

# Aural Blast Injury: An Emergency Management Professional's Guide to Acoustic Trauma

The goal of this CPG is to provide medical providers the tools necessary to identify, assess, and treat acoustic trauma. Early referral and reporting allows medical staff to evaluate, diagnose, and treat injuries in a timely manner, within therapeutic windows to mitigate injury progression. *Note: A Service Member with hearing loss is less effective during missions and can negatively impact mission performance.*



## Acoustic Symptoms

- Hearing loss
- Tinnitus (ringing in the ear)
- Aural fullness
- Sensitivity to loud noise
- Difficulty localizing sounds
- Difficulty hearing in background noise
- Vertigo / dizziness



## Physical Symptoms

- Tympanic Membrane Perforation
- Middle Ear Injury
- Temporal Bone Fracture
- Facial Nerve Injury
- Ear discharge
- Ear pain



## Suspected hearing loss, awaiting treatment, or during treatment protocol:

- Individuals should be restricted from hazardous noise environments for the duration of treatment.
- Restrict from operations requiring good hearing, if possible, for the duration of treatment.

## Evaluation

If patient is experiencing:



## Treatment

Follow this treatment protocol:

More severe

- Blood or other discharge draining from the ear canal
- Dizziness or balance issues

- Refer to ENT or Audiology for further evaluation and testing.
- If ENT is not available, evacuate patient to a higher level of care.
- Refer to PT for balance assessment.

Less severe

- Debris present in the ear canal
- Damage to the ear drum (perforation or tear)

- DO NOT irrigate the ear because it can cause pain, dizziness, or infection.
- Debris removal should be done by trained personnel to avoid further injury.
- Refer patient to PCM for steroid treatment.

- A change in hearing
- Tinnitus or ringing in the ear

- Examine ear to determine if there is damage to the ear drum or debris present.
- If no debris is present, conduct or refer for a hearing test.

## Metrics

- ✓ Patients of interest have a documented tympanic membrane exam.
- ✓ Patients with subjective hearing loss or tinnitus persisting >72h have a hearing test or audiogram.
- ✓ Patients with absolute indications for ENT referral have a documented ENT examination.



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