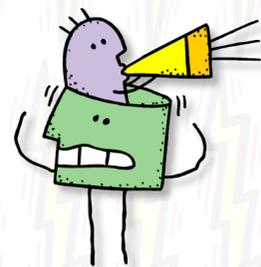


Tinnitus is the perception of sound (ringing, hissing, buzzing) in one or both ears, not produced by an external source. It is a common complaint, affecting approximately one in six Americans. It ranges in severity from a mild background noise to a constant disabling disruption of daily function. Some cases begin following known stresses such as loud noises or medications, but many times the causes are unknown.

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.



[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](#)



[Dirty electricity and tinnitus](#)

Dirty electricity

[Cellphone may cause hearing loss](#)

Links and resources

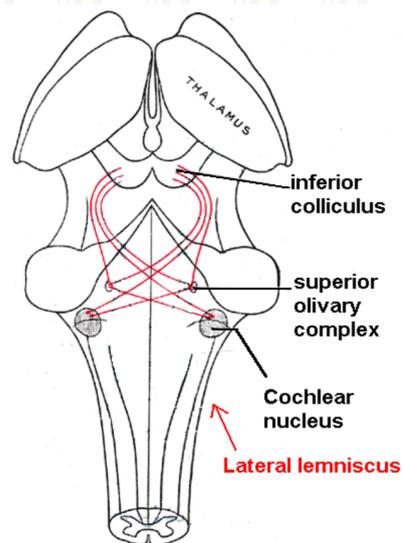
[BioEffects of Non-Lethal Weapons](#)

[50% Hearing loss in cell phone users](#)

[Paul Yanick: Natural Relief From Tinnitus](#)

[EMF Safety Network health complaints, tinnitus](#)

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.



Auditory pathway between ear and cortex: brainstem and subcortex

"High-frequency loss and absent distortion product otoacoustic 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

★ [UPDATED MAP \(NOT EMF\): TINNITUS](#)



EMF TINNITUS

- Cochlear damage
- Sensorineural hearing loss
- Brainstem abnormalities
- 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



EMF AND THE AUDITORY SYSTEM: TINNITUS AND HEARING LOSS

Home: [Oscillatorium](#)
Newest version: [this map](#)
Date of this update: 06-19-17

★ **39 STUDIES: EMF AND THE AUDITORY SYSTEM**

★ **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](#)

Studies

[Tinnitus and EHS](#)

[Cellphones, hearing loss](#)

[Occupational RF, hearing loss](#)

[Tinnitus and Mobile Phone Use](#)

[MW, children, inner ear problems](#)

★ [MW, Hearing threshold changes](#)

[Detrimental RF on auditory nuclei](#)

[Cellphones and cochlear damage?](#)

[Mobile phone use, acoustic neuroma](#)

[Tinnitus and cell phones, role of EMR](#)

[EHS and tinnitus, overactivated cortex](#)

[Vestibular schwannoma, mobile phones](#)

[Therapeutic effect, direct current, tinnitus](#)

[Chronic exposure, EMF, auditory system](#)

[Mobile phones, auditory, vestibular systems](#)

[Vestibular schwannoma, tinnitus, cellphones](#)

[Effect of mobile phone on audiologic system](#)

[Audiologic disturbances, mobile phone users](#)

[Spiral nerve ganglion sensitivity, mobile phones](#)

[MW, phones, tinnitus, other symptoms, adults](#)

[Risk increases with prolonged mobile phone use](#)

[Cell phones affect auditory brainstem responses](#)

[UK study links cell phones to acoustic neuromas](#)

[MW, phones, hearing problems, earache, warmth](#)

[Mice with decreased GABA inhibition more sensitive](#)

★ [MW, rats, neurodegeneration, apoptosis, aud. system](#)