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**EXPLANATION OF TESTING FOR INDEPENDENT MEDICAL EXAM[IME]**

Tests are directed towards determining if there is an ocular (including retinal and optic nerve) or cortical or brain stem lesion giving rise to the visual complaints the patient has..

These tests are objective (not dependent on patient's voluntary responses) or subjective (dependent on patient's voluntary responses).

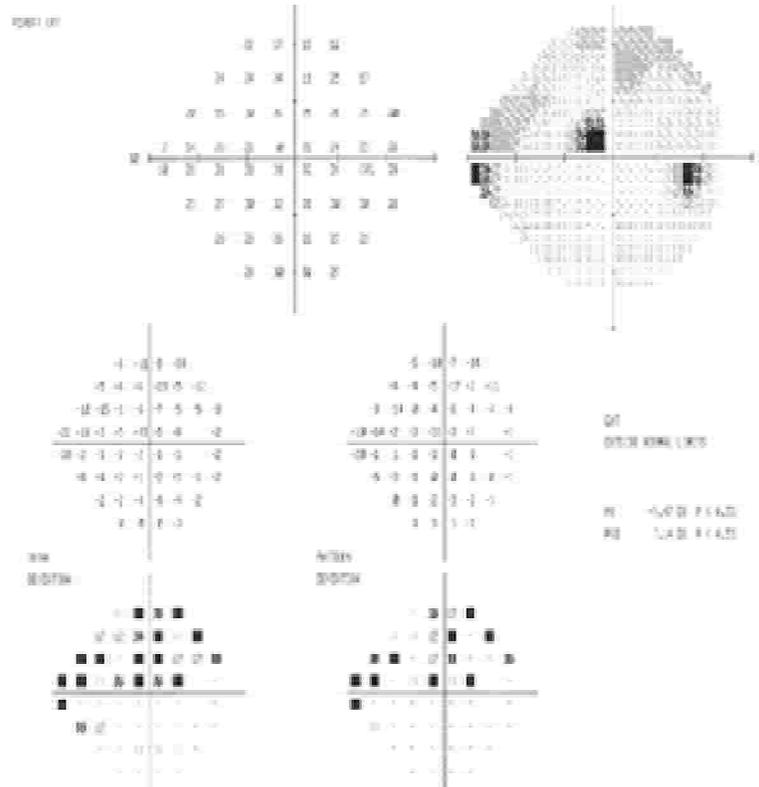
These are the explanations of the tests that we may perform during a Neuro-ophthalmic IME:

**Automated visual fields (CPT 92083):** this is a mapping of both the central and peripheral vision for each eye. This test is subjective and quantifies a patient's complaints of a visual field defect that can be central or peripheral. Serial visual field testing is helpful in determining improvement or progression of an alleged visual field loss as well as consistency. There are diplopia problems that are related to have lost part of the visual field[due to lack of fusion]. No pupillary dilation required.

