol | 122 mg | 142 mg |

| Nutrients Per Day | SODIUM LEVEL | |
|-------------------|--------------|----------|
| | 2,400 mg | 1,500 mg |
| Sodium | 2,259 mg | 1,441 mg |
| Calcium | 1,200 mg | 1,203 mg |
| Magnesium | 491 mg | 502 mg |
| Potassium | 5,152 mg | 4,914 mg |
| Fiber | 32 g | 32 g |

* Recipe on page 21.



| 2,400 mg Sodium Menu | Sodium (mg) | Substitutions To Reduce Sodium to 1,500 mg | Sodium (mg) | Number of DASH Food Group Servings | | | | | | | |
|--|-------------|---|-------------|------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|---------------|--------|
| | | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils | Sweets |
| Breakfast | | | | | | | | | | | |
| 3/4 cup frosted shredded wheat | 3 | | | 1 | | | | | | | |
| 2 slices whole wheat bread | 299 | | | 2 | | | | | | | |
| 1 medium banana | 1 | | | | | 1 | | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | | |
| 1 cup orange juice | 5 | | | | | 1 ¹ / ₃ | | | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | 1 | | | | | | 1 | | |
| 2 tsp jelly, no added sugar | 0 | | | | | | | | | | |
| Lunch | | | | | | | | | | | |
| salad plate: | | | | | | | | | | | |
| 1/2 cup tuna salad* | 158 | | | | | | | | 1 | | |
| 1 large leaf romaine lettuce | 1 | | | | | 1 ¹ / ₄ | | | | | |
| 6 wheat crackers, fat free | 107 | 6 wheat crackers, fat free, unsalted | 18 | 1 | | | | | | | |
| 1/2 cup cottage cheese, 2% | 459 | 1/2 cup cottage cheese, 2%, unsalted | 23 | | | | 1 ¹ / ₄ | | | | |
| 1 cup canned pineapple, juice pack | 2 | | | | | | 2 | | | | |
| 4 small celery sticks | 59 | | | | | 1 ¹ / ₂ | | | | | |
| 2 Tbsp ranch dressing, fat free | 306 | 2 Tbsp yogurt dressing, fat free* | 84 | | | | | | | | |
| Dinner | | | | | | | | | | | |
| 3 oz turkey meatloaf* | 62 | | | | | | | | 1 | | |
| 1 Tbsp catsup | 178 | 2 tsp catsup | 119 | | | | | | | | |
| 1 small baked potato: | 7 | | | 1 | 1 | | | | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | | | | | | | 1 | | |
| 1 Tbsp sour cream, lowfat | 15 | | | | | | | | | | |
| 1 scallion stalk, chopped | 2 | | | | | | | | | | |
| 1 cup collard greens, cooked from frozen | 15 | | | | | 2 | | | | | |
| 1 medium peach | 0 | | | | | | 1 | | | | |
| 1 cup fat free milk | 126 | | | | | | | 1 | | | |
| Snack | | | | | | | | | | | |
| 1 Tbsp peanut butter, reduced fat | 101 | 1 Tbsp peanut butter, reduced fat, unsalted | 3 | | | | | | 1 ¹ / ₂ | | |
| 1/2 medium bagel (3-inch diameter) | 152 | | | 1 | | | | | | | |
| 1/2 cup fruit yogurt, fat free, no added sugar | 53 | | | | | | | 1 ¹ / ₂ | | | |
| Totals | | | | 5 | 3 ³ / ₄ | 5 ¹ / ₃ | 2 ³ / ₄ | 2 | 1 ¹ / ₂ | 2 | 0 |

| Nutrients Per Day | SODIUM LEVEL | |
|-------------------------------------|--------------|----------|
| | 2,400 mg | 1,500 mg |
| Calories | 1,947 | 1,941 |
| Total fat | 38 g | 40 g |
| Percent calories from fat | 17% | 19% |
| Saturated fat | 9 g | 10 g |
| Percent calories from saturated fat | 4% | 5% |
| Cholesterol | 153 mg | 153 mg |

| Nutrients Per Day | SODIUM LEVEL | |
|-------------------|--------------|----------|
| | 2,400 mg | 1,500 mg |
| Sodium | 2,495 mg | 1,493 mg |
| Calcium | 1,293 mg | 1,360 mg |
| Magnesium | 429 mg | 475 mg |
| Potassium | 4,609 mg | 4,826 mg |
| Fiber | 27 g | 30 g |

* Recipe on page 22.

