Patient information leaflet

Non-arteritic anterior ischaemic optic neuropathy (NAION)

What is NAION?

What we see of the world is focussed onto the lining of the back of our eyes - a thin layer called the retina. The retina converts this image into electrical impulses which travel through the optic nerve (nerve of sight) to the brain.

The optic nerve is supplied by very small blood vessels and it is the blood flow in these small blood vessels that is affected in NAION. The blood supply to part of the optic nerve is reduced, resulting in damage to the nerve fibres and thus the loss of some of the sight in the eye.

What causes NAION?

Despite many theories and suggestions, the exact cause of NAION is not known. Many people with NAION have good general health but some conditions seem to increase the risk of NAION such as a history of heart disease, diabetes, raised cholesterol and sleep apnoea.
Initially the blood supply to the optic nerve may be lower than normal but the final event may be an overnight drop in oxygen levels or blood pressure which reduces the blood supply further and causes damage and swelling of the nerve.

**What happens early in NAION?**

The commonest situation is to wake up one morning and feel as if there is something covering part of the vision of the eye. This commonly happens in the lower part of the vision towards the side of the nose. In some patients the central part of the vision is abnormal, while in others the upper or lower half of the centre of the vision is affected. In the first few weeks this area may become greyer and more obvious. Most people find that some or all of the lower half of the vision is affected in one eye. The whole process is usually painless. It is common in the first few weeks to see flashes of light in the affected area when the eyes are closed. This gradually becomes less and then stops happening.

**Will the eyesight change later?**

The affected area of vision may become more obvious in the first month or two but it is very unusual for the damage to spread to new areas of the vision in the same eye over this period. Unfortunately the optic nerve damage that has taken place does not recover. However, the optic nerve and retina are swollen in the first weeks and as the swelling disappears some modest improvement can occur in the less badly affected area of vision in that eye.

**Will the other eye become affected?**

There is a low risk of the other eye being affected in the same way – about 15-20%. This risk can be kept to a minimum by ensuring that risk factors such as raised cholesterol and sleep apnoea are treated. People with NAION are *not* more likely than others to die from stroke or heart disease. There is some evidence that people with NAION in one eye may be at higher risk of developing NAION in the other eye if they take drugs for erectile dysfunction. Your consultant will be able to discuss this with you. Cataract surgery may also increase the risk of NAION occurring in the other eye.

**Is there any treatment?**

There is no single treatment that has been proven to treat or prevent NAION or to reduce the amount of visual loss. However, there are some steps to take that can be helpful and may reduce the risk of developing NAION in the other eye:
Reducing cholesterol: if your cholesterol level is raised then drugs can be given to reduce the levels. Your GP can discuss this with you.

Treating high blood pressure: while this is important, it needs to be done slowly to avoid dropping the blood pressure too low (especially at night). Your doctor may advise taking your blood pressure medication in the morning to avoid this problem.

Treating other conditions: any condition that can affect small blood vessels or blood oxygen levels (such as diabetes or sleep apnoea) needs to be kept well controlled. It is also important to stop smoking.

Aspirin: this helps keeps blood flowing and may help reduce the risk of NAION occurring in the other eye. The dose is low, often 75mg once daily. Your consultant or GP can advise you if it is safe to take this.

Glasses: new or replacement glasses will not restore the vision that has been damaged. However, if you had previously needed glasses, then wearing the glasses will make the damaged area much less noticeable. If you feel you need new glasses, wait until the optic nerve swelling at the back of the eye has settled. This may take 1-2 months and your ophthalmologist will advise when it is appropriate to visit an optician.

Diet and exercise: a healthy diet and some exercise are always sensible. The exercise can be simply walking or swimming, which are as good as jogging or going to the gym.

Will I adjust to the loss of vision?

Yes. Only one eye is affected so the normal eye starts to ‘fill in the gap’. The upper half of the vision may be normal in the affected eye and for those whose central vision is unaffected, they will find they can use the affected eye well. In time, most patients learn to ignore the damaged area of vision.

Other sources of support

RNIB (Royal National Institute for the Blind) offers support to people with sight problems and can put you in touch with local support groups.
105 Judd St, London WC1H 9NE.

RNIB Helpline Tel: 0303 123 9999
The Partially Sighted Society is able to give advice on coping with sight loss and they can be contacted at
7 - 9 Bennetthorpe, Doncaster, South Yorkshire DN2 6AA
Tel: 0844 477 4966

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