

# HIGH BLOOD PRESSURE

## What is blood pressure?

When your heart beats, it pumps blood into your arteries and creates pressure in them. This pressure (blood pressure) causes your blood to flow to all parts of your body. The top number, systolic pressure (SBP), measures the pressure in your arteries when the heart is beating. The bottom number, diastolic pressure (DBP), measures the pressure while your heart is resting between beats.

## What is high blood pressure?

A sustained elevation of blood pressure is called hypertension. When blood pressure is too high and remains high, the walls of the arteries become damaged and prone to atherosclerosis, a build-up of fatty substances on the inner walls of the arteries. The heart must work harder to try and pump oxygenated blood through the clogged arteries. The clogged arteries are more prone to blood clots that can block the flow of blood entirely. High blood pressure can also cause arteries to bulge (aneurysm) or burst (hemorrhage). High blood pressure damages all the arteries and organs of the body.

## What are the guidelines for adult blood pressure ranges?

Category	Systolic (top number) mm Hg		Diastolic (bottom number) mm Hg
Normal	Less than 120		Less than 80
Elevated	Between 120-129	OR	Less than 80
Stage 1	Between 130-139	OR	Between 80-89
Stage 2	At least 140	OR	At least 90
Hypertensive Crisis	Greater than 180	AND/OR	Greater than 120 with patients needing prompt changes in medication if there are no other indications of problems or immediate hospitalization if there are signs of organ damage.

### Notes:

When SBP and DBP fall into different categories, use the higher category.

People with Diabetes or kidney disease should maintain a blood pressure below 130/80.

*Taken from 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guidelines for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults (Journal of the American College of Cardiology (November, 2017)*

## High Blood Pressure Has No Symptoms!

### How can I lower my high blood pressure?

- ◆ Maintain a healthy weight
- ◆ Be physically active – establish a structured exercise program
- ◆ Follow a healthy eating plan which includes foods lower in salt
- ◆ If you drink alcoholic beverages, do so in moderation (men 2 drinks, women no more than 1)
- ◆ If you have high blood pressure and are taking medication, take it as directed
- ◆ Stop smoking

## How do I take an accurate blood pressure reading?

- Sit quietly for 5 minutes prior to recording your blood pressure
- Keep your arm free of tight clothing at the level of your heart
- Always use the correct cuff size: Standard cuff upper arm measurement 9-13" or Large cuff 13-17"
- Do not smoke or drink caffeine 30 minutes prior to taking your blood pressure
- Discuss with your doctor how often to take your blood pressure and when to report high readings

Remember that a single elevated blood pressure reading does not mean that you have high blood pressure, but it is a sign that further observation is needed.

## What foods will help lower my blood pressure?

The DASH DIET (Dietary Approaches to Stop Hypertension)

<b>Food Group</b>	<b>Daily Servings</b>	<b>Serving Sizes</b>
Grains	7-8	1 slice of bread, 1 cup ready-to-eat cereal, ½ cup cooked rice, pasta
Vegetable juice	4-5	1 cup raw leafy vegetable, ½ cup cooked vegetable, 6 oz.
Fruits	4-5	1 medium fruit, ¼ cup dried fruit, ½ cup fresh, frozen or canned, 6 ounces fruit juice
Low-fat/fat-free dairy	2-3	8 ounces milk, 1 cup yogurt, 1 ½ ounces cheese
Lean meats, poultry, fish	2 or less	3 ounces cooked lean meats, skinless poultry or fish
Nuts, seeds, and dry beans seeds	4-5 per wk.	1/3 cup or 1 ½ ounces nuts, 1 tablespoon or ½ ounce ½ cup cooked or dry beans
Fats & Oils	2-3	1 tsp. soft margarine, 1 Tbsp. low-fat mayonnaise 2 Tbsp. light salad dressing, 1 tsp. vegetable oil
Sweets lemonade	5 per wk.	1 T. sugar, 1 T. jelly or jam, ½ oz. jelly beans, 8 oz.

Limit alcohol, sugars, and desserts (eat melons, berries, grapes, fruit salads). Use unhydrogenated oils in place of any solid or animal fat. Limit salt and salty foods to less than 2300 mg/day.

