



# NO HEALTH IMPACTS FROM WIND TURBINES, STUDIES CONSISTENTLY FIND

## What impacts do wind turbines have on my health?

Although some people living near wind turbines report symptoms such as headaches, dizziness, and sleep disturbance, research studies and comprehensive reviews consistently find that while wind turbines can cause irritability and annoyance, they have no direct effects on physical health.

## How loud are wind turbines?

Sound is expressed in terms of its frequency (measured in hertz, Hz) and pressure or volume (measured in decibels, dB). Humans generally can hear sounds that are above 16 Hz. Compared to other common sources of outdoor sound, wind turbines are quiet.

Activity	Sound pressure (dBA)
Jet aircraft at 250 meters	105
Noise in a busy office	60
Car travelling at 40 mph from 100 meters away	55
Windfarm (10 turbines) at 350 meters	35-45
Quiet bedroom	35
Background noise in rural area at night	20-40

## Purported Health Effects

- **Hearing impairment:** The sound from wind turbines at common residential setbacks is *not loud enough to cause hearing impairment.* <sup>7,8</sup>
- **Seizures:** *Turbine blades rotate too slowly to cause epileptic seizures.*<sup>9</sup>
- **Diabetes and cardiovascular disease:** There is *no evidence directly linking wind turbine noise with diseases such as diabetes or cardiovascular disease.* <sup>10,11</sup>
- **“Wind Turbine Syndrome”:** Several physicians associated with anti-wind groups have recorded a common set of symptoms among people living near wind turbines and called them “Wind Turbine Syndrome.” This research *has been consistently rejected as biased and not based on facts or science.* Instead, fear, annoyance, rumors, and the spread of unscientific, poorly documented “studies” can be responsible for the symptoms reported by some community members.

1. Chief Medical Officer of Health of Ontario. 2010. <http://www.windworksmichigan.com/s/CA-Study-Health-Impacts.pdf>

2. Australian Government: National Health and Medical Research Council. 2010. <https://goo.gl/AJ0lSm>

3. Massachusetts Department of Environmental Protection and Massachusetts Department of Public Health. 2012. <http://www.mass.gov/eea/docs/dep/energy/wind/turbine-impact-study.pdf>

4. Colby, W. D., et al. 2009. [http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

5. Merlin, T., et al. 2013. <https://goo.gl/bbdHrz>

6. Australian Government: National Health and Medical Research Council. 2010. <https://goo.gl/AJ0lSm>

7. Australian Government: National Health and Medical Research Council. 2010. <https://goo.gl/AJ0lSm>

8. The Expert Panel on Wind Turbine Noise and Human Health, Council of Canadian Academies. 2015. <https://goo.gl/YDo6ek>

9. Massachusetts Department of Environmental Protection and Massachusetts Department of Public Health. 2012. <http://www.mass.gov/eea/docs/dep/energy/wind/turbine-impact-study.pdf>

10. Massachusetts Department of Environmental Protection and Massachusetts Department of Public Health. 2012. <http://www.mass.gov/eea/docs/dep/energy/wind/turbine-impact-study.pdf>

11. The Expert Panel on Wind Turbine Noise and Human Health, Council of Canadian Academies. 2015. <https://goo.gl/YDo6ek>

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# 18 STUDIES ON WIND AND HEALTH SHOW NO NEGATIVE HEALTH IMPACTS FROM WIND TURBINES

- Bolin K., et al. "Infrasound and low frequency noise from wind turbines." Environmental Research Letters. 2011. <http://iopscience.iop.org/1748-9326/6/3/035103>
- Chatham-Kent Public Health Unit. The Health Impact of Wind Turbines: A Review of the Current White, Grey, and Published Literature. 2008. [https://www.wind-works.org/cms/fileadmin/user\\_upload/Files/Health\\_and\\_Wind\\_by\\_C-K\\_Health\\_Unit.pdf](https://www.wind-works.org/cms/fileadmin/user_upload/Files/Health_and_Wind_by_C-K_Health_Unit.pdf)
- Chief Medical Officer of Health of Ontario. The Potential Health Effects of Turbines. 2010. <http://news.ontario.ca/mohltc/en/2010/05/new-report-from-ontarios-chief-medical-officer-of-health-says-there-is-no-direct-causal-link-between.html>
- Colby, W. D. et al. Wind Turbine Sound and Health Effects: An Expert Panel Review. 2009. [http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)
- Fiumicelli, D. "Wind Farm Noise Dose Response: A literature review." Acoustics Bulletin. 2011.
- Jakobsen, J. "Infrasound Emission from Wind Turbines." Journal of Low Frequency Noise, Vibration and Active Control. 2005. <http://www.oddzialywaniawiatrakow.pl/upload/file/284.pdf>
- Knopper, L. D. and Ollsen, C. A. "Health effects and wind turbines: a review of the literature." Environmental Health. 2010. <http://www.ncbi.nlm.nih.gov/pubmed/21914211>
- Leventhall, H. G. "Low frequency noise and annoyance." Noise and Health. 2004 <http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2004;volume=6;issue=23;page=59;epage=72;aulast=Leventhall>
- Massachusetts Dept. of Environmental Protection. Wind Turbine Health Impact Study. 2012. <http://www.mass.gov/eea/docs/dep/energy/wind/turbine-impact-study.pdf>
- Minnesota Dept. of Health Environmental Health Division. Public Health Impacts of Wind Turbines. 2009. <http://www.health.state.mn.us/divs/eh/hazardous/topics/windturbines.pdf>
- National Health and Medical Research Council. Systematic Review of the Human Health Effects of Wind Farms. 2013. [http://www.nhmrc.gov.au/files\\_nhmrc/publications/attachments/new0048\\_evidence\\_review\\_wind\\_turbines\\_and\\_health.pdf](http://www.nhmrc.gov.au/files_nhmrc/publications/attachments/new0048_evidence_review_wind_turbines_and_health.pdf)
- National Research Council of the National Academies. Environmental Impacts of Wind-Energy Projects. Chapter 4: Impacts of Wind-Energy Development on Humans. 2007. <https://www.nap.edu/catalog/11935/environmental-impacts-of-wind-energy-projects>
- Oregon Health Authority. Strategic Health Impact Assessment on Wind Energy Development in Oregon. 2013. [https://public.health.oregon.gov/HealthyEnvironments/TrackingAssessment/HealthImpactAssessment/Documents/Wnd\\_Energy\\_HIA/Wind\\_HIA\\_Final.pdf](https://public.health.oregon.gov/HealthyEnvironments/TrackingAssessment/HealthImpactAssessment/Documents/Wnd_Energy_HIA/Wind_HIA_Final.pdf)
- Pederson, E. "Noise annoyance from wind turbines - a review." 2003. <http://www.naturvardsverket.se/Documents/publikationer/620-5308-6.pdf>
- The Expert Panel on Wind Turbine Noise and Human Health, Council of Canadian Academies. Understanding the Evidence: Wind Turbine Noise. 2015.
- UK Health Protection Agency. Environmental Noise and Health in the UK. 2010. <http://www.apho.org.uk/resource/item.aspx?RID=83405>
- UK Health Protection Agency. Ultrasound and infrasound: health effects. 2010. [http://www.hpa.org.uk/webc/HPAwebFile/HPAweb\\_C/1265028759369](http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1265028759369)

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