Optic Neuritis

What is optic neuritis?

Optic neuritis is inflammation of the optic nerve. In optic neuritis, the covering around the optic nerve (myelin) is damaged by inflammation (demyelination), which typically results in blurred or dark vision.

What causes optic neuritis?

Your immune system normally protects your body from infections. However, it can become confused and attack your own body (autoimmune reaction). Most cases of optic neuritis are caused by an autoimmune reaction to the optic nerve but can be caused by certain infections.

Optic neuritis can be caused by systemic conditions or infections, or may not have any known cause (idiopathic). Many diseases can cause optic neuritis, including multiple sclerosis (MS). Multiple sclerosis is an autoimmune disease that specifically attacks your brain and spinal cord. MS has been strongly linked to optic neuritis.

How does optic neuritis affect me?

Vision Loss

In optic neuritis, the eye itself is not affected, but the optic nerve behind the eye is. This may cause blurred vision, darkened vision, decreased color vision, or decreased peripheral vision. The most common symptom of optic neuritis is decreased vision, which happens suddenly or quickly over the course of 1-3 days. Many people describe the blurring and darkening of their vision as “dimming” or like “the brightness is turned down.” Optic neuritis does not affect your glasses prescription.
Eye Pain

Most people with optic neuritis will have eye pain or discomfort when looking in different directions. When the optic nerve is inflamed, and the eye moves there may be pulling on the optic nerve that can cause irritation. This pain typically goes away after several days.

Other Vision Problems

- Decreased color vision is also common. Colors are often described as “washed out.”
- Some people will see flashes of light, sparkles, or shifting squares. Some people will have episodes of blurred vision lasting up to an hour triggered by exercise or hot temperatures, which may continue after the episode of optic neuritis has resolved.

Why do I need to see a neuro-ophthalmologist?

Neuro-ophthalmologists specialize in diseases of the optic nerve. While a neuro-ophthalmologist may do the same tests as your regular eye doctor, a neuro-ophthalmologist is experienced in sorting out the differences between optic neuritis and other optic nerve diseases.

- Your doctor may test your visual field and may scan your optic nerves.
- Your doctor will order an MRI if appropriate.
- Your doctor may order other tests, such as blood tests or a chest X-ray, to look for different causes of optic neuritis. There is no specific test for optic neuritis.
If your symptoms and eye exam are typical for optic neuritis, your doctor may choose to order very few tests at first. If your symptoms are unusual, your doctor may order other tests.

Why does my doctor say I may have multiple sclerosis (MS)?

There has been a lot of research that links optic neuritis with multiple sclerosis. Most people with multiple sclerosis will have an episode of optic neuritis in their lifetime. While not everyone who gets optic neuritis will develop multiple sclerosis, **people who have optic neuritis have a greater risk for having MS in the future, compared to those who have never had an episode.** Because early detection and treatment may keep you from having more severe problems, it is important to follow your doctor’s advice.

An MRI of the brain is recommended in optic neuritis because it can help determine the risk for developing MS in the future, and determine if you need additional treatment.

- Your doctor may recommend that you see a neurologist to be screened for multiple sclerosis, even if you do not have any other symptoms. Studies have shown that 75% (3 out of 4) people with optic neuritis and abnormal MRIs will develop MS within 15 years.
- In people who have normal MRIs, 25% (1 out of 4) people with optic neuritis develop MS within 15 years.

How is optic neuritis treated?

In typical cases of optic neuritis, no treatment is necessary. Research has shown that there is no difference in final vision between people with optic neuritis who were treated and those who were not treated. Treatment can speed up recovery, however the treatment for optic neuritis has many side effects and is therefore not recommended for everyone. Treatment may be recommended in:

- **Abnormal MRI.** If your MRI is abnormal, your doctor may recommend treatment.
- **Atypical cases.** If your symptoms are unusual, or if your vision is severely affected, your doctor may recommend treatment, regardless of the MRI results.

