

& Optical Gallery

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Artery Occlusion (CRAO OR BRAO)

Central retinal artery occlusion (CRAO) is an ischemic event which occurs when there is a blockage of the main blood vessel that carries oxygenated blood into the eye. This causes a **sudden and painless loss of vision**, which typically affects only one eye at a time. When a smaller artery is affected, this is called a **Branch retinal artery occlusion** (BRAO), and vision loss will be less severe. An artery occlusion can be diagnosed by a dilated eye exam which may also include fundus photography and visual field testing.

Immediate in-office treatment is indicated **if occlusion occurred within 24 hours** of presentation. Reduction of intraocular pressure with eye drops or pills, intermittent digital massage over the closed eyelid, or anterior chamber paracentesis (carefully releasing some fluid from the anterior chamber of the eye) may dislodge an embolus or plaque and allow it to enter a smaller branch of the artery, thus reducing the area of retinal ischemia. Unfortunately, **treatments for retinal artery occlusions rarely improve visual acuity.**

There has been a slow shift in the approach of patients with CRAO to treat them for what they are: stroke patients. Patients with an acute embolic event to the eye should be evaluated promptly to look for modifiable risk factors that may help protect the patients' long-term wellbeing. Affected patients are at a greater risk for new stroke events and therefore need an **urgent stroke or cardiac work-up**. Underlying life- threatening conditions such as carotid occlusive or cardiac valve disease need to be ruled out. Depending on underlying risk factors and the time since the onset of symptoms, patients may be referred either to an emergency room or to their primary care doctor for further evaluation. Evaluation by a neurologist and cardiologist may also be indicated.

Call 911 if you experience any of the following stroke symptoms:

- Sudden numbness or weakness in the face, arm, or leg, especially on one side of the body
- Sudden **confusion**, trouble speaking, or difficulty understanding speech
- Sudden **trouble seeing** in one or both eyes
- Sudden trouble walking, dizziness, loss of balance, or lack of coordination
- Sudden severe headache with no known cause

Patients who have experienced CRAO or BRAO need to be **monitored in the long-term**. New blood vessels can grow in the retina or iris, which can cause complications such as neovascular glaucoma. This complication requires treatment to prevent further vision loss or ocular pain.

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