

History Taking and Pretesting

History taking entails obtaining the patient's medical history and description of the current symptoms. Symptoms may include vision loss or impairment, floaters, flashing lights, shadows or curtain, and pain. This information forms the basis for pretesting - performing baseline tests, including visual acuity, pupil function, ocular motility, and intraocular pressure (IOP) test.

Why it is performed

The purpose is to assist the doctor subsequent examination, investigations, diagnosis, and treatment planning. Specifically,

- Knowledge of a patient's medical history and understanding of the current symptoms are essential in all phases of care cycle from initial examination to diagnosis to care planning to treatment and follow up.
- The visual acuity test is performed to screen for possible vision problems, especially if there is a change in vision, monitor vision problems in people with chronic conditions (e.g., diabetes), determine the needs for glasses or contact lenses to improve vision, and assess vision to meet job requirements or after injury.
- The pupil function test is performed to inspect the pupil and assess its function to assist in the diagnosis of ocular or retinal disorders.
- The ocular motility test is performed to assess the kinematics of eye movements, muscle actions, and measurements of eye movements, especially when the symptoms include double vision or a neurological disease is suspected.
- The IOP test is performed to assist in the diagnosis of glaucoma, vision-threatening disorders marked by an elevation in IOP that can gradually (or suddenly) destroy the optic nerve, and detect low IOP, which can be caused by injury, inflammation, detachment of the retina, or poor blood supply to the eye.

How to prepare

People are asked to provide (a) demographic information, (b) names of the referring and family doctors, and (c) health status information, including medical conditions and current medications. No special preparation is required before taking the visual acuity test, the pupil function test, or the ocular motility test. However, for the IOP test, a short-acting freezing drop is applied.

How it is performed

History taking: Patients are asked to fill in a form to provide (a) demographic information including name, address, telephone number, date of birth, health care number, occupation and employment and next of kin, (b) names of the referring and

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family doctors, and (c) medical status information, including medical conditions, current medications. An interview follows during which patients are asked to answer some medical history-related questions and describe their vision-related problems and symptoms.

The Visual Acuity Test: Visual acuity is the eye's ability to detect fine details and is the quantitative measure of the eye's ability to see an in-focus image at a certain distance. The visual acuity test is done with the Snellen chart. A patient is asked to cover one eye and read the letters on the chart from the smallest to the largest from the distance of 20 feet (or 6 metres). The smallest line the patient can read successfully is recorded. The same test is repeated with the other eye.

The Pupil Function Test: It entails the inspecting the pupils as well as the assessment of the pupil reflex response to light stimulus, and direct and consensual accommodation.

The Ocular Motility Test: It entails the inspection of the eyes followed by the 'follow my finger' test, in which the examiner's finger traces an imaginary "H", which touches upon the six cardinal fields of gaze to assess the muscles of the eye. The test also entails the assessment of the fast movement of the eye by having the patient move his or her eye quickly to a target at the far right, left, top and bottom.

The IOP Test: It entails the use of a device called a tonopen that is mounted on the slit lamp and positioned in front of the eye so that its tip gently touches the cornea to measure the amount of force applied until the device flattens the central cornea by a standard amount. This reading is an indication of IOP.

Results

The Acuity Test: A visual acuity 20/20 is considered "normal". Any deviations from "normal" may indicate that corrective lenses are needed to obtain normal vision, or may indicate an eye condition requiring further evaluation.

The Pupil Function Test: Pupils are considered normal if they are equal size, regular shape and constrict when exposed to light.

The Ocular Motility Test: The eyes are considered normal if they point in the same direction and their movement to track slow and fast moving objects is coordinated.

The IOP Test: IOP is measured in millimetres of mercury (mm Hg). Normal IOP falls between 10 and 20 mm Hg. Elevated IOP, which may indicate glaucoma or ocular hypertension, requires further testing, including ophthalmoscopy to visual inspect of the optic nerve and perimetry to perform visual field testing. Low IOP, which may indicate retinal problems, inflammation, or poor blood supply to the eye, requires further testing to determine the cause of the low pressure.

How it feels

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There is no pain or discomfort associated with the visual acuity test, the pupil function test, or the ocular motility test. Some people may notice a brief stinging sensation when the drops are put into their eyes for the IOP test.

What the risks are

There are no known risks associated with the visual acuity test, the pupil function test, or ocular motility test. Although the IOP test is considered safe, in some people the eye drops can cause brief episodes of nausea, dryness of the mouth, flushing, and dizziness. In rare cases, severe reactions can occur.