“A diet rich in fruits, and vegetables, and low-fat dairy products, and with reduced saturated fat and salt, significantly lowers blood pressure.” Ralph Paffenbarger, Harvard Alumni Study

## **What medications treat high blood pressure?**

If you have high blood pressure, a lifestyle of healthy eating and increased activity may not be enough to control it. Your doctor may prescribe medications. The more that you eat healthy foods rich in fruits and vegetables and low in fat along with regular exercise, the less medicine your doctor may need to prescribe to control your blood pressure.

There are many drugs to lower blood pressure. Often, two or more drugs work better than one. It may take some time to get your blood pressure under control with the right medicine for you. Work with your doctor and keep up the healthy lifestyle.

## **Medications commonly used to treat hypertension:**

- Diuretics – These medications are also known as “water pills” because they flush excess water and sodium from the body in the urine which reduces the amount of fluid in the blood; thus lowering blood pressure. Lasix, HCTZ (Hydrochlorothiazide)
- Beta-Blockers – These drugs reduce nerve impulses to the heart and blood vessels. The heart beats more slowly and with less force. Blood pressure drops and the heart does not work as hard. Toprol, Tenormin, Inderal
- Angiotensin Converting Enzyme (ACE) Inhibitors – These pills prevent the formation of a hormone called angiotensin II, which normally causes blood vessels to narrow. ACE inhibitors relax the blood vessels and blood pressure goes down. Altace, Prinivil, Zestril, Vasotec
- Angiotensin II Receptor Blockers (ARB) – These medicines are a new type of drug which shields the arteries from the effects of angiotensin II. As a result, the vessels become wider and blood pressure is lowered. Cozaar, Diovan, Atacand
- Calcium Channel Blockers – Calcium is kept from entering the muscle cells of the heart and blood vessels relax. Blood pressure goes down. Norvasc, Verapamil, Cardizem
- Alpha Blockers – These drugs reduce nerve impulses to blood vessels, which allows blood to pass more easily. Minipress, Cardura, Hytrin
- Vasodilators – These medications directly open blood vessels by relaxing the muscle in the vessel wall. Nitroglycerin, Apresoline

**Caution:** Certain drugs, such as Viagra, when combined with your blood pressure medication may lower your blood pressure to dangerous levels!

## **What are some guidelines for taking my medications?**

When you start taking a medication, work with your doctor to get the right drug and dose level for you. If you have side effects, report them to your doctor immediately so that the medication can be adjusted. If you are worried about the cost, tell your doctor or pharmacist. There may be a cheaper drug or generic form to use.

It is important that you take the medication as prescribed by your physician and continue your healthy lifestyle changes.

- ◆ Take the medication the same time each day.
- ◆ Never abruptly stop taking your medication without checking with your doctor.
- ◆ Use a pillbox or calendar (crossing off your medications after taking).
- ◆ Do not store your medications in the bathroom (humidity and temperature may damage your medicines).
- ◆ Wear support stockings and change your position every two hours.
- ◆ Rise slowly as blood may pool in your lower legs and may cause sudden drops in your blood pressure.
- ◆ Profuse sweating enhances the effect of your medications.
- ◆ Avoid extremely “hot” (over 105 degrees) showers or tub baths.
- ◆ Sit down if you feel faint or dizzy and report any prolonged dizziness to your doctor.
- ◆ Notify your doctor if you have prolonged vomiting, diarrhea, or fever.

### **What questions should I ask my doctor?**

- ◆ When is my next follow-up visit?
- ◆ When should I take my blood pressure readings at home?
- ◆ When should I call my doctor for high readings?
- ◆ When should I take my medications?
- ◆ Should my medications be taken on an empty stomach or with food?
- ◆ Are there potential side effects? Will they pass with time?
- ◆ Should I avoid certain activities while taking this medication?
- ◆ Will any foods or other medications interfere with my prescriptions?
- ◆ What if I forget to take my pill?

Check with your physician before taking medications that may increase your blood pressure.

### **Drugs that can raise blood pressure:**

#### **Prescription Drugs:**

Anabolic steroids	Cortisone (Prednisone)	Bromocriptine	Cafergot
Disulfiram	Erythropoetin	Estrogens	Tacrolimus
MAO Inhibitors(Lithium)	Tricyclic antidepressants		

#### **Over-the-Counter Drugs:**

Non-steroidal anti-inflammatory drugs: aspirin, ibuprofen (Advil), naproxen  
Phenylephrine (found in nasal sprays)  
Phenylpropanolamine (found in appetite suppressants)  
Pseudoephedrine (found in cold and allergy preparations)

*Please call our Nurse Heartline, 630-527-2825, to learn more about high blood pressure management*