

## **SCREENING OPHTHALMIC EXAMINATION CHECKLIST**

- I. Visual acuity testing (check each eye with the fellow eye occluded)**
  - A. Distance (wear corrective lenses)
  - B. Near (be aware of presbyopic patient)
  
- II. Visual fields (confrontation – compare patient’s visual field with yours)**
  - A. Position self so that your face is level with patient’s face and about 2’ away.
  - B. Test one eye at a time by displaying one or two fingers equidistant between yourself and the patient in one quadrant and asking patient to identify how many fingers are displayed.
  - C. Test all 4 quadrants in each eye.
  
- III. External Examination**
  - A. Inspection and palpation
    1. Orbits, prominence or retraction of eyes
    2. Eye brows, eye lids, lacrimal apparatus
  
  - B. Inspection (with penlight)
    1. Conjunctiva
      - a. Bulbar (on eye-ball)
      - b. Palpebral (on lids)
      - c. Cul-de-sacs - upper and lower
    2. Sclera, Cornea, Iris
  
- IV. Pupillary examination (test with room lights dimmed looking at distant target)**
  - A. Size and shape
  - B. Reaction to direct light (each eye)
  - C. Swinging flashlight test (for afferent pupillary defect)
  
- V. Motility examination**
  - A. Cardinal positions of gaze (6)
    1. Presence of nystagmus or diplopia
  - B. Convergence
  - C. Tropias – distance and near
    1. Cover-uncover test (do for each eye)
  - D. Phorias (optional) – distance and near
    1. Alternate cover test
  
- VI. Ophthalmoscopic examination (test with room lights dimmed looking at distant target)**
  - A. Ocular media (at 12”) to evaluate red reflex
  - B. Fundus examination (get close to eye/pupil)
    1. Optic nerve
    2. Retinal vessels
    3. Retinal periphery
    4. Macula
  
- VII. Intraocular pressure**
  
- VIII. Fluorescein staining**
  - A. Use separate fluorescein strip for each eye.

# COMPREHENSIVE OPHTHALMIC EXAMINATION

## **Required Equipment**

1. Eye chart and/or reading card
2. Penlight type of flashlight
3. Ophthalmoscope
4. Mydriatic drops for pupillary dilation

Perform the exam in a room that can be darkened sufficiently.

*Patient seated, physician facing patient*

## **Visual Acuity**

Instruct patient to wear glasses or contact lenses for this part of the examination only.

Test one eye at a time.

Instruct patient to cover one eye with opaque card or palm of hand (not fingers).

Have patient read print on eye chart (or other standard acuity testing device) – at 20 foot distance – based on equipment/facility’s limitations.

1. Record visual acuity as a fraction.
2. Repeat with other eye.
3. If distance visual acuity test is not practical, check for near vision using a reading card, if available, or a newspaper or magazine. Have patient hold the reading material 14 inches from the eyes. Check one eye at a time and use reading glasses if patient has them.
4. If visual acuity is not recordable with usual tests, check for “counts fingers”, “hand motion”, light perception, etc.

## **Visual Fields by the Confrontation Method (If Indicated)**

*Assume position directly in front of patient approximately 2 feet away so face is level with patient’s face.*

1. Instruct patient to cover (occlude) one eye with opaque card or palm of hand (not fingers) and to look at your eye that is directly opposite that of the patient’s non-occluded eye. Close opposite eye so your own visual field is roughly superimposed on that of the patient.
  - a. Place hand equidistant between self and patient.
  - b. Sequentially display one or two fingers in one quadrant of the visual field and ask patient to identify how many fingers are displayed (don’t let patient look directly at the fingers).
  - c. Compare patient’s field of vision against yours.
  - d. Test each of the four quadrants, e.g.

|               |                |
|---------------|----------------|
| upper<br>left | upper<br>right |
| lower<br>left | lower<br>right |

2. Repeat for other eye.

## **External Examination.**

1. General appearance of orbits and eyes – overall comparison of one side of face to the other; overall comparison of orbits and eyes; compare one side to the other – note:

- position
- alignment
- size
- shape
- prominence (bulging) of the eyes
- retraction of the eyes

2. Inspect eyebrows – note:

- configuration
- any scaliness of underlying skin

3. Inspect and palpate eyelids – note:

- position of lids in relation to globe
- color (e.g., redness, ecchymosis)
- lesions
- edema (swelling)
- discharge
- condition and position of the eyelashes
- completeness of opening and closure of lids

4. Inspect and palpate lacrimal apparatus – note:

- swelling over lacrimal gland or lacrimal drainage system
- excessive tearing

5. Conjunctiva and Sclera:

With patient looking up, pull down lower lid of each eye and expose the sclera and conjunctiva.

a. Using a penlight, inspect the sclera and the conjunctiva of lower globe – note:

- color
- vascularity
- swelling
- discharge, secretions

With patient looking down, elevate upper lid of each eye and expose sclera and conjunctiva and note color, vascularity, swelling.