DAY 6



| 2,400 mg Sodium Menu | Sodium (mg) | Substitutions To Reduce Sodium to 1,500 mg | Sodium (mg) | Number of DASH Food Group Servings | | | | | | |
|---|-------------|--|-------------|------------------------------------|------------|--------|-------|-------------------------|----------------------------|---------------|
| | | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils |
| Breakfast | | | | | | | | | | |
| 1 lowfat granola bar | 71 | | | 1/2 | | | | | | |
| 1 medium banana | 1 | | | | | 1 | | | | |
| 1 cup fruit yogurt, fat free, no sugar added | 107 | | | | | | 1 | | | |
| 1 cup orange juice | 2 | | | | | 1 1/3 | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | |
| Lunch | | | | | | | | | | |
| turkey breast sandwich: | | | | | | | | | | |
| 3 oz turkey breast | 48 | | | | | | | | 1 | |
| 2 slices whole wheat bread | 299 | | | 2 | | | | | | |
| 2 slices (1 1/2 oz) natural cheddar cheese, reduced fat | 260 | 2 slices (1 1/2 oz) cheddar cheese, natural, reduced fat, low sodium | 3 | | | | 1 | | | |
| 1 large leaf romaine lettuce | 1 | | | | 1/4 | | | | | |
| 2 slices tomato | 22 | | | | 1/2 | | | | | |
| 2 tsp mayonnaise, lowfat | 60 | | | | | | | | 2/3 | |
| 1 Tbsp Dijon mustard | 372 | 1 tsp regular mustard | 60 | | | | | | | |
| 1 cup broccoli steamed from frozen | 44 | | | | 2 | | | | | |
| 1 medium orange | 0 | | | | | 1 | | | | |
| Dinner | | | | | | | | | | |
| 3 oz spicy baked fish* | 93 | | | | | | | | 1 | |
| 1 cup scallion rice† | 3 | | | 2 | | | | | | |
| 1/2 cup spinach, cooked from frozen | 88 | | | | 1 | | | | | |
| 1 cup carrots, cooked from frozen | 96 | | | | 2 | | | | | |
| 1 small whole wheat roll | 148 | | | 1 | | | | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | 1 | | | | | | 1 | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | |
| Snack | | | | | | | | | | |
| 2 large rectangle graham crackers | 156 | 3 rice cakes (3 inches in diameter), unsalted | 7 | 1 | | | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | |
| 1/4 cup dried apricots | 3 | | | | | 1 | | | | |
| Totals | | | | 6 1/2 | 5 3/4 | 4 1/3 | 5 | 2 | 0 | 1 2/3 |

| SODIUM LEVEL | | |
|-------------------------------------|----------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Calories | 1,944 | 1,941 |
| Total fat | 31 g | 28 g |
| Percent calories from fat | 14% | 13% |
| Saturated fat | 8 g | 7 g |
| Percent calories from saturated fat | 4% | 3% |
| Cholesterol | 180 mg | 180 mg |

| SODIUM LEVEL | | |
|-------------------|----------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Sodium | 2,331 mg | 1,568 mg |
| Calcium | 1,858 mg | 1,851 mg |
| Magnesium | 549 mg | 572 mg |
| Potassium | 5,555 mg | 5,575 mg |
| Fiber | 34 g | 35 g |

* Recipe on page 22.

† Recipe on page 23.

