



Health Seekers

The DASH Diet to lower high blood pressure

What is the DASH diet?

The Dietary Approaches to Stopping Hypertension (DASH Diet) is based on two studies, DASH and DASH-Sodium, that looked at ways of reducing blood pressure through changes in diet. In the DASH study, people were given one of three eating plans: a plan similar in nutrients to what most North Americans eat; the same plan but with extra vegetables and fruit; or the DASH diet, which is rich in vegetables, fruit and low-fat dairy foods and lower in saturated fat, **total fat** and **cholesterol**.

The results were compelling. The diet higher in **vegetables and fruit** and the DASH diet both reduced blood pressure.

The DASH diet had the greatest effect on blood pressure, lowering levels within two weeks of starting the plan. Not only was blood pressure reduced, but total cholesterol and low-density lipoprotein (LDL) or "bad cholesterol" were lower.

In the DASH-Sodium study, participants were randomly assigned to either a diet pattern typical of what many Americans eat or the DASH diet, and were fed each of the following three sodium plans in a random order for a set period of time: the DASH diet with 3,300 mg of sodium per day (a normal amount for many North Americans); 2,300 mg of sodium (a moderately restricted amount); or 1,500 mg of sodium (a more restricted amount, about 2/3 of a teaspoon of salt). Blood pressure was lower for everyone on the DASH diet. However, the less salt people consumed, the greater the decrease in blood pressure. People who already had high blood pressure had the largest decrease in blood pressure.

Why is a healthy blood pressure important?

High blood pressure causes the heart to work harder to pump nutrient- and oxygen-rich blood to the body. The arteries that deliver the blood become scarred and less elastic. Although these changes happen to everyone as they age, they happen more quickly in people with high blood pressure. As the arteries stiffen, the heart works even harder, causing the heart muscle to become thicker, weaker and less able to pump blood. When high blood pressure damages arteries, they are not able to deliver enough blood to organs for their proper functioning. As a result, organs may become damaged, too. For example, this type of damage can affect the heart, causing a heart attack, the brain, causing a stroke, and the kidneys, leading to kidney failure.

How is DASH different from Canadian recommendations?

Both **Canada's Food Guide** and the DASH diet focus on vegetables, fruit, whole grains and protein choices such as nuts, seeds, beans, lean meats, poultry, fish and low-fat dairy foods. The DASH diet is also low in saturated fat, sugar and salt.

Canada's Food Guide recommends filling half your plate with vegetables and fruit, a quarter of your plate with whole-grain foods, a quarter of your plate with protein foods and making water your drink of choice. The DASH diet specifies the number of servings and serving sizes for each food group.

The DASH eating plan

DASH food groups:

- vegetables
- fruit
- grains (mainly whole grains)
- low fat or no-fat dairy foods
- lean meats, poultry and fish
- nuts, seeds and dry beans
- fats and oils.

DASH daily servings (except as noted) and examples:**• Vegetables: 4-5 servings**

250 mL (1 cup) raw leafy vegetables

125 mL (½ cup) cooked vegetables

• Fruit: 4-5 servings

1 medium piece of fruit

60 mL (¼ cup) dried fruit

125 mL (½ cup) fresh, frozen or canned fruit

• Grains (mainly whole grains): 7-8 servings

1 slice bread

250 mL (1 cup) ready to eat cereal

125 mL (½ cup) cooked rice, pasta or cereal

• Low fat or no-fat dairy foods: 2-3 servings

250 mL (1 cup) milk

250 mL (1 cup) yogurt

50 g (1½ oz) cheese

• Lean meats, poultry and fish: 2 servings or less

3 ounces cooked lean meats, skinless poultry, or fish

• Nuts, seeds and dry beans: 4-5 servings per week

1/3 cup (1.5 oz.) nuts

30 mL (2 tbsp) peanut butter

2 tbsp (1/2 oz.) seeds

1/2 cup cooked dry beans or peas

• Fats and oils: 2-3 servings

5 mL (1 tsp) soft margarine

15mL (1 tbsp) low-fat mayonnaise

30 mL (2 tbsp) light salad dressing

5 mL (1 tsp) vegetable oil

What about medication?

Many people require medication to control their blood pressure. Lifestyle modification, which includes healthy eating and regular physical activity, may be the only treatment needed in those with mild high blood pressure. In those that require medication to control their blood pressure, following a healthy lifestyle may reduce the need for, or the amount of, medication required.

What next?

A healthy lifestyle, including healthy eating, is part of the Canadian recommendations for the management of high blood pressure. Heart and Stroke is involved in developing blood pressure guidelines, which are updated every year. To control your blood pressure and reduce the risk of heart disease, the guidelines recommend that you:

- Engage in 30 to 60 minutes of moderate-intensity exercise on most days of the week.
- Choose the following more often:
 - vegetables
 - fruit
 - low-fat dairy or dairy alternatives
 - whole grains and protein from a variety of foods, such as beans, lentils, nuts and seeds, lean meats, poultry and fish.
- Maintain a healthy body weight.
- Eat less salt by:
 - limiting your use of salt in cooking and at the table
 - avoiding highly processed and fast foods
 - choosing fresh or plain frozen vegetables and fruit
 - avoiding canned or prepared foods that are high in salt
 - reading the Nutrition Facts table on food packages for sodium content
 - using other seasonings such as herbs, spices, lemon juice and garlic during food preparation.
- If you drink alcohol, limit yourself to no more than **2 standard drinks per week**. (Do not drink when you are driving a vehicle, taking medications or other drugs that interact with alcohol, pregnant or are planning to be pregnant, making important decisions, doing any kind of dangerous physical activity, living with alcohol dependence or mental or physical health problems, or responsible for the safety of others. If you are concerned about how drinking may affect your health, talk to your doctor).
- Be smoke-free. It is important to stop smoking if you have high blood pressure. Smoking increases the risk of developing heart problems and other diseases.
- Take your medication(s) as prescribed.
- Monitor your blood pressure regularly.
- Avoid drinking sugar sweetened beverages. Choose safe drinking water, low fat milk or tea instead.

Changing your diet means a life-long commitment to healthier lifestyle choices. People who make small changes in their diet over a longer period rather than a dramatic change all at once, are more likely to stay committed to a healthier diet.

If you are considering starting on the DASH diet, discuss it with your healthcare provider first.

How much salt?

We recommend Canadians consume no more than 2,300 mg of sodium (about 1 teaspoon/5 mL of table salt) a day. The amount of salt you eat isn't just what you shake onto your food – it is already added in large quantities to prepared foods, canned products, snack foods and restaurant meals.

Ways to get started on the DASH diet

Change gradually:

- If you now eat one or two vegetables a day, add another serving at lunch and dinner.

- If you don't eat fruit now or have only juice at breakfast, add a serving of fruit to your meals or switch out your juice for a whole fruit.
- Limit meat and alternatives to about 6 oz (170 g) over two meals (two servings). Each serving is about the size of a deck of cards or the palm of your hand.
- Choose plant-based proteins more often.
- Choose fruit, vegetables, whole grains or protein foods for desserts and snacks.
- Choose a variety of foods.

Related information

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