

OPTIC  
NEURITIS

# UNDERSTAND MORE ABOUT OPTIC NEURITIS



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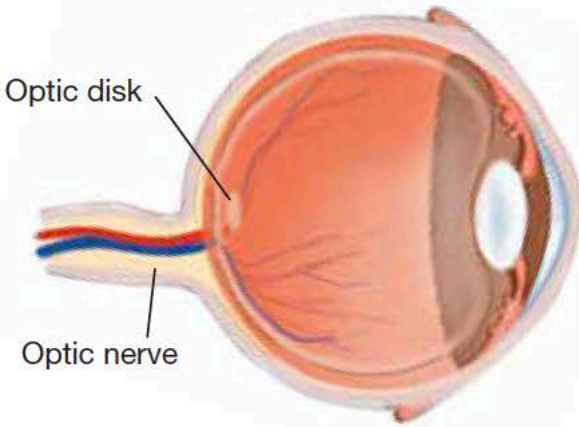


Singapore National  
Eye Centre

SingHealth

# Optic Neuritis

## Optic nerve



The optic nerve's role is to carry visual information from the eye to the brain.

## What is optic neuritis?

Optic neuritis is inflammation of the optic nerve and/or its covering (myelin sheath).

## What causes optic neuritis?

The inflammation occurs when the immune system of one's body mistakenly attacks the optic nerve and/or its myelin sheath. Optic neuritis is a broad term describing a condition which may be caused by a wide range of underlying diseases.

### **Possible causes:**

- Idiopathic or unknown, although a viral infection may be responsible
- Multiple sclerosis (MS)
- Neuromyelitis optica (NMO)

- Myelin oligodendrocyte glycoprotein (MOG)-associated optic neuritis
- Autoimmune conditions
  - Systemic lupus erythematosus (SLE), Sjogren's syndrome, sarcoidosis, granulomatosis with polyangiitis, etc.
- Infections
  - Bacterial infections such as Lyme disease, syphilis, etc., viral infections such as measles, mumps and herpes.

Examination by your ophthalmologist, together with investigations such as blood tests and MRI are important to help differentiate the different types of optic neuritis.

## What are the symptoms of optic neuritis?

Symptoms may affect *one* or *both* eyes, and include:

- **Blurring of vision**
  - You may notice sudden vision loss developing over days.
- **Loss of colour vision**
  - You may notice that colours appear less vibrant than usual.

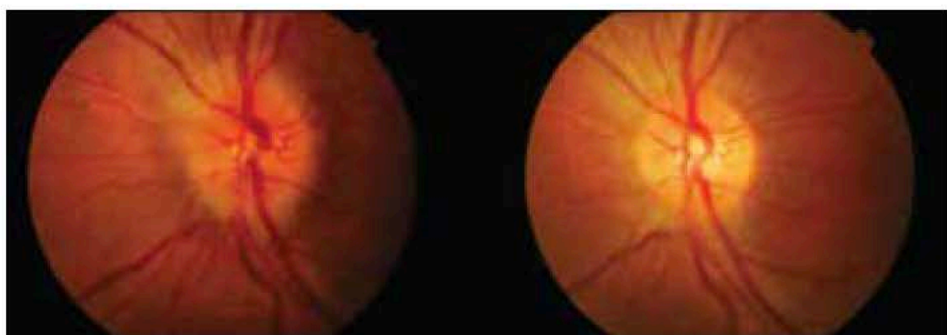
- **Eye pain**

- This may feel like a dull ache behind the eye. Your eye pain may be worsened by eye movement.

## How is optic neuritis diagnosed?

You will need to see an ophthalmologist to make the diagnosis. Your ophthalmologist will take a medical history and perform a full eye examination.

Your optic disc (part of the optic nerve that is visible in the eye) may or may not appear swollen.



Swollen left optic disc in a patient with optic neuritis

Resolution of left optic disc swelling in the same patient 2 weeks later

The following tests may be required in order to diagnose and help distinguish the different causes of optic neuritis:

- **Visual field test**

Measures the degree and pattern of visual loss in your field of vision.

- **Optical coherence tomography (OCT)**

Measures the thickness of your eye's retinal nerve fibre layer, which may be thicker in the acute stage of optic neuritis in the presence of optic disc swelling, or thinner in the late stage due to optic nerve damage.

- **Blood tests**

To check for infections or specific antibodies that may cause different types of optic neuritis.

- **Magnetic resonance imaging (MRI)**

Scan to look for changes in your optic nerve or brain. You may also receive an injection of a contrast (dye) during the scan.

- **Lumbar puncture**

May be performed to analyse the fluid surrounding your brain and spine (cerebrospinal fluid) for abnormalities.

## How is optic neuritis treated?

Some patients with optic neuritis, especially the idiopathic type, may get better without any treatment. However, many patients need

# Optic Neuritis

treatment to improve their vision. The aim of treatment is to reduce inflammation and limit the amount of optic nerve damage.

