

- Don't forget to compare the abnormal eye with the fellow eye. Back-and-forth comparisons between both sides of the face can reveal a subtle asymmetry.
- Compare your findings with previous records. Looking at old photographs, including driver's licenses, can reveal an unrecognized but long-standing ptosis or asymmetry. If necessary, have the patient bring in old photographs from home. The examiner should also have photographs taken whenever possible to document trauma, presurgical appearance, and any lesion that might be growing. When photographs are not possible, careful drawings included within the medical record can greatly aid future caregivers in the assessment of the evolution of pathology.
- Be careful when measuring the eyelid fissure height. The position of the eyelids will change depending upon eye position, facial muscle activity, alertness, and external stimuli such as phenylephrine eyedrops. Check the palpebral fissure in primary position, with the eyes gazing at a distance target. Don't forget to observe the brow for ptosis, compensatory elevation, and wrinkling.
- Be gentle. Pressure on the globe can elicit the oculocardiac reflex and produce bradycardia in susceptible individuals. Be sure to warn the patient about what to expect during procedures such as eyelid eversion.

Suggested Resource

Orbit, Eyelids, and Lacrimal System. Basic and Clinical Science Course, Section 7. American Academy of Ophthalmology; published annually.

CLINICAL PROTOCOL 9-1

Performing a Neurosensory Examination of the Head and Face

Assessing Facial Nerve Function

1. Ask the patient to squeeze their eyes closed forcefully and note whether the orbicularis oculi muscles completely bring the eyelids together.
2. Compare the relative strength of both orbicularis oculi muscles by using your fingertips to pry the eyelids open. The needed force should be the same for both sides.
3. Ask the patient to smile and show their teeth. Note the symmetry of the facial expression.
4. When there is weakness of 1 side of the lower face, check for a supranuclear lesion by asking the patient to raise both eyebrows and to wrinkle the forehead. A central facial palsy spares the forehead and orbicularis oculi muscles; a peripheral lesion often does not.

Eliciting Blink Reflexes

1. Without mentioning it to the patient, note the frequency and completeness of normal blinks. Expect to see a complete blink every 4 seconds.
2. If involuntary blinks are absent, swat your hand toward the patient to assess whether a blinking movement can be elicited.
3. Gently tap on the patient's glabella if a central nervous system disorder is suspected. A normal response produces only a few blinking movements; repetitive blinks (as in parkinsonism) are abnormal.

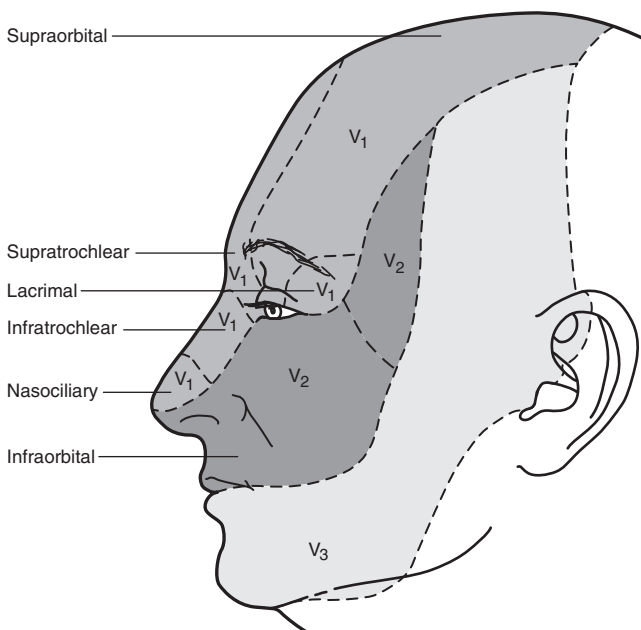
Assessing Facial Sensation

1. Using your fingertip, tissue paper, or cotton wisp, lightly touch 1 side of the patient's face and then the contralateral, corresponding side. Ask the patient to compare the affected side with the normal side. Repeat for all 3 trigeminal nerve dermatomes and for the distribution of each principal sensory nerve (Figure 1).
2. Map the area of reduced sensation (eg, the zone of hypesthesia that results from an infraorbital nerve damaged by an orbital floor fracture).
3. Perform simultaneous testing of both sides of the face if abnormal cortical function is suspected.

Testing Corneal Sensation

1. Without touching the eyelashes or stimulating the visual startle reflex, touch the cornea with a clean cotton wisp, facial tissue wick, fragment of dental floss, or puff of air from a small syringe. A brief touch should

Figure 1 Assessing facial sensation.



produce a reflex blink with a faint subjective sensation. The response may be graded on a scale of 0 to 4+.

2. Use an esthesiometer, an instrument that has a nylon filament of adjustable length, to quantify the degree of sensation for patients in whom recovery or further loss is anticipated.

CLINICAL PROTOCOL 9-2

Measuring Binocular Interpupillary Distance

1. Ask the patient to fixate a distance target.
2. Facing the patient at an arm's-length distance, position yourself just below the patient's gaze. Align your eyes with the patient's eyes as the patient maintains distance fixation over your head.
3. Rest the millimeter ruler lightly across the bridge of the patient's nose.
4. Close your right eye and use your left eye to line up the zero point of the ruler with the temporal limbus of the patient's right eye (Figure 1).
5. Keep the ruler steady. Close your left eye and open your right eye.
6. Read the measurement that aligns with the nasal limbus of the patient's left eye (Figure 2).
7. Repeat the above sequence to confirm a reproducible reading.
8. Near PD is measured in a similar way by having the patient stare at your nose instead of the distance target.

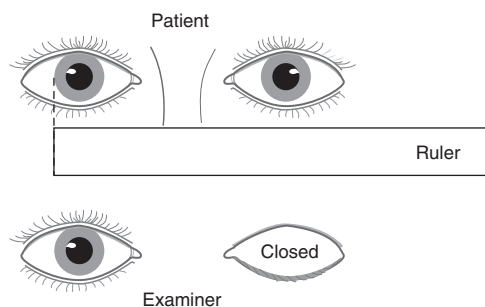


Figure 1 Aligning with the patient's right eye.

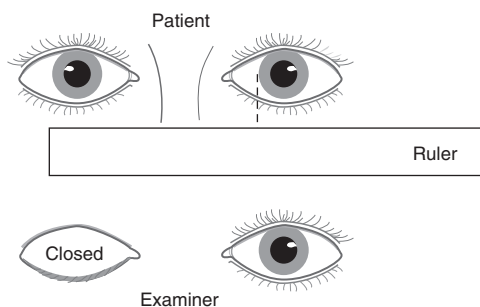


Figure 2 Aligning with the patient's left eye.

CLINICAL PROTOCOL 9-3

Performing Exophthalmometry

1. Position yourself directly in front of the patient. Your left eye measures the patient's right eye, and your right eye measures the patient's left eye.
2. Hold the exophthalmometer so that the angled mirrors are oriented upward, above the fixation foot plates.