This story is not about wind turbines; however the same concerns would apply

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Aircraft Noise Raises Blood Pressure Even While People Are Sleeping, Says Study

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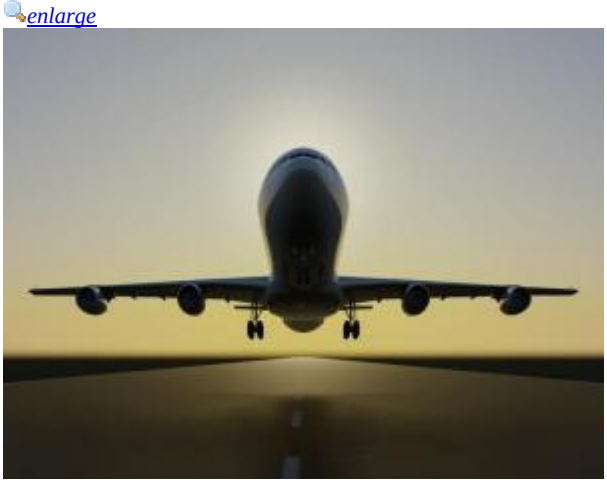

Night-time noise from aircraft or traffic can increase a person's blood pressure even if it does not wake them. (Credit: iStockphoto/Mark Evans)

When you read this apply wind turbines rather than airports. Airplanes are not constant where wind turbines are most of the time.

ScienceDaily (Feb. 17, 2008) — Night-time noise from aircraft or traffic can increase a person's blood pressure even if it does not wake them, according to a new study published in the European Heart Journal. Scientists from Imperial College London and other European institutions monitored 140 sleeping volunteers in their homes near London Heathrow and three other major European airports.

The researchers measured the volunteers' blood pressure remotely at 15-minute intervals and then analysed how this related to the noise recorded in the volunteers' bedrooms.

People with high blood pressure (hypertension) have **an increased risk of developing heart disease, stroke, kidney disease and dementia**. High blood pressure is defined by World Health Organisation as being 140/90mmHg or more.

The researchers found that volunteers' blood pressure increased noticeably after they experienced a 'noise event' -- a noise louder than 35 decibels -- such as aircraft travelling overhead, traffic passing outside, or a partner snoring. This effect could be seen even if the volunteer remained asleep and so was not consciously disturbed.

Aircraft noise events caused an average increase in systolic blood pressure of 6.2 mmHg and an average increase in diastolic blood pressure of 7.4 mmHg. Similar increases in blood pressure were seen also for other noise sources such as road traffic.

The researchers found that the increase in blood pressure was related to the loudness of the noise, so that a greater increase in blood pressure could be seen where the noise level was higher. For example, for every 5dB increase in aircraft noise at its loudest point, there was an increase of 0.66 mmHg in systolic blood pressure.

The decibel level - and not the origin of the sound - was the key factor in determining the effect that each noise event had on the volunteers' blood pressure, with similar effects regardless of the type of noise, where the 'loudness' of the noise was the same.

The research follows recent findings by the same researchers, showing that people who have been living for at least five years near an international airport, under a flight path, have a greater risk of developing high blood pressure than a population living in quieter areas. That study, published in the journal Environmental Health Perspectives, showed that an increase in night-time aeroplane noise of 10dB increased the risk of high blood pressure by 14 per cent in both men and women.

Dr Lars Jarup, one of the authors of the study from the Department of Epidemiology and Public Health at Imperial College London, said: "We know that noise from air traffic can be a source of irritation, but our research shows that it can also be damaging for people's health, which is particularly significant in light of plans to expand international airports. Our studies show that night-time aircraft noise can affect your blood pressure instantly and increase the risk of hypertension.

It is clear to me that measures need to be taken to reduce noise levels from aircraft, in particular during night-time, in order to protect the health of people living near airports."

The researchers are continuing their analyses to find out whether combined exposure to noise and air pollution increases the risk of heart disease.

Both studies were carried out as part of the Hypertension and Exposure to Noise near Airports (HYENA) project, a four-year study exploring the health effects associated with exposure to aircraft noise. The project includes cross-sectional studies near major airports in Germany (Berlin Tegel), Greece (Athens), Italy (Milano Malpensa), the Netherlands (Amsterdam Schiphol), Sweden (Stockholm Arlanda) and the UK (London Heathrow), including a total of 5,000 study subjects. Dr Jarup is the Principal Investigator for HYENA.