**The Instrument**



## The Results

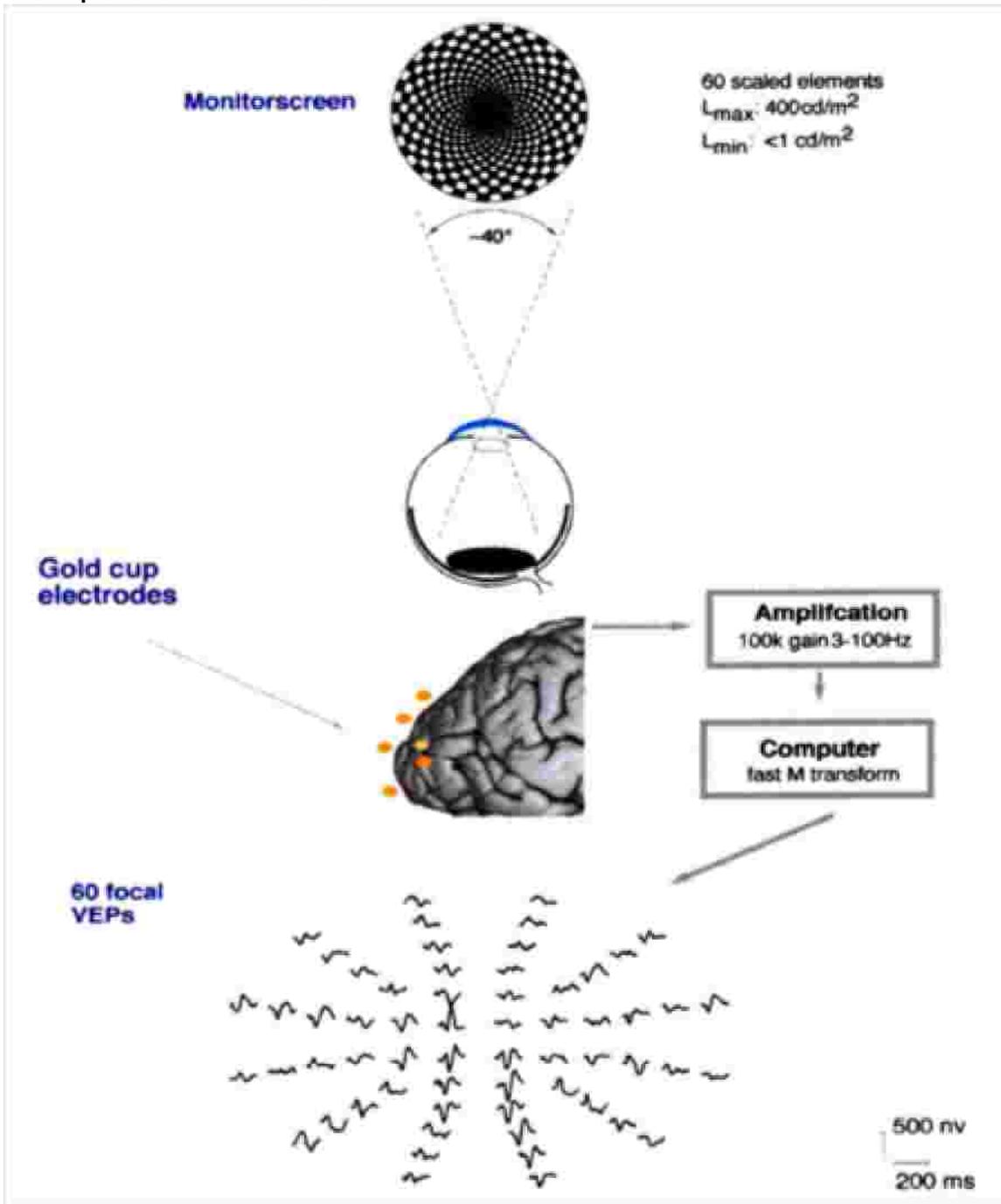


**The sensory motor exam (CPT 92060)** consists of an objective portion: Sensory motor test with multiple measurements of eye motility. This process detects abnormalities in eye movements that tend to correlate with the patient's visual complaints of double vision or inability to move one or both eyes. No papillary dilation required.

**Orthoptics (CPT -92065):** consist of measuring several parameters both sensory and motility related to see if the problem is congenital or acquired. Also during this evaluation we can perform prism measurements to neutralize and or treat problems related to double vision. Also we are able to dispense prisms Fresnel to place temporary on glasses or prescribe ground in new glasses. The subjective part of the test is Stereo testing which allow us to determine 3D vision capabilities. No papillary dilation required.

**The Pattern visual evoked response (VER)-multifocal VER (CPT 95930)** is an objective test that gives us a recording of the electrical activity of the visual pathway. The patient has electrodes placed in the head and is asked to look at a TV type of display or a flash light. A recording is generated by this display /flash that appears as a wave. Measuring the wave characteristics we can infer what part of the visual pathway may be causing the loss of visual field or loss of vision or location and cause of diplopia.. Does not require papillary dilation.

