TEST

Standard eye exam

A standard eye exam checks how clearly you see and looks for eye problems.

WHAT IT MEASURES
Vision, focusing, eye alignment, pressure, and eye health

SAMPLE
None

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually 30 to 60 minutes

RESULTS IN
Usually immediate; additional test timing varies by clinic

USED FOR
Screening, diagnosis, and monitoring

MAIN LIMITATION
A normal exam cannot rule out every eye condition

Overview

A standard eye exam is a group of tests that checks your vision and the health of your eyes. It may be performed by an optometrist or ophthalmologist. An optometrist provides eye and vision care, while an ophthalmologist is a medical doctor who specializes in eye disease and surgery.

The exact tests are tailored to your age, symptoms, medical history, and previous results. A routine exam often checks:

Your pupils may be widened with dilating drops so the examiner can see more of the retina and optic nerve. The retina is the light-sensitive layer at the back of the eye. The optic nerve carries visual information to the brain.

- How clearly you can see at different distances
- Whether glasses or contact lenses could improve your vision
- How your pupils, eye muscles, and side vision work
- The pressure inside your eyes

- The front and back structures of your eyes

Why the test is ordered

An eye exam may be used to find vision changes before they noticeably affect daily life. It can identify common focusing problems such as short-sightedness, long-sightedness, and astigmatism.

The exam also looks for signs of conditions affecting the eye, including cataracts, glaucoma, retinal disease, inflammation, and damage related to diabetes. Some findings need further testing before they can be diagnosed.

If you already have an eye condition, exams can show whether it is stable or changing. They may also monitor how well glasses, contact lenses, medicines, laser treatment, or surgery are working.

An exam may be arranged because of blurred vision, headaches linked to focusing, eye strain, double vision, flashes, floaters, eye pain, redness, or a change in side vision. These symptoms have many possible causes and the exam alone may not provide the final answer.

Who should have the test

Routine eye care is relevant throughout life, but the timing is not the same for everyone. Recommended intervals vary with age, vision, family history, general health, medicines, previous findings, and local guidance.

You may need exams more often if you:

Children may have vision screening through primary care, school, or community programs. Screening is not always the same as a complete eye exam. A child may need a fuller assessment if screening is unclear or if there are concerns about eye alignment, focusing, or development.

Sudden loss of vision, a curtain-like shadow, new flashes with many floaters, severe eye pain, or an eye injury should not wait for a routine appointment. Seek urgent eye care. Call emergency services for vision changes accompanied by weakness, facial drooping, trouble speaking, severe imbalance, or a sudden severe headache.

- Wear glasses or contact lenses
- Have diabetes or another condition that can affect the eyes

- Have glaucoma or a strong family history of it
- Take medicines that can affect vision or eye structures
- Have had an eye injury, operation, or previous abnormal result

How to prepare

You do not need to fast. You can usually eat, drink coffee, and take your regular medicines unless the clinic gives different instructions.

Bring your current glasses and contact lenses, along with their prescription if you have it. Bring a list of medicines and eye drops. Tell the examiner about previous eye surgery, injuries, allergies, pregnancy, and medical conditions such as diabetes or high blood pressure.

Contact lenses can temporarily change the shape and surface of the cornea, the clear front window of the eye. The clinic may ask you to remove them before the appointment or leave certain lenses out for longer if detailed corneal measurements are planned.

If dilation is likely, consider bringing sunglasses. Your near vision may be blurred and bright light may feel uncomfortable for several hours. Ask the clinic beforehand about driving, especially if you have not been dilated before.

What happens during the test

The examiner first asks about your vision, symptoms, health, medicines, family history, and previous eye care.

You will usually read letters or symbols on a chart. This is called a visual acuity test. Each eye is checked separately, with and without your current glasses when appropriate.

During refraction, the examiner shows you different lenses and asks which gives the clearer view. This helps estimate a glasses prescription. Some people, particularly children, may receive drops that temporarily stop the eyes from focusing so the prescription can be measured more reliably.

A light is used to check your pupils and eye movements. Side vision may be assessed by asking you to respond when you see a target away from the center of your gaze.

A slit lamp is a microscope with a bright, narrow beam of light. It allows close examination of the eyelids, cornea, iris, lens, and other structures.

Eye pressure may be measured with a brief air puff or a small instrument that gently touches

the numbed surface of the eye. This is called tonometry.

Dilating drops may then widen your pupils. The examiner uses lights and lenses to inspect the retina, blood vessels, central retina, and optic nerve. Photographs or scans may be taken when more detail or a record for comparison is needed.

Understanding your results

Many results are available during the appointment. The examiner may describe whether your vision is clear with correction, whether your prescription has changed, and whether the examined eye structures appear healthy.

Visual acuity may be written as a fraction, such as 20/20 or 6/6. The first number is the testing distance. The second describes the smallest line you could read compared with a standard chart. Good chart vision does not test every part of sight, such as side vision, contrast, or how well you see in dim light.

