

Pupil Assessment

Purpose: To evaluate pupillary function and potential neurological issues. Assess pupil size, shape, and reactivity in light and dark to evaluate for abnormalities, including RAPD (Relative Afferent Pupillary Defect).

Equipment: Penlight, or transilluminator.

Notes:

- Test without glasses; contacts are acceptable.
- Room lights should be off or dimmed.
- Use the pupil gauge to assess the size in millimeters

Cautions:

1. Small pupils may require more time in the dark.
2. Corneal reflections can obscure view—adjust the light angle.
3. Ptosis may require manual lid elevation.
4. Ensure patient fixates on a distant target to avoid miosis from accommodation.
5. Shine a penlight into the eye, slightly off-center.

Testing Process:

1. Dim or turn off room lights.
2. Instruct the patient to fixate on a distant, non-accommodative target.
3. Indirectly light the face to assess pupil size, shape, and equality in dim light. Both pupils must be visible at once for comparison. Note the size of the pupils in the “Dark” in mm.





Direct Pupil Assessment

Light Reaction Testing Process

1. Shine the light into the right eye for 2–3 seconds.
 - **Direct Response:** Observe the right pupil's size and reaction speed (brisk, sluggish, or none).
2. Shine the light into the left eye for 2–3 seconds.
 - **Direct Response:** Observe the left pupil's size and reaction speed (brisk, sluggish, or none).
3. Direct light assesses pupil size, shape, and equality in bright light. Note the size of the pupils in the "Light" in mm.

Note: You may need to repeat the light stimulus multiple times to gather accurate observations.

Direct and Consensual Pupil Assessment or Relative Afferent Pupillary Defect (RAPD or APD) Assessment

Swinging Flashlight Test:

It's important to maintain a steady rhythm during the swinging flashlight test—count 'one, two, three,' then quickly switch to the other eye, approximately every second.

1. Shine the light into the right eye for 3 seconds.
 - **Direct Response:** Observe the right pupil's size and reaction speed (brisk, sluggish, or none).
2. Shine the light into the left eye for 3 seconds.
 - **Direct Response:** Observe the left pupil's size and reaction speed (brisk, sluggish, or none).
3. Shine the light into the right eye for 3 seconds.
 - **Consensual Response:** Observe the left pupil's size and reaction speed (brisk, sluggish, or none).
4. Shine the light into the left eye for 3 seconds.
 - **Consensual Response:** Observe the right pupil's size and reaction speed (brisk, sluggish, or none).

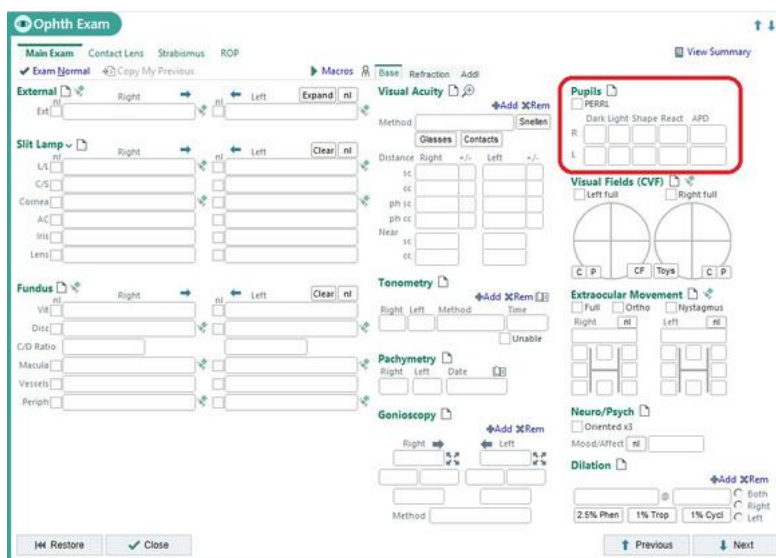
Note:

- If you do not perform the swinging flashlight test, you will not be able to detect an RAPD or Marcus Gunn Pupil.
- When checking for an APD in a patient with strabismus, it is important to ensure that the light is shone directly into the pupil of each eye. This may mean that you need to adjust the angle at which the light shines into each eye. The patient should look at a distance at a non-accommodative target, either a large letter or object in the distance that is easy for them to read.

Normal Response: Pupils constrict with light and slightly dilate during transition, then constrict again in the fellow eye.

Abnormal Response: When the light is moved to the eye with an RAPD, the pupils may fail to constrict or may dilate, indicating reduced light perception in that eye.

Documentation:



Ophthalm Exam

Main Exam Contact Lens Strabismus ROP

Exam Normal Copy My Previous

External Right Left Expand nl

Slit Lamp Right Left Clear nl

Fundus Right Left Clear nl

Visual Acuity

Method Distance Right Left Glasses Contacts

Tonometry Right Left Method Time

Pachymetry Right Left Date

Gonioscopy Right Left

Pupils

PERL Dark Light Shape React APD

R L

Visual Fields (CVF) Left full Right full

Extraocular Movement Full Ortho Nystagmus Right Left

Neuro/Psych Oriented x3 Mood/Affect

Dilation Add X Rem 2.5% Phen 1% Trop 1% Cyclo Both Right Left

Previous Next

If you observe or suspect an RAPD, notify the resident, fellow, or attending for confirmation before dilation. If an RAPD was previously documented and is still present, confirmation is not needed, but note that it is still visible and has been seen previously.

To document Pupils in Epic:

- Record pupil assessments in Epic under the "Pupils" section of the Ophthalmology Exam
- Any notes about abnormal pupil shape or response should be added in the 'Note' section.