DAY 7



| | Sodium (mg) | Substitutions To Reduce Sodium to 1,500 mg | Sodium (mg) | Number of DASH Food Group Servings | | | | | | | |
|--|-------------|---|-------------|------------------------------------|------------|--------|-------|-------------------------|----------------------------|---------------|--------|
| | | | | Grains | Vegetables | Fruits | Dairy | Meat, poultry, and fish | Nuts, seeds, and dry beans | Fats and oils | Sweets |
| 2,400 mg Sodium Menu | | | | | | | | | | | |
| Breakfast | | | | | | | | | | | |
| 1 cup whole grain oat rings cereal | 212 | 1/2 cup regular oatmeal with 1 tsp cinnamon | 1 | 1 | | | | | | | |
| 1 medium banana | | 1 | | | | 1 | | | | | |
| 1 cup fruit yogurt, fat free, no sugar added | 107 | | | | | | 1 | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | | |
| Lunch | | | | | | | | | | | |
| tuna salad sandwich: | | | | | | | | | | | |
| 1/2 cup tuna, drained, rinsed | 57 | | | | | | | 1 | | | |
| 1 Tbsp mayonnaise, lowfat | 90 | | | | | | | | 1 | | |
| 1 large leaf romaine lettuce | 1 | | | | 1/4 | | | | | | |
| 2 slices tomato | 22 | | | | 1/2 | | | | | | |
| 2 slices whole wheat bread | 299 | | | 2 | | | | | | | |
| 1 medium apple | 0 | | | | | 1 | | | | | |
| 1 cup fat free milk | 126 | | | | | | 1 | | | | |
| Dinner | | | | | | | | | | | |
| 1/6 recipe zucchini lasagna* | 380 | substitute unsalted cottage cheese in recipe* | 196 | 3 | 1 | | 1 | | | | |
| salad: | | | | | | | | | | | |
| 1/2 cup fresh spinach leaves | 12 | | | | 1/2 | | | | | | |
| 1/2 cup tomatoes wedges | 8 | | | | | 1 | | | | | |
| 2 Tbsp croutons, seasoned | 62 | 2 Tbsp croutons, plain | 26 | 1/4 | | | | | | | |
| 2 Tbsp vinaigrette dressing, reduced fat | 312 | 2 Tbsp vinaigrette dressing† | 0 | | | | | | 3/4 | | |
| 1 small whole wheat roll | 148 | | | | 1 | | | | | | |
| 1 cup grape juice | 7 | | | | | | 1 1/3 | | | | |
| 1 tsp soft margarine | 51 | 1 tsp soft margarine, unsalted | 1 | | | | | | 1 | | |
| Snack | | | | | | | | | | | |
| 1/3 cup almonds, unsalted | 5 | | | | | | | | 1 | | |
| 2 slices (1 1/2 oz) cheddar cheese, natural, reduced fat | 260 | | | | | | | 1 | | | |
| 6 whole wheat crackers | 166 | 3 large rye wafer crackers, unsalted | 1 | 1 | | | | | | | |
| Totals | | | | 8 1/4 | 3 1/4 | 3 1/3 | 5 | 1 | 1 | 2 3/4 | 0 |

| | SODIUM LEVEL | |
|-------------------------------------|--------------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Calories | 1,980 | 1,941 |
| Total fat | 60 g | 56 g |
| Percent calories from fat | 27% | 26% |
| Saturated fat | 12 g | 12 g |
| Percent calories from saturated fat | 6% | 5% |
| Cholesterol | 72 mg | 76 mg |

| | SODIUM LEVEL | |
|-------------------|--------------|----------|
| Nutrients Per Day | 2,400 mg | 1,500 mg |
| Sodium | 2,471 mg | 1,498 mg |
| Calcium | 1,587 mg | 1,589 mg |
| Magnesium | 527 mg | 527 mg |
| Potassium | 4,556 mg | 4,588 mg |
| Fiber | 31 g | 31 g |

* Recipe on page 23

† Recipe on page 21

1
1 & 5

Recipes for Heart Health

Here are some recipes to help you cook up a week of tasty, heart healthy meals. If you're following the DASH eating plan at 1,500 milligrams of sodium per day or just want to reduce your sodium intake, use the suggested recipe changes.