## **Intravenous Methylprednisolone**

A three- to five-day course of high dose intravenous corticosteroids may be offered to reduce inflammation in the optic nerve. This is usually followed by a longer course of oral corticosteroids.

Possible side effects from steroid treatment include:

- Hypertension, irregular heart beat
- High blood sugar
- Electrolyte (salt) imbalance in the blood
- Gastric bleeding (usually in patients with pre-existing gastric ulcers)
- Infections
- Weight gain
- Osteoporosis
- Mood changes, insomnia

Let your doctor know if you have a history of:

- Gastric ulcers
- Tuberculosis
- Hepatitis B or C carrier

## Plasma Exchange Therapy

When steroid therapy fails and severe vision loss persists, this treatment may be offered to help you recover some vision.

Plasma is the liquid portion of your blood that contains disease-causing antibodies. This treatment removes plasma from your blood and replaces it with a substitute.

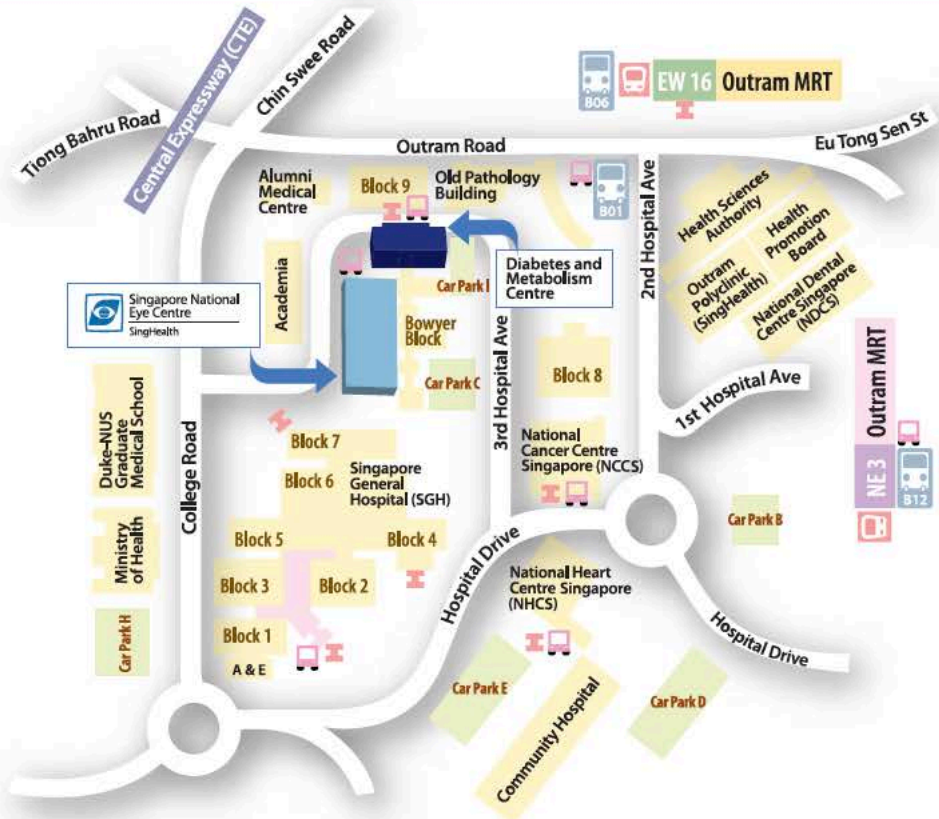
## Will my vision improve completely after treatment?

Most patients recover their vision completely. It may take up to one year. This tends to be the case when optic neuritis is not related to an underlying health condition (see “*What causes optic neuritis?*”). In some cases, however, vision recovery may be incomplete.

## Will my episode of optic neuritis occur again?

If you have an underlying health condition (see “*What causes optic neuritis?*”) that triggered the optic neuritis, this has to be treated. Otherwise, optic neuritis may recur.

# LOCATION MAP



## Legend

MRT Station

Taxi Stand

East West Line

North East Line

Shuttle Bus Service  
Mon to Fri (8.00am - 7.00pm)  
Sat (8.00am - 2.00pm)

**Opp Outram Park Stn**  
Bus No. 33, 63, 75, 121,  
122, 174, 174e, 851, 970

**Outram Park Stn Exit F**  
Bus No. 61, 124, 143, 147,  
147e, 166, 197, 961, 961C

**Outram Park Stn/Outram Rd**  
Bus No. 33, 63, 75, 121, 122, 174,  
174e, 534, 535, 549, 761, 851, 970

This patient information leaflet is a general guide to help patients understand specific eye conditions, treatment or tests. The information does not replace the need for individual advice from an ophthalmologist. Please consult with your ophthalmologist about your specific eye condition and/or concerns.

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