What impact do wind turbines have on my health?

Advancing Renewable Energy in the Midwest

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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.^{1, 2, 3, 4, 5}

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

Table: Noise levels compared to ten turbine windfarm⁶

Purported health effects

- Hearing impairment: The sound from wind turbines at common residential setbacks is not loud enough to cause hearing impairment.^{7, 8}
- Seizures: Turbine blades rotate too slowly to cause epileptic seizures.⁹
- **Diabetes and cardiovascular disease:** There is *no evidence directly linking wind turbine noise with diseases* such as diabetes or cardiovascular disease.^{10, 11}
- "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.

¹Chief Medical Officer of Health of Ontario. 2010. <u>http://www.windworksmichigan.com/s/CA-Study-Health-Impacts.pdf</u> ²Australian Government: National Health and Medical Research Council. 2010. <u>https://goo.gl/AJ0lSm</u> ³Massachusetts Department of Environmental Protection and Massachusetts Department of Public Health. 2012. <u>http://www.mass.gov/cea/docs/dep/energy/wind/turbine-impact-study.pdf</u>

http://www.mass.gov/eea/docs/dep/energy/wind/turbine-impact-study.pdf ⁴ Colby, W. D., et al. 2009. <u>http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf</u>

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

⁶ Australian Government: National Health and Medical Research Council. 2010. <u>https://goo.gl/AJ0ISm</u>

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

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

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