Note: Do not apply pressure to eyeball itself when pulling open the lids. Hold the lids against the rims of the bony orbit.

## 6. Cornea and Lens

- a. With oblique and direct lighting, inspect the cornea for opacities and check the depth of the anterior chamber. Examine lens for any opacities that may be visible through the pupil.

## 7. Iris:

- a. Inspect size, shape, markings, color of the iris, and check for lesions of the iris and equality of pupils.

### **Pupillary Testing**

1. Test in room with lights dimmed.
2. Instruct patient not to focus on the light but to look at a distant target (over 10 feet away).
3. Position pen light below patient's eyes to avoid fixation on the light, illuminate both eyes with least amount of light possible to discern pupil size and shape.
4. Shine bright light on each pupil (in turn, not simultaneously) from a point slightly lateral to the patient's line of vision.
  - a. Inspect for pupillary constriction in eye light shined into (direct response).
5. Do swinging flashlight test (changing light rapidly from one pupil to the other and back again) and check for equal pupillary constriction.
6. Reaction to accommodation
  - a. Ask patient to look into distance and then at your finger (or test object) held 2 to 4 inches from bridge of patient's nose.
  - b. Look for pupillary constriction in each eye when changing from distant focus to near focus.

### **Extraocular Muscle Examination (Ocular Motility)**

1. Ask patient to follow a target (finger, pencil, or penlight) held at a comfortable distance from the patient.
2. Move target object slowly to each of the six cardinal positions of gaze (in gaze right, check in up, horizontal, and down positions. In gaze left, check in up, horizontal, and down positions).
  - a. Pause during each gaze position to detect nystagmus (oscillations of eyes).
  - b. Inspect for:
    - normal and abnormal movements in each direction
    - relation of upper lid to globe as patient moves eye vertically from above downward
  - c. Ask patient about presence of diplopia (double vision)

3. Ask patient to follow the target as you slowly move it from a distance of at least 2 feet toward the bridge of the patient's nose.
  - a. Note convergence of eyes
4. Ask patient to fixate his eye on a distant target (over 10 feet away).
  - a. Do cover-uncover test on each eye. Note any movement of uncovered eye (tropia).
  - b. Do alternate cover test. Note any movement of eye as it is uncovered (phoria).
5. Ask patient to fixate on a near target (15 or so inches). Repeat 4a and 4b above.

### **Ophthalmoscopic Examination**

1. Dilate patient's pupils with appropriate drug.
2. Darken room.
3. Set ophthalmoscope to +6-8 diopters (black or green numbers on the dial).  
Note: text says "0" diopters, but you get more information starting with +6 to +8 diopters.
4. Ask patient to fix on specific point in the distance and to try not to move eyes.
5. Use ophthalmoscope in right hand and look through it with your right eye to examine patient's right eye (opposite for examination of left eye).
6. Shine light beam from ophthalmoscope into pupil from position approximately 12 inches from the patient and about 15 degrees lateral to patient's line of vision – note:
  - orange glow in pupil
  - red reflex from retina
  - opacities interrupting the red reflex
7. Move in toward patient's eye on the 15 degree line up to the point where your own fingers holding the ophthalmoscope contacts patient's cheek—or the ophthalmoscope touches your thumb on the patient's brow (or holding the upper lid).
  - a. Adjust the ophthalmoscope lenses to focus on retina and optic disc.
  - b. Examine disc for:
    - clarity of disc outline
    - color (pink-orange)
    - presence of abnormalities surrounding the disc
    - the central physiologic cup (and symmetry of cups between the two eyes)
    - the blood vessels of the disc

- c. Examine vessels peripherally by following them from disc in each of the four quadrants – note:
    - relative sizes
    - character of arteriovenous crossings
    - hemorrhages or exudates
  - d. Look at retinal periphery by having patient move eye up, up and right, right, down and right, down, down and left, left, and up and left.
  - e. Inspect macular area.
    - do this last since it is the most uncomfortable for the patient.
8. Repeat 4-7 for left eye, holding ophthalmoscope in your left hand and looking through it with your left eye.

### **Fluorescein instillation**

1. Take the fluorescein strips out of the packet and separate them using one for each eye (to avoid contaminating the “other” eye).
2. Have the patient look up toward the ceiling and pull down the lower lid, visualizing the inferior cul-de-sac of the conjunctiva.
3. Touch the fluorescein end of the strip to the cul-de-sac and to the back of the lid, not to the eyeball itself.
4. When the fluorescein dye strip has been wet by the tears, remove the strip and release the lower lid, allowing the patient to blink gently.
5. Observe the fluorescein pattern with a light (blue light if at all possible).