



EYE TRAUMA: INITIAL CARE

10-15% of casualties experience eye injuries. Initial care by forward providers is critical to preserving vision. Seek immediate management by an eye surgeon.

Emergencies

- Chemical Injury → Immediate irrigation
 - Figs. 32 A1-A6/ Figs. 32 a-c
 - To pH 7 if available (2L minimum)
- Orbital Compartment Syndrome (OCS)
 - Rock-hard eyeball / + RAPD test
 - Lateral canthotomy/inferior cantholysis
 - Figures 33 A-D

How to Place an Eye Shield

- Use rigid eye shield (Figure 31 A-C)
- Can use member's own eye pro if intact
- Any rigid material not placing pressure on eye
- Rim of orbit supports when taped
- Secure w/ minimum 3 pieces of tape
- Shield ONLY injured eye
- **No patch/wrap/nothing under the shield**

AE Concerns

- Open Globe Injury (OGI) may contain air (expands)
 - CT /Teleconsultation
 - Pressurize fixed wing to 2500 ft
- Vibration/turbulence
 - N/V (antiemetic)
 - Pain (secure foreign body)
- Low Humidity
 - Lubricant meds
- Not safe to ambulate
 - Litter
 - Non-medical attendants

Prevention: More Effective than Management

- Eye Pro prevents large percentage eye injuries (Figures 1 & 2)
- Use only APEL Qualified Products List (Figures 27-29)

<https://www.peosoldier.army.mil/equipment/eyewear/>

Management: Teleophthalmology Consultation → Shield & Ship

- High index of suspicion based on mechanism of injury/use of EyePro/glasses/contact lenses
- Exam: Visual Acuity (and examine for critical findings/**photographs!**)
 - Visual acuity: Letters (fig. 30) → Count Fingers Hand Motion Light Perception (note +/- glasses)
 - Relative Afferent Pupillary Defect (RAPD) Testing (Swinging Flashlight)
Positive test: pupils constrict less (or dilate) when light swings to affected eye
- **Evacuate all vision threatening injuries to eye surgeon** (receives/initiates care < 24h)
 - URGENT: video teleconference service to contact R3/4 eye surgeon
 - Non-urgent: Contract R3/4 eye surgeon or DHA Global Teleconsultation Portal
<https://gtp.health.mil/>
 - If evacuation delayed, refer to JTS Ocular Injuries and Vision-Threatening Conditions in Prolonged Field Care CPG, 01 Dec 2017

Other Specific Conditions

- **Open Globe Injury:** NPO / BR w/HOB ↑30°/no ↑IOP/Abx/Tetanus/antiemetics
 - No Pressure on eye. No Ultrasound if suspect open globe injury.
 - No attempt to debride/repair/enucleate → ophtho <24h
- **Intraocular Foreign Body:** blast/shrapnel → DO NOT remove/manage as OGI
- **HypHEMA:** r/o OGI / Sickle Cell dz or trait? → manage as open globe
- **Orbital Fracture:** restricted eye movements/hypoglobus → no nose blowing!
- **Eyelid Laceration:** r/o OGI / no debridement of any tissue → to ophtho
- **Thermal Burn:** visual acuity → eye ointment & ophtho
- **Corneal Abrasion:** eval corneal infiltrates/ DC contacts → abx drops & ophtho
- **Infectious Keratitis:** + infiltrates (assoc w/contacts) → abx drops & ophtho
- **Corneal/conjunctival FB:** remove only if loose, irrigate, abx drops & ophtho
- **Preseptal/Orbital Cellulitis:** +/- redness of conjunctiva → ABX! & ophtho
- **Acute Angle Closure Glaucoma:** Acetazolamide / drops to ↓IOP → ophtho



- ✓ VA documented bilaterally at all roles of care (pupil reactivity if required)
- ✓ Rigid eye shield placed correctly at all roles of care
- ✓ OGIs receive antibiotics at first role of care
- ✓ Orbital Compartment Syndrome receives Lateral Canthotomy/inf Cantholysis
- ✓ All patients receive documented teleconsultation with eye surgeon
- ✓ All patients w/vision threatening eye injuries arrive for ophthalmological care <24h



This information is pulled from the evidence-based Joint Trauma System (JTS) Eye Trauma: Initial Care Clinical Practice Guideline (CPG). JTS CPGs can be found at the [JTS CPG website](#) or the [JTS Deployed Medicine site](#).