Typically, **treatment consists of intravenous (IV) steroids** for 3 days, followed by pills taken by mouth (oral steroids) for an additional 15 days. There is evidence that only using oral steroids
(prednisone) in doses of 60-80 mg per day INCREASES the risk of recurrence of optic neuritis.
Your doctor may recommend oral steroids at high doses similar to IV steroids.

Depending on your overall health, steroid treatment may not be safe for you. Steroids have many side effects including fluid retention, increased blood pressure, increased blood sugar, weight gain, increased appetite, mood and behavior problems, stomach irritation, and glaucoma. Over the long term, steroids can decrease your ability to fight off infection, worsen diabetes, thin your bones, skin, and hair, increase bruising, form cataracts, and increase fat deposits.

What is my prognosis?

- **Most people with typical cases of optic neuritis will get better with or without treatment.** Vision typically begins to recover within a few weeks.
- **92% of people with typical cases of optic neuritis will recover most of their vision.**
- **However, most people will continue to report some mild decreased quality of their vision,** even though they may still read the small letters on the 20/20 line in the doctor’s office. These changes are typically related to reduced color vision, distorted vision, or difficulty with contrast (distinguishing shades of light and dark).
- **Up to 35% of people with optic neuritis will have further episodes in the same eye or other eye.** As of now, there are no medications, supplements, or other treatments proven to reduce the risk of recurrence.
- **The prognosis may be worse depending on the cause of the optic neuritis.** Infections such as syphilis, tuberculosis, Lyme disease, and autoimmune diseases such as neuromyelitis optica (NMO), myelin oligodendrocyte glycoprotein (MOG)-antibody disease, sarcoidosis, and lupus can also cause optic neuritis. In these cases, the vision may not improve.

How often do I need to have checkups for optic neuritis?

Your doctor will check your eyes and vision when you are first having symptoms (acute phase). After determining if you need treatment, other testing, or a referral to a neurologist, your doctor may recheck your eyes and vision after a few weeks to months. Once your vision has stabilized and as long as you do not have any new episodes, you can have routine eye exams.
Additional Reading/Resources

Websites

- **Optic Neuritis, by the National Library of Medicine on MedlinePlus**
- **Optic Neuritis, by the Mayo Clinic**
  (http://www.mayoclinic.org/diseases-conditions/optic-neuritis/basics/definition/con-20029723)
  - The Mayo Clinic has a several-page web article about optic neuritis.
- **Optic Neuritis, by the American Academy of Ophthalmology’s EyeSmart Project**
  (http://www.aao.org/eye-health/diseases/what-is-optic-neuritis)
  - The American Academy of Ophthalmology's patient education portal has a limited but readable article about optic neuritis.
- **Optic Neuritis, by the American Academy of Ophthalmology's EyeWiki Project**
  (http://eyewiki.org/Demyelinating_Optic_Neuritis)
  - This article is a more technical description of optic neuritis and may be too detailed for most readers.
- **Optic Neuritis, by MedicineNet.com**
  (http://www.medicinenet.com/optic_neuritis/article.htm)
  - Because Wikipedia is written and edited by the general public, it may be less accurate than the above websites, which are expert-written. Nevertheless, it is helpful when used in addition to other resources.
Support Groups

To our knowledge, there is no national support group or society specifically for optic neuritis. There are several individuals who have optic neuritis, who have created online support groups and forums. However, because many of those websites have not been updated for several years and do not have significant activity, those websites have not been listed below. If you would be interested in forming a support group (local, national, or online) for optic neuritis, please contact us at info@nanosweb.org.

- **National Multiple Sclerosis Society** ([http://www.nationalmssociety.org/](http://www.nationalmssociety.org/))
  - Although not everyone who has optic neuritis will develop multiple sclerosis, there are many people with multiple sclerosis who have had optic neuritis. This organization both advocates for and supports people with multiple sclerosis and people suspected of having MS.

- **Multiple Sclerosis Foundation** ([http://www.msfocus.org/](http://www.msfocus.org/))
  - This organization is made up of many support groups throughout the United States. Their website lists local multiple sclerosis groups.

  - This is an organization in Great Britain that serves people who have vision loss due to various conditions. There are useful links about optic neuritis.