

# Carotid Artery Disease

## WHAT IS IT?

Carotid (ka-ROT-id) artery disease is a condition in which a fatty material called plaque (plak) builds up inside the carotid arteries. You have two common carotid arteries—one on each side of your neck—that divide into internal and external carotid arteries. The internal carotid arteries supply oxygen-rich blood to your brain. The external carotid arteries supply oxygen-rich blood to your face, scalp, and neck. Carotid artery disease can be very serious because it can cause a stroke, or “brain attack.” A stroke occurs when blood flow to your brain is cut off. If blood flow is cut off for more than a few minutes, the cells in your brain start to die. This impairs the parts of the body that the brain cells control. A stroke can cause lasting brain damage, long-term disability, paralysis (an inability to move), or death.

## BASIC FACTS

- Carotid artery disease is a condition in which a fatty material called plaque builds up inside the carotid arteries. You have two common carotid arteries—one on each side of your neck—that divide into internal and external carotid arteries.
- Plaque narrows the carotid arteries and limits blood flow to the brain. It also makes it more likely that blood clots will form in the carotid arteries. Blood clots can partly or fully block a carotid artery.
- Carotid artery disease can be very serious because it can cause a stroke, or “brain attack.” A stroke occurs when blood flow to your brain is cut off. If blood flow is cut off for more than a few minutes, the cells in your brain start to die. This can cause lasting brain damage, long-term disability, paralysis (an inability to move), or death.
- Carotid artery disease appears to start when damage occurs to the inner layers of the carotid arteries. This causes your body starts a healing process. The healing causes plaque to build up where the arteries are damaged. Over time, the plaque may crack and cause blood clots to form in the arteries.
- The major risk factors for carotid artery disease are unhealthy blood cholesterol levels, high blood pressure, smoking, older age, insulin resistance, diabetes, overweight or obesity, metabolic syndrome, lack of physical activity, and a family history of atherosclerosis.
- Carotid artery disease may not cause signs or symptoms until it severely narrows or blocks the carotid arteries. Signs and symptoms may include a bruit, transient ischemic attack (TIA), or a stroke. A bruit is a whooshing sound your doctor may hear while listening to your carotid arteries with a stethoscope. A TIA is a “mini-stroke.” During a mini-stroke, you have some or all of the symptoms of a stroke. However, they usually go away on their own within 24 hours.
- If you think you're having a stroke or mini-stroke, you need urgent treatment. Call 9–1–1 (don't drive yourself to the hospital). It's important to get checked and to get treatment started within 1 hour of having symptoms.

- Your doctor will diagnose carotid artery disease based on your medical history and the results from a physical exam and tests.
- Treatment for carotid artery disease may include lifestyle changes, medicines, and medical procedures. The goals of treatment are to stop the disease from getting worse and to prevent a stroke.
- Taking action to control your risk factors can help prevent or delay carotid artery disease and stroke. Making lifestyle changes and taking prescribed medicines are important steps. Know your family history of health problems related to carotid artery disease.
- If you already have carotid artery disease, you can take steps to stop it from getting worse. Making lifestyle changes, following your treatment plan, and knowing the warning signs of stroke are important.

### **WHAT CAUSES CAROTID ARTERY DISEASE?**

Carotid artery disease appears to start when damage occurs to the inner layers of the carotid arteries. Major factors that contribute to damage include:

- Smoking
- High amounts of certain fats and cholesterol in the blood
- High blood pressure
- High amounts of sugar in the blood due to insulin resistance or diabetes

When damage occurs, your body starts a healing process. The healing may cause plaque to build up where the arteries are damaged.

Over time, the plaque may crack. Blood cells called platelets stick to the injured lining of the artery and may clump together to form blood clots.

The buildup of plaque or blood clots can severely narrow or block the carotid arteries. This limits the flow of oxygen-rich blood to your brain and can cause a stroke.