

What is Optic Atrophy

The optic nerve is the nerve of vision. It carries images of what we see coded as electrical impulses, from our eye to our brain. The optic nerve is like a cable of electrical wires, and consists of about 1,200,000 separate tiny wires, or nerve fibers. Each of these carries a part of the information. If some of these nerve fibers are damaged through disease, the brain doesn't get all the vision information, and our sight becomes blurred.

Optic atrophy is the medical term used to describe the loss of some or all of the nerve fibers in the optic nerve. If most of the nerve fibers are damaged, severe loss of vision is the result, while loss of only a few nerve fibers may produce little change in vision. In either case, the term optic atrophy is used.

What Causes Optic Atrophy?

Many diseases and conditions may lead to optic atrophy, or a damaged optic nerve. The nerve from only one eye may be involved, or both optic nerves may be damaged. For example, some people are born with optic atrophy because the optic nerves did not develop properly. Other people inherit the problem from parents or others in their family. Optic atrophy may also result from inflammations of the optic nerve, from failure of circulation to the optic nerve, and from glaucoma (eye pressure too high) or even head injuries. In unusual cases, poisons, vitamin deficiencies, or tumors may be responsible. Most commonly, optic atrophy just happens, without a cause that can be proven.

What Are The Signs Of Optic Atrophy?

The optic nerve enters the back of the eye where it appears as a small disc, which can be examined by looking through the pupil with a special instrument called an ophthalmoscope. If optic atrophy is present, this small disc appears white (pallor), indicating loss of nerve tissue. Other signs of optic atrophy include poor vision, abnormal side or color vision, and poor constriction of the pupil in light. These tests help to decide if optic atrophy is present, and if so, what caused it. Other tests including CT scans, ultrasound, or brain wave recordings with visual stimuli (VEP) may be ordered.

How Is Optic Atrophy Treated?

Unfortunately, there is no effective treatment for optic atrophy. The best we can do is to find out what has caused it, if we can, to prevent further damage from occurring. Once the nerve fibers in the optic nerve are lost, they never grow back or heal. Because the nerves cannot heal, eye or optic nerve transplants are

not possible. Since optic atrophy cannot be treated, the best defense is an early diagnosis. If the cause can be found and corrected, further damage may be prevented. Visual rehabilitation is with Low Vision aids. Low Vision aids like optical magnifiers, CCTV based readers or computer aided devices and special software to read and increase the font size of the reading material may be used to assist in rehabilitation.

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