

Glaucoma

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Glaucoma. What is it? Some misconceptions exist regarding glaucoma. One thing that most of the public does understand, however, is that glaucoma is serious and is potentially blinding. Many people, however, harbor the misconception that glaucoma produces pain. Indeed, there is one form of glaucoma that can produce an acute onset of pain, but this form of glaucoma (acute angle closure glaucoma) is relatively uncommon, particularly in comparison to the much more common form of the disease, chronic open-angle glaucoma. Chronic open-angle glaucoma is completely a-symptomatic (without symptoms) in the earliest stages of it. Loss of vision off to the side, (peripheral vision) is eventually noticed by the patient, but by the time patients realize that peripheral vision has been lost, the damage caused by glaucoma is quite advanced. What is the solution to prevention of development of such advanced stages of a blinding disease? Regular screening for the disease! Screening for glaucoma requires essentially three elements: Visual acuity testing, intraocular pressure measuring, and an analysis of the optic nerve (typically by a skilled physician simply looking through the pupil and examining the optic nerve visually).

Glaucoma by accepted general definition is damage to the optic nerve produced as a result of the imbalance between the blood flow (and the pressure driving it) to the optic nerve, and the pressure in the eye, which can reduce flow of blood to the optic nerve. In most instances, this imbalance of forces occurs as a result of pressure in the eye that is too high. The upper limits of normal is typically considered as 21 millimeters of mercury. Pressure above that without optic nerve damage is typically called "ocular hypertension." Evidence of optic nerve damage, either through inspection of the nerve or through demonstration of abnormalities on visual field testing, is then defined as glaucoma.

At the Massachusetts Eye Research and Surgery Institution (MERSI) we are using the latest and most sensitive technology to monitor the nerves of the retina and to monitor the optic nerve in an effort to preserve the vision of patients with glaucoma, rather than to simply detect loss of peripheral vision after it has already occurred.

From a public health standpoint, the important thing for the general public to remember is that an annual eye examination after the age of 40 (and examination every two years before the age of 40) is the best medicine-approach to self-care and good health maintenance.