

High Blood Pressure and the DASH Diet

What is high blood pressure?

Blood pressure is the force of blood against the inside walls of your arteries. If your arteries become narrow or hardened, the pressure of the blood inside goes up, causing **high blood pressure (hypertension)**.

High blood pressure can damage your arteries, reduce blood flow to your organs, and make your heart work harder. If not controlled, it can lead to heart disease, stroke, kidney disease, blindness, and other health problems.

How is it diagnosed?

To measure your blood pressure, your health care provider will wrap a special cuff around your arm. The cuff is attached to a machine or gauge. When the cuff is inflated, it measures the pressure in your blood vessels in millimeters of mercury (mmHg).

Blood pressure is measured with 2 numbers, for example, “120 over 80” (written as 120/80). The first number is your **systolic pressure** (when your heart beats). The second number is your **diastolic pressure** (when your heart rests between beats). The table below shows the numbers for normal, borderline high blood pressure (**prehypertension**), and high blood pressure.

Your health care provider will check your blood pressure several times to determine if you have high blood pressure on a regular basis.

BP category	Systolic	/	Diastolic
Normal	less than 125	and	less than 85
Prehypertension	126-139	or	86-89
Hypertension	140 or higher	or	90 or higher



Important keys to blood pressure control are **reducing the amount of sodium (salt)** in your diet, a **healthy diet** rich in fruits and vegetables, and **home monitoring**.

What causes it?

Most commonly, blood pressure develops gradually over many years. Certain things can increase your risk for high blood pressure. These are called **risk factors**. Some you can't change, others you can. Check your risk factors on the list below. See the next two pages for tips on managing the risk factors you can control.

Risk factors you CANNOT change	Risk factors you CAN change
<input type="checkbox"/> Family history <input type="checkbox"/> Age: Risk increases as you age <input type="checkbox"/> African American race	<input type="checkbox"/> Inactivity <input type="checkbox"/> Being overweight or obese <input type="checkbox"/> Diet <input type="checkbox"/> Smoking and tobacco use <input type="checkbox"/> Stress <input type="checkbox"/> Use of birth control pills

What are the symptoms?

Rarely, people with high blood pressure may have dizziness, headaches, or nose bleeds. However, **most people don't have any signs or symptoms**. For this reason, you should have your blood pressure checked regularly, even if you're feeling fine.

Manage your BP with MAWDS

“MAWDS” is a word that can help you manage your risk factors and your blood pressure. It means:



Medication — Take your medicine.

The best way to manage your blood pressure is to take your medicine every day, even if you feel fine. Make sure you understand how and when to take your medicines. Remember that most people with high blood pressure do not have symptoms. And even if your blood pressure has reached its goal, it may not stay there without your medicines. Tell your doctor about any side effects.



Activity — Stay active every day.

Staying active is one of the best ways to control your blood pressure. According to the American Heart Association, people who are active have up to a 50% decreased risk of developing high blood pressure. Aim for at least 30 minutes of exercise almost every day.



Weight — Maintain a healthy weight.

Being overweight increases your risk of high blood pressure and heart disease. Losing even a small amount of weight can lower your risk. The best ways to reach and stay at a healthy weight are to be active and eat healthy foods.



Diet — Eat a healthy diet.

Studies have shown that following a healthy eating plan — such as the **DASH diet** described on these pages — lowers your systolic blood pressure by an average of 11 points, and your diastolic blood pressure by an average of 5 points. This diet can also help prevent osteoporosis, cancer, heart disease, stroke, and diabetes.



Smoking and Stress — Stop smoking, and manage stress.

Tobacco use harms your arteries and increases your blood pressure. Lots of stress over many months or years can also hurt your body. Quitting smoking and learning to manage stress can lower your blood pressure and improve your overall health.

Do the DASH

DASH stands for **D**ietary **A**pproaches to **S**top **H**ypertension. The **DASH** eating plan helps you to:

- **Lower the sodium (salt) in your diet.** The standard DASH diet allows up to 2,300 milligrams (mg) of sodium a day. A lower-sodium DASH diet calls for less than 1,500 mg of sodium a day.
- **Follow a healthy diet in general,** rich in whole grains, fruits and vegetables, fat-free or low-fat milk products, fish and poultry, beans, seeds, and nuts.

How it works: The **DASH eating plan** (page 3) suggests a certain number of daily servings from various food groups based on your calorie intake. Recommended calories are based on your sex, age, and activity level (see table below). If you want to lose weight, you'll need to eat fewer calories a day, increase your activity level, or both.

Sex	Age	Calories needed based on activity level		
		Low	Medium	High
Female	19 to 30	2,000	2,000 to 2,200	2,400
	31 to 50	1,800	2,000	2,200
	51 and older	1,600	1,800	2,000 to 2,200
Male	19 to 30	2,400	2,600 to 2,800	3,000
	31 to 50	2,200	2,400 to 2,600	2,800 to 3,000
	51 and older	2,000	2,200 to 2,400	2,400 to 2,800

General tips:

- **Avoid high-sodium foods.** Pre-made foods that come in cans, boxes, and bags are often high in sodium, as are foods that come from the deli, like ham, salami, potato salad, and pickles.
- **Read food labels carefully.** Foods with more than 20% of the Daily Value are considered “high-sodium.” Check the serving size. This is what the nutrition facts are based on.
- **Go for gradual changes.** For example, add a serving of vegetables at lunch and dinner. Add a serving of fruit to your meals or as a snack. Use half your usual amount of butter or salad dressing.

