

# Wind Turbines Make People Ill: Fact not Fiction

Dr. Pamela Kenny

Would I say this?:

***“Hundreds of thousands of people around the world live near and work at operating wind turbines without health effects. Wind energy enjoys considerable public support, but wind energy detractors have publicized their concerns that the sounds emitted from wind turbines cause adverse health effects. These allegations of health-related impacts are not supported by science. Studies show no evidence for direct human health effects from wind turbines.”***

It is certainly not me talking.

It is the claim of The American Wind Energy Association (AWEA), the national trade association for the U.S. wind industry. Wind power developers and their lobby groups around the world are shouting the same message - that the noise and vibration (infrasound, sound pressure, and low frequency noise) produced by large-scale wind turbines produce no direct health effects.

In reality, their claim is a lie. There is an ocean of documented evidence to support the assertions of anti-wind campaigners that the noise and vibration from wind turbines causes a range of health problems in significant numbers of people. If you search for just a couple of hours online, you can find personal stories by the thousand, and also numerous highly technical research papers by eminent medics and scientists detailing, amongst others, these symptoms:

- Chronic sleep deprivation
- Sleep disturbance
- Increased blood pressure
- Increased blood sugar (dangerous for diabetics)
- Poor concentration and memory
- Depression
- Headaches and migraines
- Dizziness, unsteadiness, ear pain and vertigo
- Vibration in the body, particularly the chest
- Nausea / “seasickness”
- Tinnitus
- Sensations of pressure or fullness in the ear
- Stress
- Panic
- Annoyance, anger and aggression
- Increase in agitation by those with Autistic Spectrum Disorder, and ADD / ADHD



Some of these symptoms can be attributed to sleep deprivation. It is increasingly clear from peer-reviewed medical papers that night noise interrupting sleep has an adverse effect on both cardiovascular health and stress levels. Interrupted sleep can also have serious effects on daytime concentration leading, potentially, to increased risk of industrial accidents and road traffic collisions. As these problems are likely to occur at locations remote from the cause of the interrupted sleep they are difficult to attribute to their actual cause. Dr. Christopher Hanning, a now-retired Consultant in Sleep Disorders Medicine to the University Hospitals of Leicester NHS Trust, writes:

*In the short term... deprivation of sleep results in daytime fatigue and sleepiness, poor concentration and memory function. Accident risks increase. In the longer term, sleep deprivation is linked to depression, weight gain, diabetes, high blood pressure and heart disease.<sup>1</sup>*

I do not pretend to be an expert in the effects of noise, but I do know that in over 30 years as a GP I have seen countless patients presenting with the effects of insomnia, and shift workers in particular suffer far more than the general population with the effects of disturbed sleep. What I find astonishing is that the noise regulations for the wind industry permit MORE noise to be generated by the turbines at night than during the day. This is completely contrary to noise pollution legislation, World Health Organisation (WHO) guidelines - and common sense.

Other symptoms listed above are likely to be a response to exposure to infrasound (sound with a frequency of less than 20 Hz) and low frequency noise (sound with a frequency of less than 200 Hz) produced by the turbines. Both low frequency noise and infrasound occur naturally in the environment (for instance, from household appliances and machinery in the case of low frequency noise, and ocean waves in the case of infrasound). In periods when the wind is blustery, large wind turbines generate both very low frequency sounds and infrasound which can travel much greater distances than audible sound. These sounds are not audible to the human ear, but our brains certainly detect them and some susceptible people suffer some of the unpleasant symptoms I have listed, such as tinnitus, ear pain and vertigo. If you feel up to reading some technical, but very interesting, research on this subject, take a look at *Wind-Turbine Noise. What Audiologists Should Know* by Punch, James and Pabst, published in the American publication *Audiology Today* in 2010.<sup>2</sup>

Other reasons why people experience health impacts from wind turbines include the swishing or thumping of the blades, which is highly annoying as the frequency and loudness varies with changes in wind speed and local atmospheric conditions. This is not at all like the sound of a passing train, aeroplane or tractor which moves on rapidly to be replaced by less intrusive background sounds. The noise of wind turbines has been likened to a "passing train that never passes" which may explain why it is prone to cause sleep disruption.