DAY 1

Chicken Salad

| | | |
|-------------------------------|------|----------------------------------|
| 3 ¹ / ₄ | cups | chicken, cooked, cubed, skinless |
| 1/4 | cups | celery, chopped |
| 1 | Tbsp | lemon juice |
| 1/2 | tsp | onion powder |
| 1/8 | tsp | salt |
| 3 | Tbsp | mayonnaise, lowfat |

1. Bake chicken, cut into cubes, and refrigerate.
2. In a large bowl, combine all ingredients with chilled chicken and mix well.



Makes 5 servings.

Serving size: 3/4 cup

Per Serving:

| | | | |
|---------------|-------|-----------|--------|
| Calories | 183 | Sodium | 201 mg |
| Total fat | 7 g | Calcium | 17 mg |
| Saturated fat | 2 g | Magnesium | 25 mg |
| Cholesterol | 78 mg | Potassium | 240 mg |
| Fiber | 0 g | | |

To reduce sodium:

Do not add salt. New sodium total = 127 mg.

DAY 1 and 5

Yogurt Salad Dressing

| | | |
|-----|------|------------------------|
| 8 | oz | plain yogurt, fat free |
| 1/4 | cup | mayonnaise, fat free |
| 2 | Tbsp | chives, dried |
| 2 | Tbsp | dill, dried |
| 2 | Tbsp | lemon juice |

Mix all ingredients in bowl and refrigerate.

Makes 8 servings.

Serving size: 2 Tbsp

Per Serving:

| | | | |
|---------------|------|-----------|--------|
| Calories | 23 | Sodium | 84 mg |
| Total fat | 0 g | Calcium | 72 mg |
| Saturated fat | 0 g | Magnesium | 10 mg |
| Cholesterol | 1 mg | Potassium | 104 mg |
| Fiber | 0 g | | |

DAY 2

Vegetarian Spaghetti Sauce

| | | |
|-------------------------------|----------|-------------------|
| 2 | Tbsp | olive oil |
| 2 | small | onions, chopped |
| 3 | cloves | garlic, chopped |
| 1 ¹ / ₄ | cups | zucchini, sliced |
| 1 | Tbsp | oregano, dried |
| 1 | Tbsp | basil, dried |
| 1 | 8-oz can | tomato sauce |
| 1 | 6-oz can | tomato paste |
| 2 | medium | tomatoes, chopped |
| 1 | cup | water |

1. In a medium skillet, heat oil. Sauté onions, garlic, and zucchini in oil for 5 minutes on medium heat.
2. Add remaining ingredients and simmer covered for 45 minutes. Serve over spaghetti.



Makes 6 servings.

Serving size: 3/4 cup

Per Serving:

| | | | |
|---------------|------|-----------|--------|
| Calories | 102 | Sodium | 459 mg |
| Total fat | 5 g | Calcium | 42 mg |
| Saturated fat | 1 g | Magnesium | 37 mg |
| Cholesterol | 0 mg | Potassium | 623 mg |
| Fiber | 5 g | | |

To reduce sodium:

Use a 6-oz can of no-salt-added tomato paste. New sodium total = 260 mg.



DAY 2

Vinaigrette Salad Dressing

| | | |
|-----|------|------------------------------|
| 1 | bulb | garlic, separated and peeled |
| 1/2 | cup | water |
| 1 | Tbsp | red wine vinegar |
| 1/4 | tsp | honey |
| 1 | Tbsp | virgin olive oil |
| 1/4 | tsp | black pepper |

Makes 4 servings.

