# Temporal Arteritis

Devin Mackay, MD and Sashank Prasad, MD  
Division of Neuro-Ophthalmology  
Brigham and Women’s Hospital  
Harvard Medical School  
[www.brighamandwomens.org/neuro-ophthalmology](http://www.brighamandwomens.org/neuro-ophthalmology)

## A Patient’s Guide

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What is temporal arteritis?

Temporal arteritis is a condition that causes inflammation of arteries—the blood vessels that carry oxygen-rich blood from the heart. The exact cause of temporal arteritis is unknown, but the inflammation appears to be a result of the immune system overreacting and attacking the body’s own tissues. It is more common among older patients, and almost never occurs under the age of 55.

The “temporal artery” is the name of a specific artery located on each side of the head. In the condition known as temporal arteritis, there is inflammation of numerous blood vessels, but the temporal arteries are almost always affected. Inflammation of arteries causes reduced blood flow, which is why this disease can cause severe symptoms.

Image courtesy of Don Bienfang, MD

Temporal arteritis causes inflammation of blood vessels.

It can lead to permanent visual loss and other symptoms, because it causes severely reduced blood flow.
What are the common symptoms of temporal arteritis?

A new headache, tenderness of the scalp, muscle aches, weight loss, and fevers are characteristic symptoms of temporal arteritis. It is also common to experience aching or pain in the jaw muscles when chewing (called jaw “claudication”). Visual loss occurs in about 25% of patients with temporal arteritis. The episodes of blurred or darkened vision can be brief and temporary, and usually affect one eye. In some cases visual loss can be quite sudden and severe. Because temporal arteritis can quickly progress to cause severe, irreversible visual loss in both eyes, prompt medical attention is extremely important when this condition is suspected.

Why does temporal arteritis cause visual loss?

Inflammation of the arteries causes them to become narrowed and impairs their ability to supply oxygen-rich blood. The arteries that travel to the eye are especially vulnerable in temporal arteritis. When the eye and optic nerve (the cable that carries visual information to the brain) go without oxygen, they can become permanently injured, causing loss of vision.
What tests will my doctor perform to determine if I have temporal arteritis?

Your doctor will ask you about your symptoms and perform a thorough eye exam. The doctor will feel the pulse in your temporal arteries. Blood tests are performed, including a test called the erythrocyte sedimentation rate (ESR), which is abnormal when inflammation is present. Sometimes, a test called fluorescein angiography may be performed. During this test, pictures are taken of the blood vessels in the back of the eye after a special dye is injected into a vein in the arm. When your doctor suspects temporal arteritis, a very important test that is often performed is a temporal artery biopsy.

The diagnosis of temporal arteritis typically includes:

- Careful eye exam
- Blood tests for inflammation
- Temporal Artery Biopsy

In some cases the following tests may be performed:

- A brain scan (CT or MRI)
- Fluorescein angiogram (picture of the blood vessels in the eye)

An eye exam for a patient with visual loss due to temporal arteritis may show areas in the back of the eye where there has been injury due to reduced blood flow.
What is a temporal artery biopsy?

This is a simple procedure done in a doctor’s office. After a small injection of anesthesia, an incision is made just above the ear. A piece of the temporal artery (usually one or more centimeters) is then cut and removed. A pathologist carefully examines the tissue to look for evidence of inflammation and “giant cells.” This finding is the reason that temporal arteritis has another name—“Giant cell arteritis.”

A normal artery has a hollow inside, through which blood flows. In temporal arteritis, the artery becomes severely narrowed (arrow).

A temporal artery biopsy is a relatively safe procedure, typically done in the doctor’s office.

When a patient has temporal arteritis, the biopsy shows inflammation and narrowing of the artery.
What are the treatments for temporal arteritis?

When temporal arteritis is strongly suspected, a steroid medication called prednisone should be started very quickly. This is especially important when there have been symptoms of visual loss. Prednisone reduces inflammation in the affected arteries and many patients feel better in several days. In some cases, a patient will be admitted to the hospital to receive additional tests and treatments, such as intravenous fluids.

Corticosteroids (such as prednisone) are the most important treatment to help control the inflammation in temporal arteritis.

Corticosteroids may cause numerous side effects that require careful monitoring.

Patients taking prednisone should be monitored for side effects, which include osteoporosis, weight gain, high blood sugar, high blood pressure, changes in mood, muscle weakness, cataracts, glaucoma, and skin thinning. Most patients taking prednisone should take calcium and vitamin D supplements and many should take a medicine to prevent heartburn (gastritis).

Prednisone is a very important steroid treatment that controls inflammation in temporal arteritis.
If visual loss has occurred, can it return to normal?

Usually the visual loss that occurs due to temporal arteritis is permanent. The reason it is so important to make an early diagnosis and start treatment as soon as possible is to try to stop the inflammation before it progresses to cause severe visual loss in both eyes. Unfortunately, there are no known treatments to repair the optic nerve after it has been damaged.

How long will I need to be on prednisone and other treatments?

It is common for patients with temporal arteritis to require prednisone for a year or more. Relatively high doses are typically required until the symptoms have resolved and the vision has become stable. Blood tests are repeated frequently to make sure it is safe to slowly lower the dose of the medications. If high doses of prednisone cause intolerable side effects, then other medications can be used to help lower the dose of prednisone. These include other medications that suppress the immune system such as aza-thioprine (Imuran) and mycophenilate mofetil (Cell Cept).

Where can I get more information on temporal arteritis?

For more information on temporal arteritis, consider the following sources:

- **American Academy of Ophthalmology**
  - [http://eyewiki.aao.org/Giant_Cell_Arteritis](http://eyewiki.aao.org/Giant_Cell_Arteritis)

- **National Institutes of Health**

Corticosteroids do not typically reverse visual loss that has already occurred, but are meant to prevent any further visual loss.