



High Blood Pressure (Essential Hypertension)

Definition

High blood pressure is *abnormally* high blood pressure with no known cause. Blood pressure measurements are read as two numbers. The higher number is called the **systolic pressure**. The lower number is called the **diastolic pressure**. Normal systolic pressure is 120 or less, and normal diastolic blood pressure is 80 or less.

High blood pressure is defined as systolic pressure greater than 140 and/or diastolic pressure greater than 90. People with systolic blood pressures between 120 and 139, or diastolic pressures of 80 to 89 are considered “prehypertensive” and need medical monitoring and lifestyle changes. High blood pressure puts stress on the heart, lungs, brain, kidneys, and blood vessels. Over time, high blood pressure can damage these organs and tissues.

Causes

By definition, the cause of essential hypertension is not known.

Risk Factors

- Sex:
 - Male
 - Postmenopausal female
- Race: Black
- Age: Middle-aged and older
- Overweight
- Heavy drinking of alcohol
- Smoking
- Use of oral contraceptives (birth control pills)
- Sedentary lifestyle
- Family history
- Kidney disease
- Diabetes
- High-fat, high-salt diet
- Emotional stress

Symptoms

High blood pressure usually does not cause symptoms. Your organs and tissues can be damaged by high blood pressure without you feeling any symptoms. Occasionally, if blood pressure reaches extreme levels, you may experience the following symptoms:

- Headache
- Blurry or double vision
- Abdominal pain
- Chest pain
- Shortness of breath
- Dizziness

Diagnosis

High blood pressure is often diagnosed during a visit to the doctor. Blood pressure is measured using a cuff around the arm and a device called a sphygmomanometer. If your blood pressure reading is high, you'll be asked to come back for repeat blood pressure checks. If you have two or more visits with readings over 140/90, you will be diagnosed with high blood pressure.

Tests to make sure your high blood pressure is not caused by another medical condition and that it has not already caused complications include:

- Blood tests
- Urine tests
- Chest x-rays – a test that uses radiation to take a picture of structures inside the body
- Electrocardiogram (ECG, EKG) – a test that records the heart's activity by measuring electrical currents through the heart muscle

Treatment

Lifestyle Changes

- Lose weight if necessary. Your doctor can recommend a safe weight loss plan and a reasonable target weight.
- Begin a safe exercise program based on the advice of your doctor. In addition, try to add physical activity into your daily life.
- Eat a low-fat, low-sodium, high-fiber diet, rich in fruits and vegetables, as recommended by your doctor.
- If you smoke, quit.
- Drink alcohol in moderation. Moderate alcohol intake is no more than two drinks per day for men and one drink per day for women.
- Consider counseling, stress reduction exercises, and meditation to decrease the stress in your life.

Medications

Types of medications to lower blood pressure include:

- Diuretics
- Beta blockers
- Angiotensin converting enzyme inhibitors (ACE inhibitors)
- Calcium channel blockers
- Alpha blockers
- Alpha-beta blockers
- Nervous system inhibitors
- Vasodilators

Prevention

- Eat a healthful diet, one that is low in saturated fat and rich in whole grains, fruits, and vegetables.
- Exercise regularly.
- Maintain a healthy weight.
- Don't smoke. If you smoke, quit.
- Drink alcohol in moderation. Moderate alcohol intake is no more than two drinks per day for men and one drink per day for women.

RESOURCES:

American Heart Association
<http://www.americanheart.org>

National Heart, Lung, and Blood Institute
<http://www.nhlbi.nih.gov>