

## Optic Neuritis is One Specific Explanation for an Optic Neuropathy

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### DESCRIPTION

The optic nerve is the connection between the eye and the brain that transmits visual information from the retina. Inflammation of this nerve is called optic neuritis. During optic neuritis inflammation can cause damage to the protective sheath (myelin) surrounding this nerve and therefore the nerve itself. It can affect one optic nerve or both optic nerves at the same time.

Vision symptoms from optic neuritis can include blurring, blind spots or complete loss of vision. You also may notice distorted vision, reduced color vision and pain when you move one or both eyes [1]. These sorts of symptoms may precede vision loss thanks to optic neuritis.

The term optic neuropathy more generally describes nerves optic abnormalities or damage. This damage could be from blocked blood flow, certain medical conditions or toxic exposure [2]. Optic neuritis is one specific explanation for an optic neuropathy.

### Ischemic Optic Neuropathy

In ischemic optic neuropathies, there's insufficient blood flow (ischemia) to the nervus opticus. The anterior nervus opticus is supplied by the short posterior arteria ciliaris and choroidal circulation, while the retrobulbar nervus opticus is supplied intraorbitally by a pial plexus, which arises from the ophthalmic artery, internal carotid artery, anterior cerebral artery, and anterior communicating arteries. Ischemic optic neuropathies are classified supported the situation of the damage and therefore the explanation for reduced blood flow [3].

### Radiation Optic Neuropathy (RON)

RON is additionally thought to flow from to ischemia of the nervus opticus that happens 3 months to eight or more years after radiotherapy to the brain and orbit. It occurs most frequently around 1.5 years after treatment and leads to irreversible and severe vision loss, which can even be related to damage to the retina (radiation retinopathy). This is thought to flow from to wreck to dividing glial and vascular endothelial cells. Patients can also have radiation retinopathy with retinal haemorrhages, cotton spots, exudates and macular edema. Because many of these patients were treated for brain or orbital tumors, recurrent tumor is initially

the most consideration when patients become symptomatic [3,4]. There is no treatment of proven efficacy for RON.

### Anterior Ischemic Optic Neuropathy (AION)

(AION) includes diseases that affect the nervus opticus head and cause swelling of the blind spot. These diseases often cause sudden rapid visual loss in one eye. Inflammatory diseases of the blood vessels, like giant-cell arteritis, polyarteritis nodosa, Churg-Strauss syndrome, granulomatosis with polyangiitis, and rheumatoid arthritis can cause arteritic AIONs (AAION). The overwhelming majority of AIONs are nonarteritic AIONs (NAION). The most common acute optic neuropathy in patients over 50 years aged, NAION has an annual incidence of two.3-10.2/100,000. NAION presents as an easy loss of vision, often when awakening, that happens over hours to days. Most patients lose the lower half their field of vision (an inferior altitudinal loss), though superior altitudinal loss is additionally common [4].

### Posterior Ischemic Optic Neuropathy (PION)

PION is a syndrome of sudden visual loss with optic neuropathy without initial disc swelling with subsequent development of optic atrophy. This can occur in patients who are predisposed to AAION and NAION as described above also as those that had cardiac and spine surgery or serious episodes of hypotension [5].

### CONCLUSION

Optic neuropathy is often caused by demyelination, inflammation, ischemia, infiltration, compression, and hereditary and toxic/nutritional causes. Careful clinical evaluation is important to rule out the diagnosis of optic neuropathy. Recognition of same entities can't only alter the visual prognosis but also the neurological prognosis.

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**Received:** October 23, 2020; **Accepted:** November 6, 2020; **Published:** November 13, 2020

**Citation:** Bhalekudaru S (2020) Optic Neuritis is One Specific Explanation for an Optic Neuropathy. J Eye Dis Disord. 5: e109.

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