

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 too narrow or hardened, the pressure of the blood inside goes up, causing **high blood pressure (hypertension)**.

High blood pressure can damage your arteries, restrict blood flow to your organs, and increase the work of the heart. If not controlled, it can lead to heart disease, stroke, kidney disease, blindness, and other health problems.

How is it diagnosed?

Blood pressure is measured with a simple device called a **sphygmomanometer**. This device usually has an inflatable arm cuff attached to a machine or gauge that displays the pressure in millimeters of mercury (mm Hg).

Blood pressure is expressed as “systolic over diastolic”. For example, “120 over 80” (written as 120/80). Systolic is the pressure when your heart beats, and diastolic is when your heart rests between beats. The table below gives values for normal, borderline (“**prehypertension**”), and high blood pressure (**hypertension**).

Keep in mind that blood pressure goes up and down all day long. One reading alone can’t tell if you have high blood pressure. A doctor decides based on several blood pressure readings.

BP category	Systolic	/	Diastolic
Normal	less than 120	and	less than 80
Prehypertension	120-139	or	80-89
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. Many factors increase your risk for high blood pressure. Some you can’t change, others you can. Check your risk factors on the list below. See the next two pages for tips for managing those risk factors you do have control over.

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"/> Overweight and obesity <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 have no 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

Learn and remember the “MAWDS” acronym to help manage your risk factors and your blood pressure.



Medication — Take your medication.

Taking prescribed medications is extremely important. Make sure you understand how and when to take your medications. Report any side effects to your doctor. Do NOT stop taking your medications, even if you feel fine. 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 medications.



Activity — Stay active every day.

Staying active is one of the most important things you can do 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. Most experts agree that you should 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 significantly decrease this risk. The best ways to reach and maintain a healthy weight are to be active and follow a healthy eating plan.



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 BP by an average of 5 points. One study showed you may be able to reduce your blood pressure after just two weeks! 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. Chronic stress can also take a toll on 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 **Dietary Approaches to Stop Hypertension**. The **DASH** eating plan encourages you to:

- **Reduce the sodium (salt) in your diet.** The standard DASH diet allows up to 2,300 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** like canned soups and sauces, macaroni and cheese, pizza, hot dogs, salty snacks, prepared salads like potato salad, pickles, and processed meats (ham, salami, beef jerky).
- **Read food labels carefully.** Look for foods with sodium content less than 5% Daily Value. Foods with more than 20% are considered “high-sodium.” Remember to check the serving size that the sodium value and other 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	Select only lean meats and trim away visible fat; broil, roast, or poach; remove skin from poultry
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

Monitoring and tracking

For most people with high blood pressure, home monitoring is an important part of the treatment plan. It can help you and your doctor tell how well your medications and lifestyle changes are controlling your blood pressure. Tips to successful home monitoring are:

- **Choose a good monitor:**
 - **Look for a monitor with an arm cuff** that wraps around the upper arm and inflates automatically. Avoid wrist cuffs, as they are less 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 monitor with a large cuff.
 - **Look for a monitor that also displays heart rate.** Sometimes your doctor will want you to record your heart rate along with your blood pressure. Some blood pressure medications affect your heart rate.
- **Get an accurate reading:**
 - **Sit quietly for 5 minutes** before taking your blood pressure, with both feet flat on the floor. Rest your arm on a table or arm of a chair.
 - **Wait at least a half hour** after eating, drinking caffeine, or exercising.
 - **Place the cuff in the correct position** on your arm. Follow the instructions provided with the monitor.
- **Monitor regularly and keep track:**
 - **Monitor at least 2 or 3 times a week**, at different times of the day. When you're first diagnosed with high blood pressure, you may be asked to take your blood pressure daily, sometimes even twice a day. Once your blood pressure becomes more stable, you can check it less often.
 - **Write it down.** Keeping an accurate record is important. Use a tool such as Intermountain's *BP Tracker* to record your blood pressure and other information (like your heart rate and weight). Take this record to your health appointments to help you and your doctor monitor your progress and adjust your treatment plan as necessary.

Your health advocates:

Name: _____

Phone: _____

Name: _____

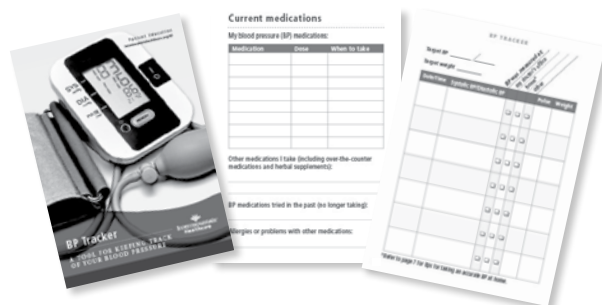
Phone: _____

Your next appointment:

With: _____

Date: _____ Time: _____

Other instructions:



Intermountain's *BP Tracker*

Intermountain's *BP Tracker* provides a pocket-sized guide to help you keep track of your blood pressure, weight, medications, 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.