

# How Infrasound Can Cause Cancer

Recently, President Trump made a [statement](#) about the possibility of wind turbine noise causing cancer. Predictably much of the press [scoffed](#) at this claim. Even some Republican legislators [objected](#). *But what are the facts?*

Since this is a technical matter, let's clarify some basics... [Infrasound](#) is Low Frequency Noise (LFN)... Industrial wind turbines [generate substantial LFN](#)... A variety of wind turbine LFN caused human and animal health problems have been well-documented (see this [small sample of studies](#))... *But what about cancers?*

The medical term [genotoxins](#) is separated into three main groups: carcinogens, mutagens, and teratogens (i.e. toxins that cause **cancer**, **genetic mutations**, or **birth defects**)... *Studies have concluded that prolonged exposure to LFN can cause all three:*

## 1-DoD Study: [Low Frequency Noise \(LFN\): A Major Risk Factor in Military Operation](#)

The genotoxic component of LFN has already been demonstrated in both animal and human models through the increased frequency of sister chromatid exchanges in LFN-exposed populations. Malignancy among VAD (Vibro-Acoustic Disease) patients has been increasingly well characterized. LFN-induced lung tumors are only of one type: squamous cell carcinoma. In the central nervous system, only glial tumors have been found. Other tumors are all located in hollow organs: bladder, colon, larynx and kidney.

Immunological studies have also been conducted on both human and animal models, and have shown that LFN modulated the immune system. In LFN-exposed workers, the amount of circulating CD8+ and CD4+ T lymphocytes was significantly altered. In mice prone to developing lupus erythematosus, LFN-exposure accelerated the autoimmune kidney disease and changed the lymphocyte subpopulation in the spleen. Lupus is a common observation among LFN flight attendants and other LFN-exposed populations.

## 2-Study: [Low Frequency Noise Legislation](#)

LFN has been identified as a genotoxic agent of disease, capable of inducing blood vessel wall thickening as seen in autopsy, as well as through light and electron microscopy studies. This can lead to well known consequences such as tumor development, cardiac infarcts and/or the need for cardiac bypass surgery. The pathology caused by excessive exposure to LFN is termed Vibro-Acoustic Disease (VAD), and has been diagnosed among several occupational and environmentally exposed populations.

### **3-Report:** [The Long Term Effects of LFN Exposure](#)

Perhaps even more importantly, they state that “LFN is a demonstrated genotoxic agent, inducing an increased frequency of sister chromatid exchanges in both human and animal models.” Again, to decode, LFN disrupts the normal cellular operations of both human and animals at its most basic level –the genetic level. That is why its effects are considered a whole body, systemic pathology. VAD can affect any organ in the human body. These doctors were able to directly observe dysplastic effects, the remnants of cells which had their cell walls literally exploded like little water balloons by LFN, pouring their still living organelles (cell organs) into the blood and tissue of the body

### **4-Study:** [Respiratory epithelia in Wistar rats born in low frequency noise plus varying amounts of additional exposure](#)

The genotoxic effect of LFN on human and animal models has already been the object of several studies, where all LFN-exposed populations exhibited a statistically significant increase in the frequency of sister chromatid exchanges. In LFN-exposed workers, the only type of respiratory tract neoplasms that have been observed are squamous-cell carcinomas. In a previous study of 236 VAD patients, 28 individuals developed malignancies, 5 of whom had multiple tumors. Of these 28 cases, 5 were squamous cell carcinomas of the lung, 2 in non-smokers. Since then, other cases of squamous cell carcinomas of the lung have been identified in LFN-exposed professionals.

### **5-NIH Study:** [Vibro-Acoustic Disease](#)

Vibro-Acoustic Disease (VAD) is a whole-body, systemic pathology, characterized by the abnormal proliferation of extra-cellular matrices, and caused by excessive exposure to low frequency noise (LFN)... In 1987, the first autopsy of a deceased VAD patient was performed. The extent of LFN induced damage was overwhelming, and the information obtained is, still today, guiding many of the associated and ongoing research projects. In 1992, LFN-exposed animal models began to be studied in order to gain a deeper knowledge of how tissues respond to this acoustic stressor. In both human and animal models, LFN exposure causes thickening of cardiovascular structures... LFN is a demonstrated genotoxic agent, inducing an increased frequency of sister chromatid exchanges in both human and animal models. The occurrence of malignancies among LFN-exposed humans, and of metaplastic and dysplastic appearances in LFN-exposed animals, clearly corroborates the mutagenic outcome of LFN exposure. The inadequacy of currently established legislation regarding noise assessments is a powerful hindrance to scientific advancement...

## 6-Study: [Secret Sonic Weapons' War Lead to Carcinogenesis](#)

Sonic and ultrasonic weapons (USW) are weapons of various types that use sound to injure, incapacitate, or kill a target. New personal communications show that infrasound can cause trough vibrations, resonance frequency about 7Hz with internal organs of humans cause also cancer, such as colorectal cancer, pancreatic cancer, etc.

## 7-Testimony by [Dr. Lynn Knuth](#), regarding a Wisconsin wind project

Exposure to more than one of these agents at a time, as occurs in wind farms, may result in especially detrimental health effects. From the research literature it appears that the combination of both whole body vibration and **low frequency noise** is particularly dangerous. **Low frequency sound** alone is not genotoxic, but when combined with vibration, chronic occupational exposure has genotoxic effects (Silva et al., 1999, 2002). This result has been replicated in laboratory animal experiments, demonstrating the mutations are definitely due to the combination of whole body vibration and low frequency noise. Again, genotoxic effects can result in cancer, and cancers have occurred in cattle in the Lincoln Township wind farm. Yet, to my knowledge, no one has studied genotoxic events in wind farms, or even the mortality rates in herds or people in the wind farms.

## 8-NIH Study: [The Effects of Low-Frequency Noise on Rats](#)

It has been detected that a single LFN exposure with either corresponding Sound Pressure Levels (SPL) had a significant increase in the frequency of chromosomal aberrations (more than 10-fold) compared to the controls and resulted in the appearance of dicentric chromosomes in the aberration spectrum, both of which are evident for the occurrence of deoxyribonucleic acid double strand breaks triggered by the exposure. Furthermore, the ImwDNA levels in the blood plasma measured the following day after a single LFN exposure were significantly higher than that in the control group, and such levels were maintained higher in the week after a single LFN exposure for the SPL of 120 and 150 dB, respectively, compared to the control group. *Conclusion:* Presumably, the LFN may have possible mutagenic effects and cause massive cell death.

For some other studies that came to similar conclusions: [here](#), [here](#), [here](#), and [here](#).

But where are the cancer cases? The short answer is that no federal or state agency is doing any comprehensive and objective analysis of this health issue.

The bottom line is that there **definitely** *is* some scientific evidence that wind turbine noise **can** cause cancer — so to dismiss that possibility out of hand is irresponsible.