

# Hypertension

## MCC Patient Education Module

### **HYPERTENSION**

Hypertension (high blood pressure) is a common condition that can lead to serious complications if untreated. Making dietary changes and losing weight are effective treatments for reducing blood pressure. Other lifestyle changes that can help to reduce blood pressure include stopping smoking, reducing stress, reducing alcohol consumption, and exercising regularly. These changes are effective when used alone, but often have the greatest benefit when used together.

### **SMOKING CESSATION**

Cigarette smoking is one of the strongest contributors to the risks of cardiovascular diseases, including coronary heart disease, stroke, sudden death, peripheral artery disease, and aortic aneurysm. Considerable reductions in the risk of cardiovascular diseases occur immediately after the discontinuation of cigarette smoking. Alterations in blood pressure (BP), heart rate (HR), and autonomic nervous function are thought to be at least in part responsible for the rapid reduction in the risk of cardiovascular diseases after quitting.

### **REDUCING STRESS**

Stress definitely affects our bodies. In addition to the emotional discomfort we feel when faced with a stressful situation, our bodies react by releasing stress hormones (adrenaline and cortisol) into the blood. These hormones prepare the body for the "fight or flight response" by making the heart beat faster and constricting blood vessels to get more blood to the core of the body instead of the extremities.

Constriction of blood vessels and increase in heart rate does raise blood pressure, but only temporarily; when the stress reaction goes away, blood pressure returns to its pre-stress level. This is called situational stress, and its effects are generally short-lived and disappear when the stressful event is over. "Fight or flight" is a valuable response when we are faced with an imminent threat that we can handle by confronting or fleeing. However, our modern world contains many stressful events that we can't handle with those options. Chronic (constant) stress causes our bodies to go into high gear on and off for days or weeks at a time.

### **DIETARY CHANGES AND BLOOD PRESSURE**

Making changes in what you eat can help to control high blood pressure.

*Reduce sodium* — The main source of sodium in the diet is the salt contained in packaged and processed foods and in foods from restaurants. Reducing the amount of sodium you consume can lower blood pressure if you have high or borderline high blood pressure.

The body requires a small amount of sodium in the diet. However, most people consume more sodium than they need. A low-sodium diet contains fewer than 2 grams (2,000 milligrams) of sodium each day.

A detailed discussion of low-sodium diets is available separately.

*Reduce alcohol* — Drinking an excessive amount of alcohol increases your risk of developing high blood pressure. People who have more than two drinks per day have an increased risk of high blood pressure compared to nondrinkers; the risk is greatest when you drink more than five drinks per day.

On the other hand, drinking one (for women) or two (for men) alcoholic beverages per day appears to benefit the heart in people greater than 40 years old. This protective effect applies to people with preexisting high blood pressure.

*Eat more fruits and vegetables* — Eating a diet high in fruits and vegetables may reduce high blood pressure and protect against developing high blood pressure. A strict vegetarian diet may not be necessary; eating more fruits and vegetables and low-fat dairy products may also lower blood pressure.

*Eat more fiber* — Eating an increased amount of fiber may decrease blood pressure. The recommended amount of dietary fiber is 20 to 35 grams of fiber per day. Many breakfast cereals are excellent sources of dietary fiber. More information about increasing fiber is available separately.

*Eat more fish* — Eating more fish may help to lower blood pressure, especially when combined with weight loss.

*Caffeine* — Caffeine may cause a small rise in blood pressure, although this effect is usually temporary. Drinking a moderate amount of caffeine (less than 2 cups of coffee per day) does not increase the risk of high blood pressure in most people.

### **EXERCISE**

Regular aerobic exercise (walking, running) for 20 to 30 minutes most days of the week can lower your blood pressure, although the effect is not as pronounced among older adults. To maintain this benefit, you must continue to exercise; stopping exercise will allow your blood pressure to become high again.

### **WEIGHT LOSS AND BLOOD PRESSURE**

Being overweight or obese increases your risk of having high blood pressure, diabetes, and cardiovascular disease. The definition of overweight and obese are based upon a calculation called body mass index (BMI). You are said to be overweight if your BMI is greater than 25, while a person with a BMI of 30 or greater is said to be obese. People who are overweight or obese can benefit from losing weight. To lose weight you must eat less and exercise more.

### **WHAT IF I STILL HAVE HIGH BLOOD PRESSURE?**

If you continue to have high blood pressure despite making changes in your diet, exercising more, and losing weight, you may need a medication to reduce your blood pressure. It will be important to keep a blood pressure log and record your blood pressures so that your doctor can see how your blood pressure trends when you are at home.

### **HOW TO KEEP A BLOOD PRESSURE LOG**

1. Measure your blood pressure twice a day—morning and late afternoon—at about the same times every day.
2. For best results, sit comfortably with both feet on the floor for at least five minutes before taking a measurement.
3. When you measure your blood pressure, rest your arm on a table so the blood pressure cuff is at about the same height as your heart.
4. You can also use Heart360 ([heart360.org](http://heart360.org)), a free online tool to help you track and monitor your health information, including your blood pressure.

