WHAT IS CAROTID ARTERY DISEASE?

The carotid arteries are the main blood vessels that carry blood and oxygen to the brain. When these arteries become narrowed, it’s called carotid artery disease. It may also be called carotid artery stenosis. The narrowing is caused by atherosclerosis. This is the buildup of fatty substances, calcium, and other waste products inside the artery lining. Carotid artery disease is similar to coronary artery disease, in which buildup occurs in the arteries of the heart. It can cause a heart attack.

Carotid artery disease reduces the flow of oxygen to the brain. The brain needs a constant supply of oxygen to work. Even a brief pause in blood supply can cause problems. Brain cells begin to die after just a few minutes without blood or oxygen. If the narrowing of the carotid arteries becomes severe enough that blood flow is blocked. If a piece of plaque breaks off it can also block blood flow to the brain. In either case, a stroke.

What causes carotid artery disease?

Atherosclerosis causes most carotid artery disease. In this condition, fatty deposits build up along the inner layer of the arteries forming plaque. The thickening narrows the arteries and decreases blood flow or completely blocks the flow of blood to the brain.

Who is at risk for carotid artery disease?

Risk factors associated with atherosclerosis include:

- Older age
- Male
- Family history
- Race
- Genetic factors
- High cholesterol
- High blood pressure
- Smoking
- Diabetes
- Overweight
- Diet high in saturated fat
- Lack of exercise

Although these factors increase a person’s risk, they do not always cause the disease. Knowing your risk factors can help you make lifestyle changes and work with your doctor to reduce chances you will get the disease.

What are the symptoms of carotid artery disease?

Carotid artery disease may have no symptoms. Sometimes, the first symptoms are those of a transient ischemic attack (TIA) or stroke.

A transient ischemic attack (TIA) is a sudden, temporary loss of blood flow to an area of the brain. It usually lasts a few minutes to an hour. Symptoms go away entirely within 24 hours, with complete recovery. When symptoms persist, it is a stroke. Symptoms of a TIA or stroke may include:

- Sudden weakness or clumsiness of an arm and/or leg on one side of the body

Homemade Frozen Yogurt Pops with Peaches

**Ingredients:**
- 16 oz. packaged plain, no-sugar added, frozen, sliced peaches, thawed
- 1 cup fat-free, plain yogurt
- 1 TBS. honey

**Preparation:**
In the bowl of a food processor, add 1 ½ cups thawed peaches, yogurt and honey. Chop remaining peaches into small bite-sized pieces and add to the bowl of puree along with any lingering peach liquid from the bag of peaches.

Divide mixture among popsicle molds. Freeze overnight. To remove from molds, hold under warm water.

**Nutrition Information Per serving:**
- Cal 66, total fat 0.5g, carbs 13g, Protein 3g, fiber 2g, Sodium 32mg, Sugars 9g

SERVES: 6
• Sudden paralysis of an arm and/or leg on one side of the body
• Loss of coordination or movement
• Confusion, decreased ability to concentrate, dizziness, fainting, and/or headache
• Numbness or loss of feeling in the face or in an arm and/or leg
• Temporary loss of vision or blurred vision
• Inability to speak clearly or slurred speech

If you or a loved one has any of these symptoms, call for medical help right away. A TIA may be a warning sign that a stroke is about to occur. TIAs do not precede all strokes, however.

The symptoms of a TIA and stroke are the same. A stroke is loss of blood flow (ischemia) to the brain that continues long enough to cause permanent brain damage. Brain cells begin to die after just a few minutes without oxygen.

The disability that occurs from stroke depends on the size and location of the brain that suffered loss of blood flow. This may include problems with:
• Moving
• Speaking
• Thinking
• Remembering
• Bowel and bladder function
• Eating
• Emotional control
• Other vital body functions

Recovery also depends on the size and location of the stroke. A stroke may result in long-term problems, such as weakness in an arm or leg. It may cause paralysis, loss of speech, or even death.

The symptoms of carotid artery disease may look like other medical conditions or problems. Always consult your doctor for a diagnosis.

If a carotid artery is less than 50% narrowed, it is often treated with medicine and lifestyle changes. If the artery is between 50% and 70% narrowed, medicine or surgery may be used, depending on your case.

Medical treatment for carotid artery disease may include:

### Lifestyle changes

- **Quit smoking.** Quitting smoking can reduce the risk for carotid artery disease and cardiovascular disease. All nicotine products, including electronic cigarettes, constrict the blood vessels. This decreases blood flow through the arteries.
- **Lower cholesterol.** Eat a low-fat, low-cholesterol diet. Eat plenty of vegetables, lean meats (avoid red meats), fruits, and high-fiber grains. Avoid foods that are processed, and high in saturated and trans-fats. When diet and exercise are not enough to control cholesterol, you may need medicines.
- **Lower blood sugar.** High blood sugar (glucose) can cause damage and inflammation to the lining of the carotid arteries. Control glucose levels through a low-sugar diet, and regular exercise. If you have diabetes, you may need medicine or other treatment.
- **Exercise.** Lack of exercise can cause weight gain and raise blood pressure and cholesterol. Exercise can help maintain a healthy weight and reduce risks for carotid artery disease.
- **Lower blood pressure.** High blood pressure causes wear and tear and inflammation in blood vessels increasing the risk for artery narrowing. Blood pressure should be below 140/90 for most people. People with diabetes may need even lower blood pressure.
- **Antiplatelets.** These medicines make platelets in the blood less able to stick together and cause clots. Aspirin, Clopidrogel, and dipryramide are examples of antiplatelet medicines.
- **Cholesterol-lowering medicines.** Statins are a group of cholesterol-lowering medicines. They include simvastatin and atorvastatin. Studies have shown that certain statins can decrease the thickness of the carotid artery wall and increase the size of the opening of the artery.
- **Blood pressure-lowering medicines.** Several different medicines work to lower blood pressure.

If a carotid artery is narrowed from 50% to 69%, you may need more aggressive treatment, especially if you have symptoms. Surgery is usually advised for carotid narrowing of more than 70%. Surgical treatment decreases the risk for stroke after symptoms such as TIA or minor stroke. Surgical treatment of carotid artery disease includes:

- **Carotid endarterectomy (CEA).** This is surgery to remove plaque and blood clots from the carotid arteries. Endarterectomy may help prevent a stroke in people who have symptoms and a narrowing of 70% or more.
- **Carotid artery angioplasty with stenting (CAS).** This is an option for people who are unable to have carotid endarterectomy. It uses a very small hollow tube, or catheter, that is thread through a blood vessel in the groin to the carotid arteries. Once the catheter is in place, a balloon is inflated to open the artery and a stent is placed. A stent is a thin, metal-mesh framework used to hold the artery open.

### Medicines

Medicines that may be used to treat carotid artery disease include:

Mary Beth Cyliax, RN, CCM
314-652-8175 Ext. 310
Call me anytime for questions

All information contained within this newsletter is intended for educational purposes only. Members should never disregard medical advice or delay in seeking it because of something they may have read in this newsletter. Information obtained from Johns Hopkins Medicine website and American Heart Association