Some of those with heightened sensitivity to specific repetitive stimuli, such as those with Autistic Spectrum Disorder, Attention Deficit Disorder or Attention Deficit Hyperactivity Disorder (ADD / ADHD), can be seriously affected by the noise. Consultant clinical psychologist Dr. Susan Stebbings, from the Lincolnshire Partnership NHS Trust, said more research was needed into wind turbine noise and these disorders:

*Because it is clear from our clinical knowledge of the condition of autism that the sensory difficulties individuals can have are possibly going to be impacted on by the presence of such large sensory objects in their environment.<sup>3</sup>*

Indeed, there is at least one case on record of a wind farm application being turned down because of the proven impact on children with autism.<sup>4</sup>

Then there is shadow flicker or strobing which occurs when the rotating blades periodically cast shadows through the windows of properties. This can be truly unpleasant to live with and can trigger

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<sup>1</sup> <http://www.algonquinadventures.com/waywardwind/docs/Hanning-sleep-disturbance-wind-turbine-noise.pdf>

<sup>2</sup> <http://docs.wind-watch.org/AudiologyToday-WindTurbineNoise.pdf>

<sup>3</sup> <http://www.bbc.co.uk/news/uk-england-lincolnshire-19374360>

<sup>4</sup> <http://news.bbc.co.uk/1/hi/england/humber/8646326.stm>

migraine and - much more rarely - epileptic fits in those suffering from photosensitive epilepsy.<sup>5</sup> At night, the red warning lights on the tops of some turbines can cause blade glint and strobing effects, so it is not just a daytime phenomenon.

Then there is the effect of stress. If you live in a tranquil rural area like ours, where the daytime and night time noise levels are almost always very low, you may well suffer varying levels of stress from the imposition of industrial-scale wind turbines into the landscape. The stress can occur long before the turbines are erected: during the planning process; during the noise and disruption of the construction; when you see the turbines for the first time and cannot believe the scale of them; and, then, during their operation when your sleep is disrupted and other physical and mental symptoms present themselves.

The effects of wind turbine noise have been known for several years now. In February 2007, a Plymouth GP, Dr. Amanda Harry, published a report *Wind Turbines, Noise and Health*.<sup>6</sup> The report documents her contacts with 39 people living between 300 metres and 2 kilometres from the nearest turbine of a wind farm. She discovered symptoms such as those I have outlined experienced by people living up to 1.6 kilometres from the wind farms.

The wind industry has repeatedly tried to discredit Dr. Harry's report, and another - published in 2009 - by a leading American Pediatrician Dr. Nina Pierpont, who coined the phrase "Wind Turbine Syndrome" to cover the range of health problems she investigated over five years in the US, the UK, Italy, Ireland and Canada.<sup>7</sup> The global wind industry also spends vast sums attempting to discredit scientifically sound research studies, and the papers of experts in the physiology of the ear that prove infrasound can have adverse effects despite it not being audible.

It is true that both Dr. Harry's and Dr. Pierpont's research is largely anecdotal and does not reach the high standards needed for statistical validity. However, that also applied to reports on the association between lung cancer and smoking, and asbestos and asbestosis, in the early days.