The DASH eating plan

Food Group	Servings based on calorie level			Serving sizes	Examples
	1,600	2,000	2,600		
Grains Major sources of energy and fiber. Whole grains are recommended. They are good sources of fiber and nutrients.	6 <i>per day</i>	6 to 8 <i>per day</i>	10 to 11 <i>per day</i>	1 slice bread 1 ounce dry cereal (between ½ cup and 1¼ cups, depending on cereal type); check the nutrition label ½ cup cooked rice or pasta	Whole wheat bread, whole wheat pasta, oatmeal, brown rice, unsalted pretzels and popcorn
Vegetables Rich sources of potassium, magnesium, and fiber.	3 to 4 <i>per day</i>	4 to 5 <i>per day</i>	5 to 6 <i>per day</i>	1 cup raw, leafy vegetables ½ cup cut-up raw or cooked vegetables ½ cup vegetable juice	Broccoli, carrots, collards, green beans, kale, lima beans, potatoes, spinach, squash, sweet potatoes, tomatoes
Fruits Important sources of potassium, magnesium, and fiber.	4 <i>per day</i>	4 to 5 <i>per day</i>	5 to 6 <i>per day</i>	1 medium fruit ¼ cup dried fruit ½ cup fresh, frozen, or canned fruit or fruit juice	Apples, apricots, bananas, dates, grapes, oranges, grapefruit, mangoes, melons, peaches, pineapples, raisins, strawberries, tangerines
Fat-free or low-fat milk and milk products Major sources of calcium and protein.	2 to 3 <i>per day</i>	2 to 3 <i>per day</i>	3 <i>per day</i>	1 cup milk or yogurt 1½ ounces cheese	Fat-free (skim) or low-fat (1%) milk; fat-free, low-fat, or reduced-fat cheese; fat-free or low-fat regular or frozen yogurt
Lean meats, poultry, and fish Rich sources of protein and magnesium.	3 to 6 <i>per day</i>	6 or less <i>per day</i>	6 <i>per day</i>	1 ounce cooked meats, poultry, or fish 1 egg	Only lean meats (trim away visible fat; broil, roast, or poach; remove poultry skin)
Nuts, seeds, and legumes Rich sources of energy, magnesium, protein, and fiber.	3 <i>per week</i>	4 to 5 <i>per week</i>	1 <i>per day</i>	⅓ cup or 1½ ounces nuts 2 Tablespoons peanut butter 2 Tablespoons or ½ ounce seeds ½ cup cooked legumes (dry beans and peas)	Almonds, hazelnuts, mixed nuts, peanuts, walnuts, sunflower seeds, peanut butter, kidney beans, lentils, split peas
Fats and oils	2 <i>per day</i>	2 to 3 <i>per day</i>	3 <i>per day</i>	1 teaspoon soft margarine or vegetable oil 1 Tablespoon mayonnaise 2 Tablespoons low-fat salad dressing	Soft margarine, vegetable oil (such as canola, corn, olive, or safflower), low-fat mayonnaise, light salad dressing
Sweets and added sugars	none	5 or less <i>per week</i>	2 or less <i>per day</i>	1 Tablespoon sugar, jelly, or jam ½ cup sorbet or gelatin 1 cup lemonade	Fruit-flavored gelatin, fruit punch, hard candy, jelly, maple syrup, sorbet and ices, sugar

Checking your blood pressure at home

Your health care provider may ask you to check your blood pressure at home on a regular basis. It can help you and your doctor know how well your medicines, diet, and activities are working to control your blood pressure. Here are some tips for checking at home:

- **Choose a good monitor:**
 - Use a monitor with an arm cuff that wraps around the upper arm and inflates automatically. Wrist cuffs aren't as accurate.
 - Make sure the arm cuff is the right size for your arm. If your upper arm is more than 13 inches around, you may need a large cuff.
 - Look for a monitor that also displays heart rate. Some blood pressure medicines affect your heart rate, so your doctor may want you to check your heart rate along with your blood pressure.
- **Get an accurate reading:**
 - Wait at least a half hour after eating, drinking caffeine, or exercising.
 - Sit quietly for 5 minutes before taking your blood pressure.
 - Place the cuff in the correct position on your arm.
 - Sit straight up with both feet flat on the floor. Rest your arm on a table or the arm of a chair. Follow the instructions provided with the monitor.
- **Tracking your results:**
 - Check your blood pressure at least 2 or 3 times a week, at different times of the day. Your doctor may ask you to take your blood pressure daily, sometimes even twice a day at first. Once your blood pressure becomes more stable, you can check it less often.
 - Write it down. Write your results in a notebook or a tool such as Intermountain's *BP Tracker* where you can also track your heart rate and weight. Take this record to your appointments to share with your health care provider.

Your health care providers:

Name: _____

Phone: _____

Name: _____

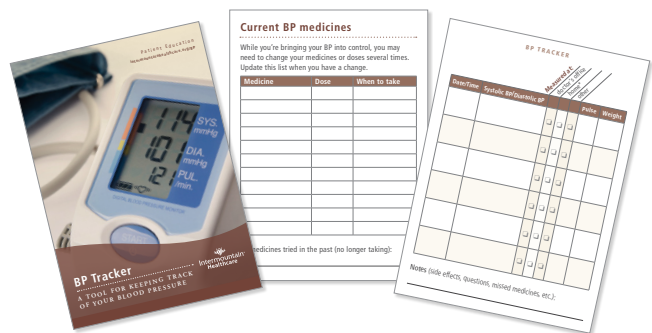
Phone: _____

Your next appointment:

With: _____

Date: _____ Time: _____

Other instructions:



Intermountain's *BP Tracker* provides a pocket-sized guide to help you keep track of your blood pressure, weight, medicines, appointments, and more. Ask your healthcare provider for a copy, or visit intermountainhealthcare.org/BP. This website also links to other resources to help you manage your blood pressure — including more information on heart-healthy nutrition, quitting smoking, and losing weight.