The Explanation: MFVEP vs CVEP



**The electroretinogram (ERG)-Multifocal ERG (CPT 95930)** is an objective test of the electrical function of the retina. A contact lens is placed in each eye and the response to a flash of light is recorded as the electrical activity of the retina (recorded by electrodes placed in the face/head).

Requires for the patient to have short acting drops to dilate the pupil which will remain dilated for ~ 4-6 hours.

#### **MFERG Patient/Instrument**

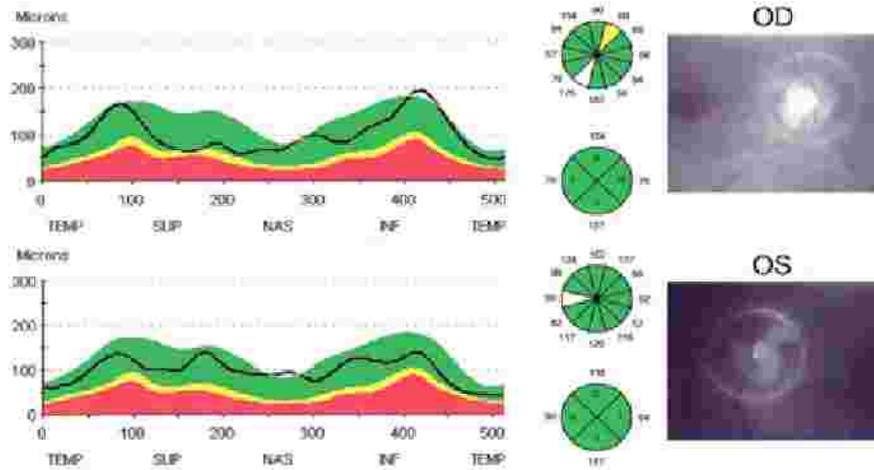


**Optic nerve/retinal topography (CPT 92235)** uses a scanning laser to measure nerve fiber layer thickness, as a way to gauge nerve fiber function, particularly in diseases affecting the optic nerve or other cranial nerves that could relate to demyelination for example.. Dilation of the pupil may be require for optimum scanning if patient has small pupils.

**The Instrument-OCT**



**The Results**



**Fundus photography (CPT 92250)** is an objective way to document the appearance (color, shape, distribution, etc.) of the optic nerve and retina and any abnormal intraocular lesions that are the explanation of peripheral or central visual loss in one or both eyes and also double vision. Requires the pupils to be dilated in most cases.

#### The Instrument



**External photography/video** : to video or take still photographs of the face, pupils, lids or eye movements for comparison documentation in future exams. Does not require pupillary dilation.

**Gonioscopy (CPT 92020)**, an objective test, allows visualization of the angle of the eye, situated where the cornea meets the iris, using a specialized contact lens with a mirror. A patient with a history of head or eye trauma may have angle-recession which can lead to a disease called glaucoma which may produce visual field loss in one eye similar to the one this patient presents. Does not require pupillary dilation.

**Corneal topography** : Corneal topography is a method of corneal curvature examination assisted by computer analysis. A corneal topographer projects a series of illuminated rings onto the corneal surface, which are reflected back into the instrument. The reflected rings of light are analyzed by the computer and a topographical map of the cornea is generated. The topographical map and computerized analysis reveals any distortions of the cornea, such as is keratoconus or corneal scarring, as well as the corneal curvature and meridians of astigmatism. These abnormalities can cause loss of vision and also diplopia which is monocular in one or both eyes. Does not require pupillary dilation

**EYE PRESSURE MEASUREMENT**: we use the applanation tonometer that requires a topical anesthetic and fluorescein dye applied to the eye or Tonopen that requires topical anesthetic applied to the eye.

**EYE DROPS USED FOR DILATION**: if it becomes necessary to dilate the patient's eyes we use TROPICAMIDE 1% combined with Neo-synephrine 2.5 % after applying topical anesthetic.