Serving size: 2 Tbsp

Per Serving:

| | | | |
|---------------|------|-----------|------|
| Calories | 33 | Sodium | 0 mg |
| Total fat | 3 g | Calcium | 2 mg |
| Saturated fat | 1 g | Magnesium | 1 mg |
| Cholesterol | 0 mg | Potassium | 9 mg |
| Fiber | 0 g | | |

- Place the garlic cloves into a small saucepan and pour enough water (about 1/2 cup) to cover them.
- Bring water to a boil, then reduce heat and simmer until garlic is tender, about 15 minutes.
- Increase the heat for 3 minutes, and reduce the liquid to 2 Tbsp.
- Pour the contents into a small sieve over a bowl and, with a wooden spoon, mash the garlic through the sieve.
- Whisk the vinegar and honey into the garlic mixture; mix in the oil and seasoning.

DAY 3

New Potato Salad

| | | |
|-----|-------|-----------------------|
| 16 | small | new potatoes (5 cups) |
| 2 | Tbsp | olive oil |
| 1/4 | cup | green onions, chopped |
| 1/4 | tsp | black pepper |
| 1 | tsp | dill weed, dried |

- Thoroughly clean the potatoes with a vegetable brush and water.
- Boil potatoes for 20 minutes or until tender.
- Drain and cool potatoes for 20 minutes.
- Cut potatoes into quarters and mix with olive oil, onions, and spices.
- Refrigerate and serve.

Makes 5 servings.

Serving size: 1 cup

Per Serving:

| | | | |
|---------------|------|-----------|--------|
| Calories | 187 | Sodium | 12 mg |
| Total fat | 6 g | Calcium | 21 mg |
| Saturated fat | 1 g | Magnesium | 36 mg |
| Cholesterol | 0 mg | Potassium | 547 mg |
| Fiber | 3 g | | |



DAY 4

Chicken and Spanish Rice

| | | |
|-------|----------|---|
| 1 | cup | onions, chopped |
| 1/4 | cup | green peppers |
| 2 | tsp | vegetable oil |
| 1 | 8-oz can | tomato sauce |
| 1 | tsp | parsley, chopped |
| 1/2 | tsp | black pepper |
| 1 1/4 | tsp | garlic, minced |
| 5 | cup | cooked rice (in unsalted water) |
| 3 1/2 | cups | chicken breast, cooked (skin and bone removed), diced |

- In a large skillet, sauté onions and green peppers in oil for 5 minutes on medium heat.
- Add tomato sauce and spices. Heat through.
- Add cooked rice and chicken, and heat through.

Makes 5 servings.

Serving size: 1 1/2 cups

Per Serving:

| | | | |
|---------------|-------|-----------|--------|
| Calories | 406 | Sodium | 367 mg |
| Total fat | 6 g | Calcium | 45 mg |
| Saturated fat | 2 g | Magnesium | 57 mg |
| Cholesterol | 75 mg | Potassium | 527 mg |
| Fiber | 2 g | | |

To reduce sodium:

Use one 4-oz can of no-salt-added tomato sauce and one 4-oz can of regular tomato sauce. New sodium total = 226 mg.

DAY 5

5

Tuna Salad

| | | |
|-------|----------|-------------------------|
| 2 | 6-oz can | tuna, packed in water |
| 1/2 | cup | raw celery, chopped |
| 1/3 | cup | green onions, chopped |
| 6 1/2 | Tbsp | mayonnaise, reduced fat |

1. Rinse and drain tuna for 5 minutes. Break apart with a fork.
2. Add celery, onion, and mayonnaise, and mix well.

Makes 5 servings.

Serving size: 1/2 cup

Per Serving:

| | | | |
|---------------|-------|-----------|--------|
| Calories | 146 | Sodium | 158 mg |
| Total fat | 7 g | Calcium | 15 mg |
| Saturated fat | 0 g | Magnesium | 19 mg |
| Cholesterol | 25 mg | Potassium | 201 mg |
| Fiber | 1 g | | |

**DAY 5**

5

Turkey Meatloaf

| | | |
|-----|-------|---------------------|
| 1 | pound | ground turkey, lean |
| 1/2 | cup | oats, regular, dry |
| 1 | large | egg, whole |
| 1 | Tbsp | onion, dehydrated |
| 1/4 | cup | catsup |

1. Combine all ingredients and mix well.
2. Bake in a loaf pan at 350°F for 25 minutes or to internal temperature of 165°F.
3. Cut into five slices and serve.

