



NUTRITION AND FOOD SERIES

# TIMELY INFORMATION

## Human Nutrition, Diet & Health

---

Department of Nutrition and Food Science, Auburn University, Alabama 36849-5654

### Hypertension: Frequently Asked Questions

#### **What is blood pressure?**

Blood pressure is the force of blood pushing against the arterial walls.

There actually are two kinds of blood pressure, reflected in the top and bottom numbers of the blood pressure reading. The top number, known as systolic pressure, is the pressure in the arteries when the heart beats; the diastolic pressure, the bottom number, is the pressure in the arteries between beats.

A reading of 120/80 is considered normal.

#### **What is hypertension?**

Hypertension, more commonly known as high blood pressure, is a blood pressure reading equal to or greater than 140/90.

Any systolic reading higher than 140 or any diastolic reading higher than 90 qualifies you as hypertensive. Systolic readings of 121 to 139 and diastolic readings of 81 to 89 are considered borderline and should be addressed.

#### **Why is hypertension often described as the silent killer?**

High blood pressure often is described as the “silent killer” because it has few outward symptoms until it is too late.

In rare cases, people with extremely high blood pressure may experience a ringing sensation in their ears. However, most hypertension sufferers are unaware that something is wrong until they are alerted by a physician or suffer a stroke or other hypertension-related complications.

## **Why does hypertension pose a long-term health risk?**

Hypertension is associated with a wide range of health problems, notably stroke.

Weak areas within the arteries of the brain are especially vulnerable to the effects of hypertension. Stroke occurs when this added pressure finally forces a rupture of one of these weakened areas, resulting in internal bleeding within the brain.

Likewise, similar weak spots within heart arteries, known as aneurysms, are vulnerable to hypertension. Equally vulnerable are the kidneys as well as blood vessels within the eyes.

## **What causes hypertension?**

There are essentially four causes of hypertension.

### **Too much fluid in the blood vessels**

One cause may be too much fluid in the arteries, similar to what happens when a high volume of water passes through a garden hose. Just as pressure within the hose increases with added water volume, pressure on the arterial walls intensifies with the increased levels of fluid.

Heavy consumption of sodium chloride (salt use) often contributes to this increased fluid and, as a result, elevated blood pressure.

### **Diameter within the arteries is too small**

Stress, which tends to shrink the diameter of arteries, is also known to contribute to hypertension. As diameter shrinks, pressure against the arterial walls increases.

### **Reduced elasticity of the arteries**

The arteries of young people typically expand and contract easily, but, as people age, arteries often tend to become less elastic --- a problem commonly described as hardening of the arteries.

### **Too much resistance to blood flow**

Blood flow resistance is a problem typically associated with overweight and obese people. In a manner of speaking, arteries compensate for the extra body mass by shrinking so that the blood can be distributed as evenly as possible throughout the body. This creates added resistance against the heart muscle as it works harder to pump blood to wider distances. The result is often hypertension.

It is important to understand that all of these problems to one degree or another are linked to unhealthy lifestyle factors.

## **Aren't there some otherwise healthy people who develop hypertension because of their genetic background?**

Yes. Some people do have a genetic predisposition to hypertension, despite their best efforts at healthy eating and exercise.

However, they comprise only a small percentage of people suffering from hypertension. The vast majority of hypertension sufferers could reverse the problems through lifestyle changes, even though some may be genetically prone to developing the condition.

## **How pervasive a problem is hypertension?**

Rates of hypertension have increased markedly within the last couple of decades. Almost one out of four adults in the United States suffers from the condition.

The incidence is considerably higher among seniors. It is estimated that as much as 50 percent of U.S. elderly (age 60 and above) suffers from hypertension.

## **Who is at highest risk?**

Compared with other racial groups, blacks are at the highest risk of developing hypertension.

## **Is reducing salt the surest way to control blood pressure?**

For a few people, excessive sodium chloride (salt) consumption probably is the major cause of their hypertension.

In fact, it's a good idea for all hypertension sufferers to reduce salt intake as much as possible by removing the salt shaker from the table and reducing the amount of salt in food preparation. Processed foods (e.g., canned soups and vegetables, hot dogs, ham, bologna, pickles and cheese) also tend to be high in sodium and should be avoided.

Sodium intake should not exceed 2,300 milligrams daily.

However, for most people, reducing dietary levels of sodium chloride is a good start but no panacea. It should be accompanied by other lifestyle changes, particularly maintaining an ideal body weight, eating five servings of fruits and vegetables daily, and maintaining a moderate exercise regimen.

## **What is the biggest single cause of hypertension?**

The biggest factor is obesity. It accounts for why hypertension within the U.S. population has risen by more than 20 percent within the last couple of decades.

Especially vulnerable are people whose fat is heavily concentrated near the abdomen --- so-called visceral fat --- rather than distributed more evenly throughout the body.

Weight reduction, coupled with moderate exercise and healthy eating, can go a long way toward reducing hypertension.

People with a body mass index greater than 30 are at significant risk of developing hypertension.

## **Will I have hypertension for as long as I'm obese?**

While maintaining ideal weight should be the ultimate goal, losing 10 pounds may result in a significant blood pressure reduction.

## **What are some of other dietary factors that can help reduce hypertension?**

Two minerals have been shown to play a particularly effective role in reducing hypertension: potassium and calcium. Typically, the more one consumes of these two minerals, the lower one's blood pressure.

Nutritionists recommend consuming at least 4,700 milligrams of potassium every day, twice as high as the recommended 2,300 milligrams a day of sodium. The recommended daily allowance for calcium is 1,000 milligrams a day. However, for people over age 51, the daily allowance is 1,200 milligrams.

Vitamin C and magnesium also have been shown to be effective in reducing blood pressure.

## **How does one obtain adequate amounts of these vitamins and minerals?**

Eating at least the recommended five servings of fruits and vegetables and three servings of low-fat dairy each day virtually guarantees you will receive these nutrients in adequate amounts.

## **What other lifestyle factors may help to reduce blood pressure?**

Any form of aerobic exercise --- walking, jogging, biking or swimming, for example --- has been shown to reduce hypertension.

Sedentary lifestyles, on the other hand, have been shown to contribute to high blood pressure. Sedentary and obese people are particularly prone to developing hypertension.

### **How much does cigarette smoking contribute to hypertension?**

Cigarette smoking is strongly linked to hypertension. Typically, between 30 and 45 minutes of heightened blood pressure follows the consumption of each cigarette. In effect, a pack-a-day smoker should expect elevated blood pressure throughout the day.

### **What other lifestyle factors contribute to hypertension?**

Heavy consumption of caffeine has been shown to increase blood pressure. Excessive alcohol consumption is also a known contributor.

**Written and compiled by Jim Langcuster, News and Public Affairs specialist, Alabama Cooperative Extension System, in conjunction with Dr. Robert Keith, Extension nutritionist and Auburn University professor of nutrition and food science.**