

Glaucoma Eye Examination Checklist

Glaucoma is an eye disease that causes irreversible vision loss, and there are no symptoms until the advanced stages. Glaucoma New Zealand recommends that everyone, even people without symptoms of any eye problem, should have an examination to check for glaucoma by the time they are 45. If the exam is normal, you should have a repeat glaucoma eye examination at least every five years. However, suppose you have a family history of glaucoma or have other risk factors for developing glaucoma. In that case, you may need to be seen at a younger age and followed up more regularly.

As part of an eye examination to check for glaucoma, your optometrist or ophthalmologist should check the following:

- You will be asked questions about your previous eye health, including any medications you may have taken for eye conditions, and any history of eye injury or surgery.
- You will be asked about any family history of glaucoma and other eye diseases.
- You will be asked about your general health and the medications you are taking or have taken in the past, particularly steroid medications. Some health conditions are associated with an increased risk of glaucoma.
- Your focusing error will be assessed. People with high levels of focusing error are at increased risk of developing glaucoma. For example, highly shortsighted people are at higher risk of developing open-angle glaucoma, and very long-sighted people have a higher risk of narrow angles and angle closure glaucoma.
- You will be asked to read the smallest letters you can see on an eye chart. Although glaucoma does not affect the central part of your vision until very late in the disease, this is an important part of any eye assessment.
- Your pupil reactions will be assessed with a bright light. If the reaction is different in one eye compared with the other, this can provide your examiner with useful information about the health of your eyes.
- The pressure inside your eye will be measured. There are a number of different ways to do this, and some methods are more suited to certain individuals. The 'gold standard' method used to measure the pressure inside the eye is called Goldmann tonometry. This requires the use of a numbing eye drop and a yellow dye so that an accurate measurement can be made.
- The fluid drainage angle will be assessed. We all have a clear fluid, called aqueous humour, constantly produced and drained inside the eye. It is important to assess the fluid drainage in order to determine your risk of developing certain types of glaucoma. In some cases a special lens may be gently placed on the eye to allow the optometrist or ophthalmologist to see the fluid drainage angle in detail. As a numbing eye drop is used, you will not feel the lens on your eye.
- The structures at the front of your eye will be assessed using a special microscope and a bright light. This is done to look for other eye conditions that may increase your risk of developing glaucoma.

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The most important part of a glaucoma examination is a detailed assessment of the optic nerve at the back of the eye. This is the part of the eye that is damaged in glaucoma. Many optometrists and ophthalmologists will also take a photograph of the optic nerve. This is so that they have a permanent record that future photographs can be compared to.

Taking all of the above information into account, your optometrist or ophthalmologist will decide whether you need any extra tests. For many people, additional tests will not be required. If other tests are needed, they can include the following:

- Your colour vision will be assessed. This can sometimes help to distinguish between glaucoma and other disease that can affect the eye.
- The thickness of the cornea (the clear window at the front of the eye) will be measured. This measurement allows for more accurate interpretation of the pressure reading, and to help determine your risk of developing glaucoma. If your cornea is thin, you may be at higher risk. This measurement does not need to be done at every visit, but everyone should have this measurement done at least once.
- You may need a detailed assessment of your peripheral (side) vision (a visual field test). It is still possible to have very early glaucoma with a normal visual field test. This means that it has been picked up at the best possible time! This is a very useful test to determine the severity of glaucoma, and whether changes to your peripheral vision are happening over time.
- A scan of the structures at the back of the eye may be taken. These scans, called optical coherence tomography (or OCT for short) are now used routinely to help the optometrist or ophthalmologist to diagnose glaucoma (and many other eye conditions) and monitor changes in the health of your eyes. The scans provide highly detailed information about the optic nerve and the layers of the retina at the back of your eyes.

Once your optometrist or ophthalmologist has the information from the eye examination, they will be able to tell you more about your risk of developing glaucoma, and how frequently you should have an eye examination.

Please note recommendations for a general eye health examination and a glaucoma examination maybe different. A general eye health examination maybe required more frequently if you have any other eye health concerns. You eye specialist will advise accordingly.