Makes 5 servings.

Serving size: 1 slice (3 oz)

Per Serving:

| | | | |
|---------------|--------|-----------|--------|
| Calories | 196 | Sodium | 217 mg |
| Total fat | 7 g | Calcium | 33 mg |
| Saturated fat | 2 g | Magnesium | 35 mg |
| Cholesterol | 103 mg | Potassium | 292 mg |
| Fiber | 1 g | | |

**DAY 6**

6

Spicy Baked Fish

| | | |
|---|-------|----------------------------|
| 1 | pound | cod (or other fish) fillet |
| 1 | Tbsp | olive oil |
| 1 | tsp | spicy seasoning, salt free |

1. Preheat oven to 350°F. Spray a casserole dish with cooking oil spray.
2. Wash and dry fish. Place in dish. Mix oil and seasoning, and drizzle over fish.
3. Bake uncovered for 15 minutes or until fish flakes with fork. Cut into 4 pieces. Serve with rice.

Makes 4 servings.

Serving size: 1 piece (3 oz)

Per Serving:

| | | | |
|---------------|-------|-----------|--------|
| Calories | 133 | Sodium | 119 mg |
| Total fat | 1 g | Calcium | 20 mg |
| Saturated fat | 0 g | Magnesium | 67 mg |
| Cholesterol | 77 mg | Potassium | 394 mg |
| Fiber | 0 g | | |

6

DAY 6**Scallion Rice**

| | |
|--------------------|-----------------------------------|
| $\frac{4}{5}$ cups | cooked rice (in unsalted water) |
| $\frac{1}{2}$ tsp | bouillon granules, unsalted |
| $\frac{1}{4}$ cup | scallions (green onions), chopped |

- Cook rice according to directions on the package.
- Combine the cooked rice, scallions, and bouillon granules, and mix well.
- Measure 1 cup portions and serve.



7

DAY 7**Zucchini Lasagna**

| | |
|---------------------|---|
| $\frac{1}{2}$ pound | cooked lasagna noodles (in unsalted water) |
| $\frac{3}{4}$ cup | mozzarella cheese, part-skim, grated |
| $\frac{1}{2}$ cups | cottage cheese, fat free |
| $\frac{1}{4}$ cup | Parmesan cheese, grated |
| $\frac{1}{2}$ cups | zucchini, raw, sliced |
| $\frac{2}{3}$ cups | tomato sauce, no salt added |
| 2 tsp | basil, dried |
| 2 tsp | oregano, dried |
| $\frac{1}{4}$ cup | onion, chopped |
| 1 clove | garlic |
| $\frac{1}{8}$ tsp | black pepper |

Makes 6 servings.

Serving size: 1 piece

Per Serving:

| | | | |
|---------------|-------|-----------|--------|
| Calories | 276 | Sodium | 380 mg |
| Total fat | 5 g | Calcium | 216 mg |
| Saturated fat | 2 g | Magnesium | 55 mg |
| Cholesterol | 11 mg | Potassium | 561 mg |
| Fiber | 5 g | | |

Makes 5 servings.

