
High Blood Pressure (Hypertension)

I. What is Blood Pressure?

Blood pressure is the force that moving blood exerts against the walls of the blood vessels during each heartbeat. Your blood pressure fluctuates throughout the day and with different activities.

II. How is Blood Pressure Measured?

An instrument called a Sphygmomanometer (cuff attached to a gauge) is used to measure blood pressure. Blood pressure is measured in millimeters of mercury (mmHg) and consists of two numbers: systolic over diastolic. Systolic pressure is the pressure of the blood flow when the heart is contracting. Diastolic pressure is the pressure of the blood flow when the heart is resting.

III. What is High Blood Pressure?

High blood pressure is a persistent elevation of systolic blood pressure (SBP), and/or diastolic blood pressure (DBP) at or above 140/90 mmHg, on at least three consecutive readings. Normal blood pressure should be below 120/80 mmHg.

IV. Symptoms of High Blood Pressure

High blood pressure is called the “silent killer” because it often has no symptoms. It is important to have your blood pressure measured since the disease has few warning signs.

V. Causes of High Blood Pressure

In over 90% of the cases, the cause of high blood pressure is unknown. This type of high blood pressure is called Essential Hypertension. In the remaining cases, high blood pressure may be a symptom of underlying diseases such as adrenal gland, heart, or kidney problems. This type of high blood pressure is called Secondary Hypertension. Once the abnormality is

corrected, blood pressure usually returns to normal.

VI. Who Gets High Blood Pressure?

Anyone can get high blood pressure. However, your chance of developing high blood pressure increases with the following risk factors:

- Family history
- High fat/sodium diet
- Male sex
- Excess alcohol intake
- Age
- Cigarette smoking
- Stress
- Women on birth control pills
- Overweight
- Inactivity

VII. Complications of Uncontrolled High Blood Pressure

Uncontrolled high blood pressure can strain the heart and damage blood vessels. It also increases your risk of stroke, kidney failure, congestive heart failure, heart attack, and blindness.

VIII. Treatment of High Blood Pressure

1. Stop Smoking
2. Limit alcohol
3. Lose weight
4. Exercise
5. Reduce stress

6. Follow a low fat/low sodium diet:
 - Reduce high sodium foods and condiments: ham, sausage, salted fish, preserved meats, canned foods, instant noodles, salt, soy sauce, fish sauce, oyster sauce, MSG, fermented black beans, chili sauce bean paste, shrimp paste, and fermented soybean curd.
 - Reduce high fat/cholesterol foods: fatty meats, skins, fried foods, organ meats (liver, brain, and kidney), egg yolk, squid, shrimp, pastries, and dim sum.
 - Choose low sodium seasonings: celery, chili pepper, black/green pepper, garlic, ginger, onion, scallion, parsley, curry powder, five spice powder, anise, vinegar, and lemon juice.
7. Eat foods high in potassium, for they may help lower blood pressure.
Warning: for those with kidney failure, consult with your physician before increasing your intake of potassium.
 - High potassium foods: banana, apricot, cantaloupe, honeydew melon, grapefruit, orange, tomato, broccoli, watercress, potato, sweet potato, spinach, and bitter melon.
8. Take medication(s) when prescribed.

Once you begin taking medication to control your blood pressure, it is important to continue taking them even after your blood pressure has reached a normal level. Treatment is usually continued over a lifetime in order to maintain good blood pressure control. If you experience any unpleasant side effects, be sure to tell your doctor. Do **not** stop taking your medication on your own as this may cause your blood pressure to go out of control. If you are on a diuretic (water pill), consult your physician regarding the need for a potassium supplement.

X. Why do I need to take medications when I feel fine?

High blood pressure has no symptoms but can cause permanent damage to your body if left untreated. Therefore, it is important to take your medication as prescribed even though you feel fine.

High blood pressure cannot be cured, but it can be controlled. Follow your doctor's advice and have your blood pressure checked regularly.

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IX. Blood Pressure Medications

When lifestyle and dietary changes fail to bring blood pressure down to normal range, treatment with drugs may be necessary. Medications may lower blood pressure by one or more of the following:

- Eliminate excess sodium (salt) and fluid from the body.
- Reduce the heart rate.
- Block the nerve impulses from constricting (narrowing) blood vessels.
- Relax and dilate (widen) blood vessels.

Blood Pressure Guidelines

<u>BLOOD PRESSURE</u>	<u>NORMAL</u>	<u>PRE-HYPERTENSION</u>	<u>STAGE 1 HYPERTENSION</u>	<u>STAGE 2 HYPERTENSION</u>
Systolic (Top No.)	Under 120	120 - 139	140 - 159	160 and higher
Diastolic (Bottom No.)	Under 80	80 - 89	90 - 99	100 and higher

Normal Resting Pulse Rate = 60-80 beats per minute

Source: Blood Pressure Guidelines,
National Heart, Lung and Blood Institute, 2003