

Milinda Sperfslage Nemaha County - InfraSound and Low Frequency Noise and Wind Turbines

Wind Turbines can be Hazardous to Human Health (<https://medicine.wustl.edu>)

By Alec N. Salt Ph.D. at Washington University in St. Louis, Dept of Otolaryngology

Large wind turbines generate very low frequency sounds and infrasound (below 20Hz). The infrasound cannot be heard and is unrelated to the loudness of the sound that you hear. You cannot hear infrasound at the levels generated by wind turbines, but your ears certainly detect and respond to it. Our measurements show the ear is most sensitive to infrasound when other, audible sounds are at low levels or absent. That is why homes and pillows probably contribute to the problem. To clarify, maximum stimulation of the ear with infrasound will occur inside your home, because the audible sound of the turbines is blocked by the walls of the house, but infrasound readily passes through. There are several ways that infrasound could affect you even though you cannot hear it.

1. Causing Amplitude Modulation (pulsation) of heard sounds. Symptoms : Pulsation, annoyance, stress
2. Stimulating “ subconscious” pathways Symptoms : sleep disturbance, panic, with chronic sleep deprivation leading to blood pressure elevation, memory dysfunction and more.
3. Causing Endolymphatic Hydrops Symptoms: Unsteadiness, dysequilibrium, vertigo, nausea, “seasickness”, tinnitus, sensation of pressure or fullness in the ear.
4. Possibly Potentiating Noise Induced Hearing Loss Hearing protectors will not protect against infrasound.

Negative Health Impact of noise from Industrial Wind Turbines: The Evidence by : Dr. Jerry Punch, Audiologist & Professor at Michigan University and James Richard, Acoustical consultant

<https://waubrafoundation.org.au/resources/punch-j-james-r-negative-health-effects-noise-from-industrial-wind-turbines/>

Evidence that Industrial Wind Turbines (IWT's) negatively impact human health is vast and growing. There is indisputable evidence that adverse health effects occur for a nontrivial percentage of exposed populations. The World Health Organization has concluded that when nighttime noise levels inside homes (especially bedrooms) rise above 30dBA or contain non-steady and/or low frequency noise will lead to diminished health. In a controlled clinical study, residents who lived within .87 mile of IWT exhibited greater sleep disturbance and poorer mental health than those living at distances greater than 2 miles.

Dr. Mariana Alves -Pereira is one of the leading researchers of infrasound & low frequency noise in the world. She has a Masters in Biomedical Engineering, a Ph.D. in Environmental Sciences & a B.S. in Physics.

(<https://waubrafoundation.org.au/resources/alves-pereira-castelo-branco-vad-need-for-new-attitude-towards-noise/>)

(<https://www.intechopen.com/online-first/accoustics-and-biological-structures>)

ILFN induced pathology was brought to light by Dr. Mariana and her research group in the early 1980's based on objective diagnostic tests, such as echocardiogram, lung function & brain potentials. Vibroacoustic Disease (VAD) is a noise induced body pathology of a systemic nature caused by excessive & unmonitored exposure to ILFN. VAD evolves over long term noise exposure and can lead to severe medical conditions such as cardiac infarcts, stroke, cancer, epilepsy and rage reactions.

MILD - 1- 4 years Exposure: Slight mood swings, indigestion & heartburn, repeated mouth & throat infections, bronchitis.

MODERATE - 4-10 years Exposure: Chest pain, backpain, fatigue, fungal & viral skin infections, allergies, blood in urine, inflammation of the stomach lining.

SEVERE - 10 plus years Exposure: Psychiatric disturbances, headaches, hemorrhages of nasal & digestive mucosa, duodenal ulcers, spastic colitis, varicose veins & hemorrhoids, decreased vision, severe joint pain, severe muscular pain, neurological disturbances.

The whole-body response also elicits the immune system, affects organs of the reproductive system, changes receptor cells in the vestibular semicanals & auditory cochlea & induces genotoxic effects including teratogenesis. Physical protection against infrasound & LF noise is not feasible. Because infrasound is of very low frequency, the wavelengths are very long and thus can easily penetrate thick barriers and into buildings. “This is why it's a problem to human health.” The waves travel kilometers and are difficult to shield against. Dr. Mariana states that she personally would not live any closer than 20km (12.4 mi) to a wind farm.

My husband & I are lifelong residents of Nemaha Co. We have farmed there for almost 40 years. We built a new house & shop, planning to live the rest of our lives there, but if the wind turbines are allowed to be placed too close to our home this may not be possible, our lifelong work would be for nothing !