We have now reached the stage in the debate when there can be no reasonable doubt that industrial wind turbines - whether singly or in wind farms - generate sufficient noise to disturb the sleep and impair the health of those living nearby.<sup>8</sup> In fact, our own Government has long been fully aware of the problems, as demonstrated in a 2008 Economic Affairs Committee Memorandum by Mr Peter Hadden, which concludes:<sup>9</sup>

*...onshore wind turbines built within 2km of homes offer no benefits and should not be part of a plan to provide the UK with a viable, secure, predictable supply of electricity. Indeed, onshore wind turbines ensure an unpredictable energy supply, by the very nature of the wind, with a long list of adverse impacts that diminish their supposed usefulness. Other renewables, such as solar and hydropower, offer more options and more predictability, especially combined with the still necessary (and technologically advancing) conventional sources of energy.*

I find it unbelievable that the wind industry is permitted to inflict health nuisance such as sleep disturbance, stress, and headaches on our communities - let alone more serious health issues such

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<sup>5</sup> <http://www.ncbi.nlm.nih.gov/pubmed/18397297>

<sup>6</sup> [www.savewesternny.org/pdf/wtnoise\\_health\\_2007\\_a\\_barry.pdf](http://www.savewesternny.org/pdf/wtnoise_health_2007_a_barry.pdf)

<sup>7</sup> <http://www.windturbinesyndrome.com/wind-turbine-syndrome/>

<sup>8</sup> <http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2012;volume=14;issue=60;spage=237;epage=243;aulast=Nissenbaum>

<sup>9</sup> <http://www.publications.parliament.uk/pa/ld200708/ldselect/ldeconaf/195/195we34.htm>

as depression, and heart and diabetes problems. To suggest, as the wind industry does, that there is “no problem” when faced with the huge body of evidence from around the world is perverse.

What sums up this entire problem for me is the quote below. It is by Dr. Noel Kerin of the Occupational and Environmental Medical Association of Canada. He was attending the First International Symposium on Adverse Health Effects and Industrial Wind Turbines, held in Canada in October 2010. He was shocked by the overwhelming evidence on the harmful effects of wind turbines:

*First we had tobacco, then asbestos, and urea formaldehyde, and now wind turbines. Don't we ever learn? Our public health system should be screaming the precautionary principle. The very people who are sworn to protect us have abandoned the public.<sup>10</sup>*

My extensive reading into the harmful effects of wind turbines leaves me in no doubt that, to protect our community, we need to oppose the erection of three 125 metre turbines on Berry Fen. Quite aside from the damage to our beautiful landscape, our tranquillity, our tourism industry, and wildlife, this wind farm would have serious implications for the health of many who live and work here for the entire 25-year life of the wind farm, and well beyond.

There is still time to object to the planning application. You do not have to write a long letter - just a couple of points outlining why you object will be perfect, and every single person in your household should write individually as the number of objections will make a difference. Whichever method you choose, please include your name and full postal address, and the Planning Application Number 14/00728/ESF:

- Send your objection by email to [plservices@eastcambs.gov.uk](mailto:plservices@eastcambs.gov.uk)
- Or write to: Mrs Penny Mills, Planning Officer, East Cambs District Council, The Grange, Nutholt Lane, Ely, CB7 4EE
- Or drop off to the following addresses: Simon Monk, Dunelm House, 4d The Borough, Aldreth and Ian Munford, 4 Orchard Way, Haddenham.

#### **About Dr. Pamela Kenny MB.BS.,MRCS.LRCP.,FIMC RCSEd.**

Dr. Pamela Kenny was a founder of the current Haddenham and Stretham GP surgeries in 1986. She retired from practice there in 2006, but continued to work in Cottenham and St Ives and is a Trustee of the emergency medical service MAGPAS.

Dr. Kenny has always had an interest in how lifestyle factors affect patient's health, and continues to do so in the interests of the community. She has immense sympathy with anyone who might be affected by any form of flicker as she has always suffered from flicker-induced migraine. She also has the kind of hearing that is super-sensitive to both high and very low sound.

Photo credit: <http://www.publicdomainpictures.net/view-image.php?image=82819&picture=woman>

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<sup>10</sup> <http://www.windvigilance.com/international-symposium/wind-turbines-linked-to-sick-building-syndrome>