Blood Pressure

What is blood pressure?
Blood pressure is the force that moves blood through your arteries. Arteries are blood vessels that carry blood from your heart to the rest of your body. High blood pressure is when blood pressure is usually higher than it should be. It’s also called hypertension.

How are medications administered?
Blood pressure medications should be taken—right after you wake up. Once started, the medications should be used with your doctor's full approval.

What can occur if not treated?
High blood pressure often has no symptoms. It is considered a silent condition. Over time, high blood pressure can cause:

- **Heart Attack**
- **Kidney failure**
- **A stroke**

Talk with your doctor often to have your blood pressure checked.

Types (Classes) of High Blood Pressure Medicines
There are currently nine types of medications that treat high blood pressure:

1. **Central-Acting Alpha Adrenergics**
   Lower blood pressure by decreasing certain chemicals in the blood; therefore, relaxing blood vessels and enabling the heart to beat slowly and easily.

2. **Beta Blockers**
   Target beta receptors that are found on cells of the heart muscles, smooth muscles, and other tissues. Beta blockers mainly work to weaken the effects of stress hormones on the heart.

3. **Calcium Channel Blockers**
   Disrupt the movement of calcium through channels into blood vessels and heart cells; allow blood vessels to relax and heart to beat more easily and/or slowly.

4. **Peripherally Acting Alpha-Adrenergic Blockers**
   Stop hormones from tightening the muscles in the walls of smaller arteries. By causing the arteries to remain open and relaxed, these drugs improve blood flow and lower blood pressure.

5. **Vasodilators**
   Help widen blood vessels, which results in relaxation of smooth muscle cells within the vessel walls. When blood vessels relax, the blood flow in an artery clogged due to blockage is increased. The dilation of arterial blood vessels decreases blood pressure.

6. **Angiotensin-Converting Enzyme (ACE) Inhibitors**
   Slow the production of a hormone (angiotensin II) that narrows blood vessels, causing dilation of blood vessels and lowering blood pressure.

7. **Angiotensin II Receptor Blockers**
   Block the effect of the angiotensin II that narrows blood vessels, and are alternatives to ACE inhibitor therapy.

8. **Renin Inhibitors**
   Block the enzyme renin in the ultimate production of angiotensin II.

9. **Diuretics**
   Sometimes called water pills. Help rid your body of salt and water. They work by making your kidneys put more sodium into your urine. The sodium, in turn, takes water with it from your blood. This decreases the amount of fluid flowing through your blood vessels, which reduces pressure on the walls of your arteries.

Combination Medicines
There are made up of 2 different kinds of blood pressure drugs.

You may have high blood pressure if you are…

- A smoker
- Dealing with sleep apnea
- Physically inactive
- Older than 50 years
- Overweight or obese
- Dealing with diabetes or kidney disease
- Taking more than 2 grams of sodium per day
- African American, Hispanic or Latino/Latina
- A man who drinks more than 1 ounce of alcohol per day
- A woman who drinks more than half an ounce of alcohol per day
- A person whose mother or father has hypertension

The more areas that describe you, the greater the chance you have high blood pressure now or in the future.

**Sources:**
1. U.S. Food and Drug Administration
2. American Society of Hypertension
4. U.S. Food and Drug Administration Center for Drug Evaluation and Research
5. www.fda.gov