cians revealed that visual acuity documentation frequently was absent from the medical record. Visual acuity should be
determined independently in each eye. The best-corrected
visual acuity should be obtained using, if necessary, the
patient’s glasses, pinhole testing, or even a hand-held ophthal-
omoscope. Topical anesthetics may facilitate visual acuity test-
ing in patients with acute eye pain and blepharospasm. If an
eye chart is unavailable, other forms of typed print, such as a
magazine, may be substituted. If a patient is unable to visual-
ize typed print, visual acuity should be recorded by having the
patient count fingers at a specified distance, having him detect
hand motion, and by determining light perception (or lack
thereof). An E chart or picture chart may be used with cooper-
ative but illiterate patients and preschool children. Visual
acuity deficits found after correcting for refractive error man-
date further evaluation.

**Orbit and Adnexal Structure Examination.** The physi-
cian should observe the orbit for the presence of any asymme-
try. Proptosis (protruding eye) may suggest an orbital com-
partment syndrome, while enophthalmos (sunken eye) could
indicate a globe rupture or an orbital fracture. These condi-
tions are assessed best by looking from above the head down-
ward toward the eyes. Ptosis may indicate a third- or seventh-
nerve palsy, levator palpebrae injury, or post-traumatic
Horner’s syndrome (miosis, ptosis, and anhidrosis). The
physician should palpate the zygoma and orbital rim, noting
any deformity, point tenderness, or subcutaneous emphysema.
Periorbital subcutaneous emphysema is highly suggestive of
an orbital or nasal antrum fracture. The eyelids should be
assessed for movement, swelling, ecchymoses, lacerations,
margin integrity, or occult foreign bodies. Medial eyelid lac-
erations should be evaluated for injuries to the lacrimal
drainage system (canaliculi). The presence of fatty tissue
within a lid laceration suggests orbital penetration with fat
prolapse. The lower eyelid may be pulled down and the upper
eyelid everted over a cotton swab to rule out adherent con-
junctival foreign bodies. The lid should not be manipulated
if globe rupture is suspected. Foreign bodies should be
removed only if the entire foreign body can be visualized, as
one end may have penetrated the globe or orbit. A traumatized
eye may exhibit blepharospasm or blepharedema, making the
examination difficult. Edematous eyelids may be retracted
manually; this should be followed by an application of a topi-
cal anesthetic. In cases of marked blepharedema, use of a
Desmarres retractor or folded paper clip may be necessary to
retract the eyelid.

**Ocular Motility.** The corneal light reflex should be at
the same relative position on each cornea and the patient should
be able to move his eyes through the six cardinal positions of
gaze (left, right, up and right, up and left, down and right,
down and left). Limited extraocular motility may indicate the
presence of orbital fractures, cranial nerve injury, extraocular
muscle injury, or restriction of globe motility from intraorbital
edema or blood. It is important to determine whether patients
complaining of diplopia are suffering from monocular vs.
binocular diplopia. Diplopia that persists when the uninjured
eye is covered suggests a refractive error (monocular diplo-
pia). Monocular diplopia most often is the result of a corneal
irregularity, lens abnormality, iridodialysis, or retinal detach-
ment. Diplopia that resolves with occlusion of either eye is
suggestive of a defect in coordinated eye movement (binocu-
lar diplopia). Binocular diplopia most often is the result of
orbital fractures, cranial nerve injury, extraocular muscle
injury, or orbital compartment syndromes.

**Pupillary Examination.** An examination of the pupil and
iris should note size, shape, symmetry, and reaction to light.
Pupil size should be recorded in millimeters. Blunt trauma
may cause traumatic miosis (constricted pupil) or mydriasis.