

Treatment and Diagnosis of Carotid Endarterectomy

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DESCRIPTION

Surgery to treat carotid artery disease is called a Carotid Endarterectomy (CEA). The primary blood channels that deliver oxygen and blood from the heart to the brain are called carotid arteries. When one of the carotid arteries develops fatty, waxy deposits, ultimately leads to this condition. On either side of the neck, the blood vessels are present which are called as carotid arteries. The carotid artery's blood flow can be improved and can lower the risk of stroke, by removing the plaque which is causing the artery to narrow. Atherosclerosis is most often responsible for the narrowing of the carotid arteries. Atherosclerosis is a plaque deposit on the artery's inner lining. Fatty compounds, cholesterol, cellular waste materials, calcium, and fibrin are the components by which the plaque is made up of. Another name for atherosclerosis is "hardening of the arteries". Each of the body's arteries could be affected. Coronary artery disease and carotid artery disease are correlated. Blockages develop in the heart's arteries as a result of coronary artery disease, which may lead to a heart attack.

Some of the complications of carotid endarterectomy include, stroke or Transient Ischemic Attack (TIA), heart attack, blood clotting into the tissue near the incision site causing swelling, nerve problems with certain functions of the eyes, nose, tongue, or ears, seizures (rare), repeated blockage of the carotid artery, infection, high blood pressure, irregular heartbeat, and other conditions, such as specific heart issues.

The key risk factors for coronary heart disease are the same as those for carotid artery disease, which are given below.

Risk factors

Diabetes: When the person has this condition, the body produces insufficient or improper amounts of insulin, which leads to increase in the blood sugar levels. Individuals who have diabetes are four times more likely to develop carotid artery disease than the individuals without diabetes.

Family history of atherosclerosis: Carotid artery disease is more likely to affect those with a family history of atherosclerosis.

High blood pressure (hypertension): Blood pressure is considered high if it remains at or increases above 140/90 mmHg over time. 130/80 mmHg or greater is considered to be high blood pressure if the person have diabetes or chronic kidney disease.

Lack of exercise: A sedentary lifestyle and excessive sitting might increase other carotid artery risk factors, like unhealthy blood cholesterol levels, increase in blood pressure, increasing weight or obesity and potential risks in developing diabetes.

Metabolic syndrome: The term "metabolic syndrome" refers to a group of risk factors that increase the chance of stroke and other other health issues, including diabetes and heart disease.

Age: The risk of atherosclerosis increases with the increase in aging. The process of atherosclerosis starts in youth and generally progresses over several decades before the disease actually develops.

Obesity or overweight: These terms describe having a body weight that is higher than the normal weight for a person of a particular height.

Smoking: Smoking can tighten and harm the blood vessels, leads to increase in bad cholesterol, and can cause increased blood pressure.

Unhealthy blood cholesterol levels: High LDL (bad cholesterol) and low HDL (good cholesterol) are examples of unfavourable blood cholesterol values.

Unhealthy diet: An unhealthy diet can increase the risk of carotid artery disease. Foods that are high in saturated and trans fat, cholesterol, sodium, and sugar can increase the other risk factors of carotid artery disease. If the person has carotid artery disease, the doctor recommends a heart-healthy lifestyle changes. Heart-healthy lifestyle changes include eating a heart-healthy diet, maintaining a healthy weight, stress management, physical activity, quitting smoking.

Diagnosis

Carotid endarterectomy is performed under local or general anesthesia. The surgeon makes an incision in the front of the

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neck, opens the carotid artery, and removes the plaque blocking the artery. The surgeon then repairs the artery with sutures or or patches made of vein or artificial material called patch grafts. Surgeons may use another technique called as eversion carotid

endarterectomy, which involves in cutting the carotid artery, turning it inside out, and removing the plaque, then reconnects the artery.