Wind turbines can affect inner ear function

Scientists have determined how infrasound from wind turbines may influence inner ear function. An increasing number of people living near wind turbines report a group of symptoms termed "wind turbine syndrome" that include sleeplessness, dizziness, fatigue, ear pain and pressure, difficulty concentrating, and headache. Up until now, many scientists who study hearing claimed that noise from wind turbines couldn't be harmful because it occurred at a frequency too low for most people to hear. Researchers at Washington University in St. Louis, Missouri successfully challenged this conventional wisdom that "what you can't hear won't hurt you." They noted that one type of inner-ear sensory cell behaves differently when encountering infrasound. Usually these cells respond to sound by contracting and expanding proteins within their walls, amplifying vibrations, which in turn stimulate other sensory cells to send electrical signals about sound to the brain. However, the proteins do not respond in the same way to infrasound and instead actively prevent stimulation of the cells that transmit sound signals. So, while the brain may not receive information about sound, a physiological response to infrasound has occurred in both the cochlea and the other sensory structures in the inner ear such as the saccule, possibly explaining the unfamiliar sensations experienced by some people. —Salt AN, Huller TE. *Hear Res* [published online ahead of print June 16, 2010].