Many people sensitive to non-ionizing electromagnetic fields describe various ear sensations -- heat, throbbing, pain -- as well as tinnitus. Some studies have been performed and several mechanisms suggested. This map offers a linked overview of reports, mechanisms, studies and articles.

**EMF and the Auditory System: Tinnitus and Hearing Loss**

- **Cellphones and tinnitus**
- **Cellphone tower tinnitus**
- **N.E.S.: Cell tower tinnitus**
- **Case of smart meter and tinnitus**
- **Smart meter effects include tinnitus**
- **Teenagers with tinnitus , alarming levels**
- **Living nightmare, smart meter, hearing loss**
- ** Radiation from your cell phone may be killing you, tinnitus**
- **Cellphones: If You Don’t Get Cancer, You Could Get Tinnitus**

**Auditory Effects of EMF Chart**

**RELATED MAPS:**

- **Mechanisms**
  - Calcium Efflux
  - EMF and EEG
  - EMF and Toxins
  - EMF and the Brain
  - Mast Cell Response
  - EMF and Membranes
  - EMF and Mitochondria
  - EMF and Free Radicals
  - EMF and Physiological Water

**EMF TINNITUS**

- **Cochlear damage**
- **Sensorineural hearing loss**
- **Vestibular Schwannoma**
- **Dorsal cochlear nucleus hyperactivity**
- **Damage to auditory cortex**
- **Overactive cortical distress network**

**Non-EMF TINNITUS**

- **Multiple central brain causes**
  - Injury from loud noise
  - Cranial, TMJ conditions
  - Ototoxicity
  - Tumors
  - Hearing loss, other causes
  - Circulatory disruption
  - Blood sugar disruption

**High-frequency loss and absent distortion product otocoustic emissions were observed with an increase in the duration of mobile phone use, excessive use of mobile phones, and age more than 30 years.” Panda et al**

**“More than 3 years of mobile phone usage emerged as a risk factor…” Panda et al**

**“Scientists now believe that cell phone use can raise the possibility of developing tinnitus by 71%...” ElectricSense**

**Date of this update: 06-19-17**

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**EMF Safety Network health complaints, tinnitus**

**Dirty electricity and tinnitus**

**Dirty electricity**

**BioEffects of Non-Lethal Weapons**

**50% Hearing loss in cell phone users**

**Paul Yanick: Natural Relief From Tinnitus**

**Cochlear nucleus**

**Lateral lemniscus**

**Auditory pathway between ear and cortex: brainstem and subcortex**

**Hearing is a complex sensory modality. There are many structures (tissues of the entire ear, neural pathways, brainstem nuclei, cortical centers) and neurotransmitters (GABA, especially) involved in its function. EMF may impact perception of sound by impacting organelles or cells, fluids or solid structures, altering local chemistry, confusing neural transmission, or via other mechanisms.**