



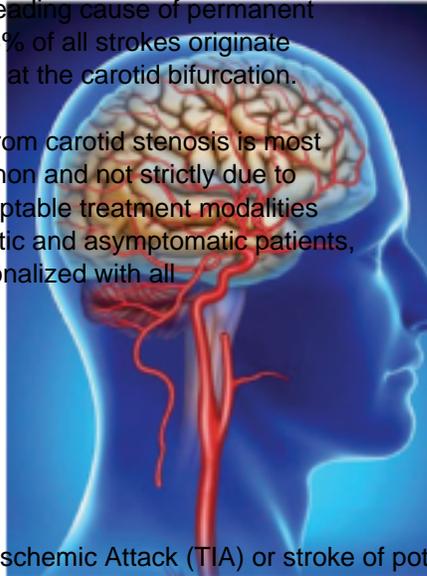
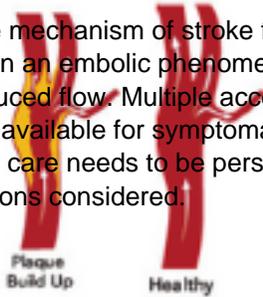
Patients with Carotid Artery Disease

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Condition

Stenoses in the carotid arteries are most commonly due to atherosclerosis, and these narrowings can lead to stroke. Stroke is the third leading cause of death in the United States and the leading cause of permanent disability. Approximately 25% of all strokes originate from atherosclerotic plaque at the carotid bifurcation.

The mechanism of stroke from carotid stenosis is most often an embolic phenomenon and not strictly due to reduced flow. Multiple acceptable treatment modalities are available for symptomatic and asymptomatic patients, and care needs to be personalized with all options considered.



When to Refer

Any patient with Transient Ischemic Attack (TIA) or stroke of potentially atherosclerotic origin warrants referral to a vascular surgeon. In addition, the Society for Vascular Surgery (SVS) has developed screening guidelines for patients at increased risk for asymptomatic carotid stenosis to help identify those who may benefit from prophylactic intervention to reduce stroke risk.

We recommend screening for carotid disease with duplex ultrasound in any patient with a history of peripheral artery disease (PAD), regardless of age. People at increased risk for carotid atherosclerosis include individuals over 65 years of age with coronary artery disease, smoking history, or hypercholesterolemia. The presence of a >50% carotid stenosis by duplex ultrasound should prompt referral to vascular surgery.

Why to Refer to a Vascular Surgeon

The treatment of carotid atherosclerosis is multi-faceted. Anti-lipid therapy, blood pressure control, lifestyle modification, and anti-platelet medications are beneficial to all patients with carotid stenosis. For some asymptomatic patients, the mainstay of treatment is medical therapy, while some patients benefit from medical therapy and intervention. If your patient would benefit from carotid revascularization to prevent stroke, vascular surgery is the only discipline trained in all modalities of carotid intervention—transfemoral stenting (CAS), transcarotid stenting (TCAR) with flow reversal, and carotid endarterectomy(CEA). Early referral and collaboration with vascular surgery will allow your patient to be treated with the therapy that is right for them.

Guidelines for Carotid Artery Management*

Screening of Asymptomatic Patients for Carotid Atherosclerosis is recommended via duplex ultrasound:

In a patient with clinically significant Peripheral Artery Disease (PAD), regardless of age

- If age > 65 years and has a history of:
 - Smoking
 - Coronary artery disease
 - Hypercholesterolemia
- Presence of a carotid bruit alone does not warrant screening

Referral to a vascular surgeon is warranted in:

Any patient with a history of transient ischemic attack (TIA) or stroke and > 50% carotid stenosis by any imaging modality

- Any asymptomatic patient found to have carotid stenosis of > 50% on screening duplex ultrasound
- Any patient with non-atherosclerotic disease of the carotid circulation (e.g., carotid body tumor, aneurysm, fibromuscular dysplasia)

Who, When, and How to Treat:

- All patients:
 - Smoking cessation
 - Diet modification and lower lipid diet
 - Anti-lipid pharmacotherapy
 - Anti-platelet agents
- Asymptomatic Patients:
 - With > 60% stenosis on contrast imaging AND acceptable 5-year life expectancy should be considered for intervention by a vascular surgeon
- Symptomatic patients:
 - With > 50% carotid stenosis should generally undergo intervention by a vascular surgeon
- The specific method of intervention (CEA, CAS, TCAR) will be recommended by your patient's vascular surgeon and depends on age, comorbidities, anatomy, risk and your patient's preference.

*Updated Society for Vascular Surgery guidelines for management of extracranial carotid disease:

<https://www.jvascsurg.org/article/S0741-5214%2811%2901635-1/fulltext>