Eye pressure is interpreted alongside the appearance of the optic nerve, corneal thickness, visual field results, age, and other risk factors. A higher reading does not by itself mean you have glaucoma, and a reading within the clinic's expected range does not completely rule it out.

Reference values and interpretation vary by clinic, equipment, age, sex, pregnancy status, medicines, and clinical context. A finding outside an expected range may need to be repeated or investigated rather than treated immediately.

What affects the results

Several factors can change eye exam findings even when the equipment is working correctly.

Dry eyes, recent screen use, tiredness, blinking, and difficulty concentrating can make chart vision or refraction less consistent. Blood sugar changes can temporarily alter focusing, so a glasses prescription measured during a period of changing glucose may not remain accurate.

Contact lenses can affect the corneal surface and shape. Recent eye rubbing can also alter some corneal measurements. Previous eye surgery may require different methods of interpretation.

Eye pressure changes during the day. Breath-holding, squeezing the eyelids, body position, recent exercise, caffeine, and some medicines or eye drops can influence a reading. Corneal thickness and stiffness can make measured pressure appear higher or lower than the pressure inside the eye actually is.

Pupil size, room lighting, dilation, age, pregnancy, and focusing effort can affect parts of the examination. Children and some adults may need a repeat test if they were unable to keep still, maintain attention, or understand the test the first time.

Tell the examiner about recent eye drops, medicines, surgery, injury, and changes in diabetes control. These details help place the findings in context.

Accuracy and limitations

A standard eye exam is not one single test, so there is no single accuracy figure. Its reliability depends on which parts are performed, the equipment used, and how consistently you can respond.

A routine exam can miss early or subtle disease. For example, glaucoma may develop with eye pressure readings that do not appear high. A quick side-vision check may miss defects that a formal automated visual field test can detect.

An unusual result may also suggest a problem that is not present. Eye pressure can be temporarily raised, and an unclear retinal image may reflect small pupils, cataracts, movement, or poor focus rather than retinal disease. Repeating the test or using another method can clarify the finding.

Retinal photographs and optical coherence tomography scans provide useful images, but they do not always replace a dilated examination. Depending on the concern, a formal visual field test, corneal thickness measurement, ultrasound, angiography, or specialist examination may be more appropriate.

Risks and complications

Most parts of an eye exam are non-invasive and painless. Bright lights may be briefly uncomfortable.

Dilating drops commonly cause temporary light sensitivity and blurred near vision. Contact tonometry drops may sting briefly, and touching the eye surface carries a small risk of irritation or a minor scratch.

Very rarely, dilation can trigger a sudden pressure rise in an eye with a narrow drainage angle. Seek urgent care after dilation if you develop severe eye pain, a red eye, worsening blurred vision, halos around lights, headache, nausea, or vomiting.

What happens next

If the results are reassuring, you may be advised to return for routine follow-up at an interval based on your age, health, and eye history. You may receive a new glasses or contact lens prescription.

An unclear or abnormal finding may lead to a repeat measurement, photographs, scans, a formal visual field test, or referral to an ophthalmologist. This does not necessarily mean that a serious condition is present; further testing may be needed to confirm what the first exam showed.

Do not wait for routine follow-up if you develop sudden vision loss, severe pain, a curtain or shadow in your vision, or new flashes with many floaters. These symptoms need urgent assessment.

Common questions

Can I drink coffee before an eye exam?

Usually, yes. Coffee can briefly affect eye pressure in some people, so tell the examiner if you recently had caffeine and pressure monitoring is important.

Does the time of day matter?

It can matter for eye pressure, which naturally changes during the day. Follow-up measurements are sometimes taken at a similar time for easier comparison.

Can I exercise beforehand?

Normal activity is usually fine. Strenuous exercise can temporarily affect eye pressure and hydration, so mention recent exercise if your pressure is being assessed closely.

Can I drive after the exam?

Many people can drive after a non-dilated exam. Dilation may blur near vision and increase glare, so arrange other transport if you are unsure whether you will feel safe driving.

Should I wear my contact lenses?

Bring them and their details, but be prepared to remove them. Ask ahead if the clinic is measuring your corneal shape or assessing contact lens fit.

How long will my pupils stay dilated?

Blur and light sensitivity commonly last several hours. The duration differs with the drops used, your eye color, age, and how your eyes respond.

Sources

- American Academy of Ophthalmology. Comprehensive Adult Medical Eye Evaluation Preferred Practice Pattern . Ophthalmology. 2021;128(1):P1-P29.
- American Optometric Association. Comprehensive Adult Eye and Vision Examination: Evidence-Based Clinical Practice Guideline . 2015.
- National Institute for Health and Care Excellence. Glaucoma: Diagnosis and Management . NICE guideline NG81. Published 2017; updated 2022.
- National Eye Institute. Dilated Eye Exam . Patient information on examination of the retina and optic nerve.
- US Preventive Services Task Force. Screening for Impaired Visual Acuity in Older Adults: Recommendation Statement . JAMA. 2022;327(21):2123-2128.