Wind Turbine Syndrome – Draft Article

Nina Pierpont, MD, PhD
19 Clay St.
Malone, NY 12953
(518) 483-6481 phone and fax
pierpont@twcny.rr.com
www.ninapierpont.com

ABSTRACT

Wind Turbine Syndrome is a consistent, often debilitating, complex of symptoms which occur during residential exposure to large industrial wind turbines. Symptoms include sleep disturbance, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, irritability, and problems with concentration and memory. Panic episodes associated with sensations of internal pulsation or quivering arise in the daytime or during sleep. Symptom intensity varies in concert with the direction turbine blades are turned, the rate of spin, or the presence of certain sounds. Panic episodes show no statistical association with previous history of anxiety or other mental health disorders, and a highly significant association with pre-existing motion sensitivity. Headache shows a significant association with preexisting migraine disorder. Secondary clusters of symptoms involve the chest and eyes. Methods: Case series of 10 affected families with 38 members age 0 to 75 exposed to turbines erected since 2004. All adults were interviewed and information obtained on all family members in a pre-exposure, during exposure, post-exposure format. Five families moved away from their exposed homes within 6 weeks before the interviews or between the first and second interviews, one family significantly reduced its time in the home 3 months before the interviews, and other families spent periods of time away from the home during exposure. Conclusions: Core symptoms of Wind Turbine Syndrome are best explained as a vibratory disturbance of thoracic organs creating a disturbance to position and motion sense via visceral graviceptors. Anxiety and panic arise in previously unaffected but motion-sensitive people due to direct neurologic linkages between balance and position sense and brain centers mediating fear, anxiety, autonomic effects, and aversive learning. There are also direct effects on ears. Secondary symptom clusters suggest other effects on tissues inside body resonant spaces, but require further research. Syndrome recognition is important for control of turbine placement and compensation of affected persons.
EDUCATION

1991  M.D.  The Johns Hopkins University School of Medicine
1985  Ph.D.  Princeton University (Behavioral Ecology)
1981  M.A.  Princeton University (Behavioral Ecology)
1977  B.A.  Yale University (Biology), National Merit Scholar (cum laude)

POST-DOCTORAL TRAINING

1992 to 94  Pediatrics  Dartmouth-Hitchcock Medical Center, Lebanon, NH
1991 to 92  Pediatrics  Children's National Medical Center, Washington, DC
1985 to 86  Ornithology  American Museum of Natural History, New York, NY

LICENSED AND CERTIFICATION

1997  Licensed Physician, New York
1997  Licensed Physician, New Hampshire (expired)
1995  Pediatric Advanced Life Support Instructor and Affiliate Faculty
1994  Licensed Physician, Alaska (expired)

HOSPITAL OR AFFILIATED INSTITUTION APPOINTMENTS

10/00 to 12/03  Senior Attending in Pediatrics Bassett Healthcare, Cooperstown, NY
1997 to 00  Attending Pediatrician Alice Hyde Hospital, Malone, NY
1995 to 96  Chief of Pediatrics Yukon-Kuskokwim (Yup’ik Eskimo) Delta Regional Hospital, Bethel, AK
1994 to 95  Staff Pediatrician Yukon-Kuskokwim (Yup’ik Eskimo) Delta Regional Hospital, Bethel, AK

OTHER PROFESSIONAL POSITIONS

2004 to …  Private Practice (Solo) Pediatrics (emphasizing Behavioral Peds) Malone, NY
1998 to 00  Private Practice (Solo) Pediatrics Malone, NY
1997 to 00  Staff Pediatrician St. Regis Mohawk (Iroquois) Health Services, Hogansburg, NY
1997 to 98  Staff Pediatrician North Country Children's Clinic (clinic for needy children), Malone, NY

ACADEMIC APPOINTMENTS

2000 to 03  Assistant Clinical Professor of Pediatrics
           Columbia University, College of Physicians and Surgeons