Serving size: 1 cup

Per Serving:

| | | | |
|---------------|------|-----------|-------|
| Calories | 185 | Sodium | 3 mg |
| Total fat | 1 g | Calcium | 24 mg |
| Saturated fat | 0 g | Magnesium | 20 mg |
| Cholesterol | 0 mg | Potassium | 80 mg |
| Fiber | 1 g | | |

- Preheat oven to 350°F. Lightly spray a 9 x 13 inch baking dish with vegetable oil spray.
- In a small bowl, combine $\frac{1}{8}$ cup mozzarella and 1 Tbsp Parmesan cheese. Set aside.
- In a medium bowl, combine remaining mozzarella and Parmesan cheese with all of the cottage cheese. Mix well and set aside.
- Combine tomato sauce with remaining ingredients. Spread a thin layer of tomato sauce in the bottom of the baking dish. Add a third of the noodles in a single layer. Spread half of the cottage cheese mixture on top. Add a layer of zucchini. Repeat layering. Add a thin coating of sauce. Top with noodles, sauce, and reserved cheese mixture. Cover with aluminum foil.
- Bake 30 to 40 minutes. Cool for 10 to 15 minutes. Cut into 6 portions.

To reduce sodium:

Use unsalted cottage cheese.

New sodium total = 196 mg.



MAKING THE DASH TO GOOD HEALTH

The DASH plan is a new way of eating—for a lifetime. If you slip from the eating plan for a few days, don't let it keep you from reaching your health goals. Get back on track. Here's how:

- **Ask yourself why you got off the track.**

Was it at a party? Were you feeling stress at home or work? Find out what triggered your sidetrack—and start again with the DASH plan.

- **Don't worry about a slip.**

Everyone slips—especially when learning something new. Remember that changing your lifestyle is a long-term process.

- **See if you tried to do too much at once.**

Often, those starting a new lifestyle try to change too much at once. Instead, change one or two things at a time. Slowly but surely is the best way to succeed.

- **Break the process down into small steps.**

This not only keeps you from trying to do too much at once, but also keeps the changes simpler. Break complex goals into smaller, simpler steps, each of which is attainable.

- **Write it down.**

Use the table on page 12 to keep track of what you eat. This can help you find the problem. Besides noting what you eat, also record: where you are, what you're doing, and how you feel. Keep track for several days. You may find, for instance, that you eat high fat foods while watching television. If so, you could start keeping a substitute snack on hand to eat instead of the high fat foods. This record also helps you be sure you're getting enough of each food group.

- **Celebrate success.**

Treat yourself to a nonfood treat for your accomplishments.

Want To Learn More?

Bulk copies of *Facts About the DASH Eating Plan* fact sheet are available at a minimal cost from the NHLBI Health Information Center.

For More Information

The NHLBI Health Information Center is a service of the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health. The NHLBI Health Information Center provides information to health professionals, patients, and the public about the treatment, diagnosis, and prevention of heart, lung, and blood diseases. For more information, contact:

NHLBI Health Information Center
P.O. Box 30105
Bethesda, MD 20824-0105
Phone: 301-592-8573
TTY: 240-629-3255
Fax: 301-592-8563
Web site: <http://www.nhlbi.nih.gov>

For more information about hypertension, visit the NHLBI's online guide to lowering high blood pressure. It can be found through the NHLBI Web site at <http://www.nhlbi.nih.gov>—look for special Web pages. You can order "Your Guide to Lowering Blood Pressure" from the NHLBI Web site. Or, order it from the NHLBI Health Information Center—ask for NIH Publication No. 03-5232.

The NHLBI Web site has information on other heart-related topics too. Or, to obtain information on other topics, write to the NHLBI Health Information Center.

To hear recorded messages about high blood pressure prevention and treatment, call toll-free 1-800-575-WELL (9355). The information line also has messages on high blood cholesterol. The messages are available in English and Spanish.

Menus and recipes were analyzed using the Minnesota Nutrition Data System software—Food Data Base version 4.02_30; Nutrient Data Base version 4.02_30—developed by the Nutrition Coordinating Center, University of Minnesota, Minneapolis, MN.



U.S. DEPARTMENT
OF HEALTH
AND HUMAN SERVICES

National
Institutes
of Health

National Heart,
Lung, and Blood
Institute

National High Blood
Pressure Program

NIH Publication No. 03-4082
Originally Printed 1998
Reprinted February 1999
Revised May 2003