

# Systemic Hypertension



## What Is It?

Systemic Hypertension is high blood pressure in the systemic arteries - the vessels that carry blood from the heart to the body's tissues (other than the lungs).

High systemic (or body) blood pressure is usually caused by the narrowing of the small arteries (arterioles). This increases the peripheral resistance to blood flow, which increases the heart's workload and raises arterial pressure.

Blood Pressure is measured at its highest (Systolic) and lowest (Diastolic) levels. Normal systolic pressure depends on a person's age, but a maximum normal adult reading is around 140 mm Hg (millimeters of mercury). The upper limit for normal diastolic blood pressure is around 90 mm Hg. The term Pulse Pressure refers to the difference (in mm HG) between the systolic and diastolic pressures.

The cause of Primary (or Essential) Systemic Hypertension (95% of cases) is unknown. Systemic Hypertension that is caused by another condition or disease is referred to as Secondary. For example, high blood pressure may be caused by a narrowing of the aorta (Coarctation of the Aorta), by kidney disease that involves a narrowing (stenosis) of the renal artery, or by certain endocrine disorders (e. g. Cushing's Disease).

## What Are Its Effects?

Systemic Hypertension has no obvious symptoms of its own and may not be recognized until complications arise. Both high diastolic and systolic blood pressure are associated with increased risk of strokes, heart attacks (myocardial infarction, involving the death of some heart muscle tissue), atherosclerosis (the buildup of fatty plaque on the inner walls of arteries), kidney failure, and cerebral hemorrhage (bleeding from an artery into the brain's tissues).

Systemic Hypertension is the primary cause of left ventricle enlargement and congestive heart failure (in which the heart is unable to pump blood adequately) in adults. The left ventricle (the heart's main pumping chamber) becomes enlarged (hypertrophic) as it pumps harder to move blood through the arteries to the body tissues. Over time, Systemic Hypertension may cause damage to the arteries, resulting in arterial disease.

## **How Is It Treated?**

Approximately one half of people with Systemic Hypertension are unaware of their condition. Therefore, it is important to monitor blood pressure so that it can be controlled before serious problems arise. Diagnosis is based on a pattern of high pressure readings rather than on a single occurrence. Primary Systemic Hypertension cannot be cured, but it can usually be controlled with medications and lifestyle adjustments.

Medications such as beta blockers (which relax the blood vessels) and calcium channel blockers (which relax the blood vessels) may be of help in lowering systemic blood pressure. Other medications that may be prescribed include anticoagulants (blood thinners) and diuretics (to reduce fluid retention and get rid of excess salt). Often, the best results are obtained from a combination of medications.

A low salt diet and exercise program may be of help in controlling hypertension.