PATIENT & CAREGIVER EDUCATION

About Hypertension (High Blood Pressure)

This information explains what hypertension (HY-per-TEN-shun) is and how to treat it.

What is hypertension?

Hypertension means high blood pressure (BP). Blood pressure is the pressure that your blood puts on the inner walls of your arteries. An artery is a blood vessel (tube) that carries blood from your heart to the rest of your body.

High blood pressure is when the force of your blood pressing against your artery walls is too high. This makes your heart work harder than it needs to. This can cause damage to your artery walls.

Untreated high blood pressure can cause problems such as:

- Damage to your heart
- Heart attacks

- Heart failure
- Kidney failure
- Stroke

Understanding your blood pressure reading

Blood pressure readings are given as 2 numbers that look like a fraction (see Figure 1). The readings are measured in millimeters of mercury (mm Hg).

Blood pressure (BP) readings are given as 2 numbers, measured in millimeters of mercury (mm Hg, see Figure 1).

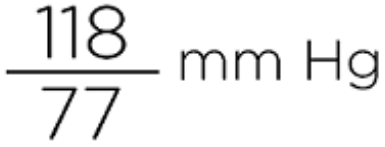


Figure 1. Blood pressure reading

Systolic blood pressure

Systolic blood pressure is the top number of the reading. It measures how much pressure your blood puts on your artery walls when your heart beats.

Diastolic blood pressure

Diastolic blood pressure is the bottom number of the reading. It measures how much pressure your blood is putting on your artery walls when your heart rests between beats.

One or both numbers can be too high. If they’re too high, you may have hypertension.

The table below shows the ranges for healthy blood pressure, prehypertension (elevated blood pressure), and hypertension. Your doctor will monitor your readings and recommend steps to control your blood pressure.

	Systolic BP		Diastolic BP
Normal BP	Less than 120 mm Hg	and	Less than 80 mm Hg
Prehypertension	120 to 129 mm Hg	and	Less than 80 mm Hg
Hypertension Stage 1	130 to 139 mm Hg	or	80 to 89 mm Hg
Hypertension Stage 2	140 mm Hg or higher	or	90 mm Hg or higher

For more information on monitoring your blood pressure, read *How To Monitor Your Blood Pressure at Home* (www.mskcc.org/cancer-care/patient-education/how-monitor-blood-pressure-home).

How to treat high blood pressure

Treating high blood pressure starts with lifestyle changes, followed by medications, if needed. Talk with your healthcare provider about which treatment options

are best for you.

Lifestyle changes to lower your blood pressure

- Keep a healthy body weight. You can ask your doctor for a referral to a clinical dietitian-nutritionist.
- Eat a healthy diet. Include lots of fruits and vegetables, low-fat dairy products, and fiber.
- Avoid foods high in fat. Lower the amount of caffeine you eat (including chocolate) and drink (including coffee and tea). For more information, ask your nurse for the resource *Eat Your Way to Better Health* (www.mskcc.org/pe/eat_better_health).
- Lower the amount of sodium (salt) you eat. Most people should eat no more than 2 grams of sodium a day. Talk with your healthcare provider about the amount that's right for you. For more information, read the resource *2-Gram Sodium Diet* (www.mskcc.org/pe/2_gram_sodium).
- Limit the amount of alcohol you drink:
  - If you are a female, do not drink more than 1 alcoholic drink a day.
  - If you are a male, do not drink more than 2 alcoholic drinks a day.
- Don't smoke. If you need help quitting, ask your nurse

about MSK's Tobacco Treatment Program. Visit www.mskcc.org/experience/patient-support/tobacco-treatment, or call 212-610-0507 for more information.

- Do something active (such as walking, biking, or gardening) for at least 30 minutes each day if you're able. Talk with your doctor if you would like a referral to a physical therapist.
- Try to lower your stress. Guided meditation and breathing exercises can help. Visit www.mskcc.org/meditation for more information.
- Get 7 to 9 hours of sleep a night.

Medications to lower your blood pressure

There are many types of medications that treat hypertension. Each one works in different ways. Talk to your healthcare provider about which medication is best for you.

Diuretics (water pills)

Diuretics help your body remove extra salt and fluid. This helps improve shortness of breath and swelling. Some examples are:

- Hydrochlorothiazide (HCTZ) Microzide®
- Furosemide (Lasix®)
- Chlorthalidone (Thalitone®)

Angiotensin converting enzyme inhibitors (ACE inhibitors)

ACE inhibitors, such as lisinopril (Prinivil®), block the hormone in your blood that can raise your blood pressure.

Angiotensin II receptor blockers (ARBs)

ARBs, such as Losartan (Cozaar®), block the hormone in your blood that can raise your blood pressure.

Do not take ACE inhibitors together with ARBs. Take one or the other.

Calcium channel blockers

Calcium channel blockers lower the amount of calcium that enters your heart. This lowers your blood pressure by relaxing and widening the muscle cells in your heart. Some examples are Amlodipine (Norvasc®) and Nicardipine (Cardene®).

Beta blockers

Beta blockers slow your heart rate and lower your blood pressure. This helps to reduce the amount of work your heart has to do. Some examples are Atenolol (Tenormin®) and Metoprolol (Lopressor®).

Alpha blockers

Alpha blockers, such as doxazosin (Cardura®), relax the smooth muscles in the walls of your blood vessels. This helps improve your blood flow.

When to call your healthcare provider

If you’re measuring your blood pressure at home, follow your healthcare provider’s instructions.

If you have any questions, contact a member of your care team directly. If you're a patient at MSK and you need to reach a provider after 5 p.m., during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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