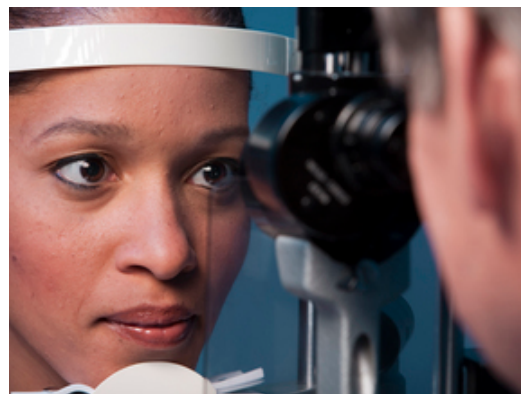


# Five Common Glaucoma Tests

**Early detection, through regular and complete eye exams, is the key to protecting your vision from damage caused by glaucoma.**

It is important to have your eyes examined regularly. Your eyes should be tested:

- before age 40, every two to four years
- from age 40 to age 54, every one to three years
- from age 55 to 64, every one to two years
- after age 65, every six to 12 months



Anyone with high risk factors, should be tested every year or two after age 35.

## A Comprehensive Glaucoma Exam

To be safe and accurate, five factors should be checked before making a glaucoma diagnosis:

Examining...	Name of Test
The inner eye pressure	<u>Tonometry</u>
The shape and color of the optic nerve	<u>Ophthalmoscopy</u> (dilated eye exam)
The complete field of vision	<u>Perimetry</u> (visual field test)
The angle in the eye where the iris meets the cornea	<u>Gonioscopy</u>
Thickness of the cornea	<u>Pachymetry</u>

Regular glaucoma check-ups include two routine eye tests: tonometry and ophthalmoscopy.

## Tonometry

Tonometry measures the pressure within your eye. During tonometry, eye drops are used to numb the eye. Then a doctor or technician uses a tool called a tonometer to measure the inner pressure of the eye. A small amount of pressure is applied to the eye by a tiny tool or by a warm puff of air.

The range for normal pressure is 12-22 mm Hg ("mm Hg" refers to millimeters of mercury, a scale used to record eye pressure). Most glaucoma cases are diagnosed with pressure exceeding 20mm Hg. However, some people can have glaucoma at pressures between 12 -22mm Hg. Eye pressure is unique to each person.

## Ophthalmoscopy

This diagnostic procedure helps the doctor examine your optic nerve for glaucoma damage. Eye drops are used to dilate the pupil so that the doctor can see through your eye to examine the shape and color of the optic nerve.

The doctor will then use a small tool with a light on the end to light and magnify the optic nerve. If your intraocular pressure is not within the normal range or if the optic nerve looks unusual, your doctor may ask you to

have one or two more glaucoma exams: perimetry and gonioscopy.

## Perimetry

Perimetry is a visual field test that produces a map of your complete field of vision. This test will help a doctor determine whether your vision has been affected by glaucoma. During this test, you will be asked to look straight ahead and then indicate when a moving light passes your peripheral (or side) vision. This helps draw a "map" of your vision.

Do not be concerned if there is a delay in seeing the light as it moves in or around your blind spot. This is perfectly normal and does not necessarily mean that your field of vision is damaged. Try to relax and respond as accurately as possible during the test.

Your doctor may want you to repeat the test to see if the results are the same the next time you take it. After glaucoma has been diagnosed, visual field tests are usually done one to two times a year to check for any changes in your vision.

## Gonioscopy

This diagnostic exam helps determine whether the angle where the iris meets the cornea is open and wide or narrow and closed. During the exam, eye drops are used to numb the eye. A hand-held contact lens is gently placed on the eye. This contact lens has a mirror that shows the doctor if the angle between the iris and cornea is closed and blocked (a possible sign of angle-closure or acute glaucoma) or wide and open (a possible sign of open-angle, chronic glaucoma).

## Pachymetry

Pachymetry is a simple, painless test to measure the thickness of your cornea -- the clear window at the front of the eye. A probe called a pachymeter is gently placed on the front of the eye (the cornea) to measure its thickness. Pachymetry can help your diagnosis, because corneal thickness has the potential to influence eye pressure readings. With this measurement, your doctor can better understand your IOP reading and develop a treatment plan that is right for you. The procedure takes only about a minute to measure both eyes.

## Why Are There So Many Diagnostic Exams?

Diagnosing glaucoma is not always easy, and careful evaluation of the optic nerve continues to be essential to diagnosis and treatment. The most important concern is protecting your sight. Doctors look at many factors before making decisions about your treatment. If your condition is particularly difficult to diagnose or treat, you may be referred to a glaucoma specialist. A second opinion is always wise if you or your doctor become concerned about your diagnosis or your progress.

Last reviewed on October 07, 2011

---

[Glaucoma Research Foundation](#)

**251 Post Street, Suite 600 (415) 986-3162**  
**San Francisco, CA 94108 (800) 826-6693**