

- Perception of sound without external stimulation
  - Ringing, hissing, clicking
  - Constant, pulsatile
  - High or low pitch
- Subjective or Objective
  - Examiner can hear objective (probably not in ED)
- Estimated 10-15% of population
- 30-40 million people
- Adults and children
- Incidence increases with age
- Causes of Subjective Tinnitus
  - Sensorineural hearing loss (Most Common), Loud Noise Exposure, Medications Meniere's, TMJ Disorders, Depression, Stress, Neurologic Disorders (Acoustic Neuroma, MS, ALS)
- Meniere's
  - Triad of Tinnitus, hearing loss, vertigo
  - May also have nausea, vomiting, diaphoresis
  - Lasts 20 mins to 12 hours
  - Can occur several times per week, or couple times a month
  - Treatment
    - Vertigo
      - Antihistamines (Antivert, Dramamine)
      - Anticholinergics (Scopolamine)
      - Benzos (Valium)
      - Others (Ephedrine, Prednisone)
    - Nausea
      - Phenergan, Compazine
  - Disposition
    - Discharge unless unable to control symptoms
    - Follow-up with PCP or ENT if severe
  - Prognosis
    - Variable, with spontaneous remission in 50%, others have progressive symptoms with progressive hearing loss
    - 5-10% require surgery
- Labyrinthitis
  - Severe vertigo and disequilibrium
    - Nausea, vomiting
  - May also have tinnitus and hearing loss
  - Usually associated with current or recent URI
    - Can also be from Meningitis or untreated Otitis Media
  - Treatment
    - Antivert, Dramamine, Scopolamine, Phenergan, Compazine, Valium
    - Corticosteroids may be beneficial
    - Antivirals for Ramsay-Hunt
    - Antibiotics for otitis media or meningitis

## Tinnitus Handout

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- Acoustic Neuroma
  - Tumor of Vestibulocochlear nerve (CN VIII)
  - Associated with Neurofibromatosis Type II (develop bilaterally)
  - Unilateral Sensorineural Hearing Loss is Acoustic Neuroma until proven otherwise
  - Unilateral Tinnitus should also be evaluated for Acoustic Neuroma
  - Symptoms can fluctuate
  - Headaches present 50-60%
  - May also have facial numbness and/or weakness
- Pulsatile equals vascular