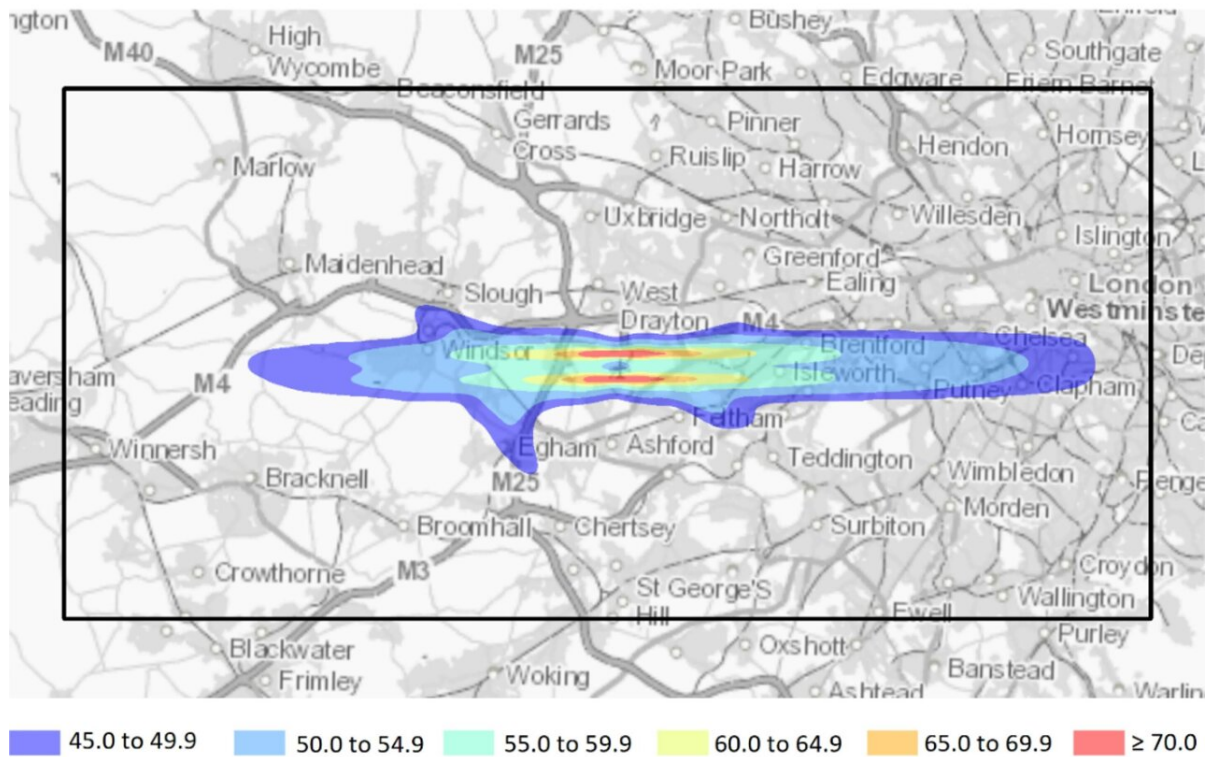


# **Airplane noise linked to next day heart health hospitalizations**

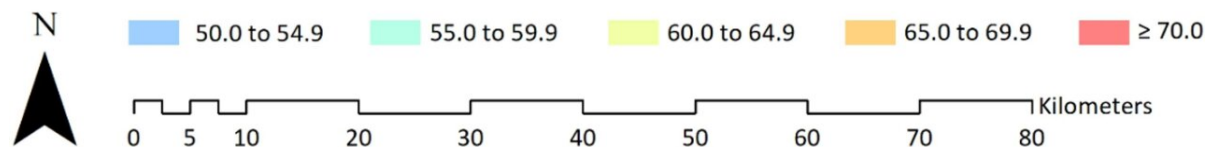
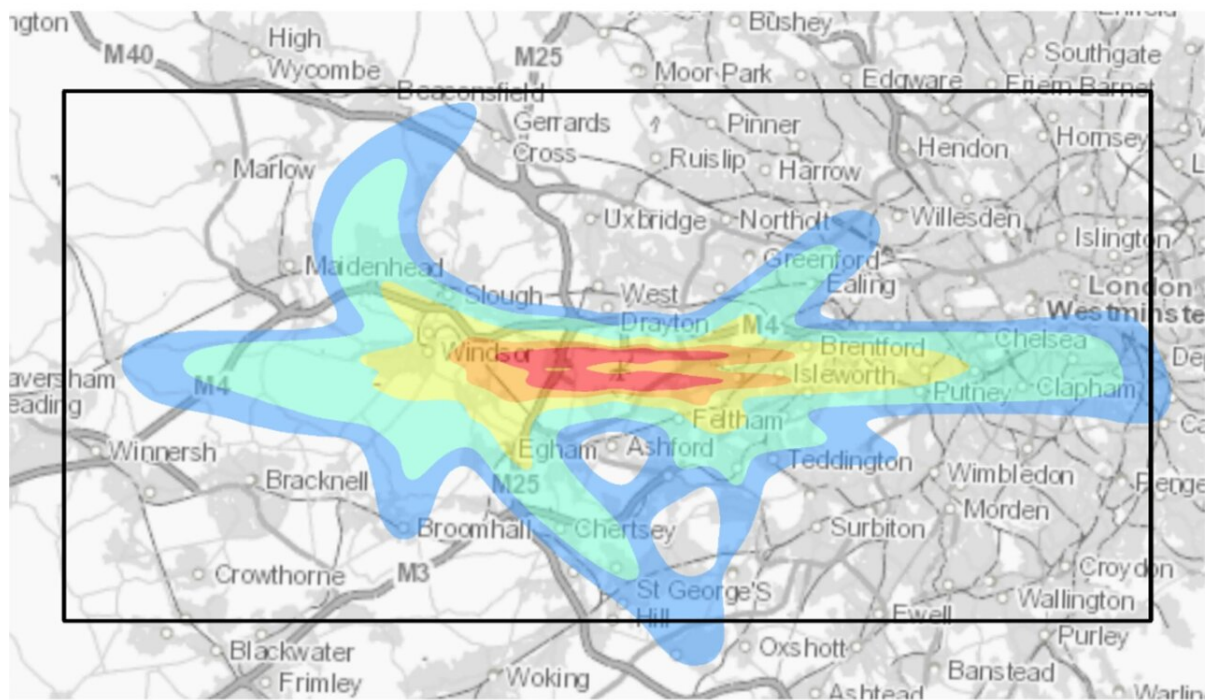
July 13 2023, by Bry Ravate

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**LNIGHT 5-DECIBEL NOISE CONTOURS IN 2011 (23:00 - 07:00)**



**LDEN 5-DECIBEL NOISE CONTOURS IN 2011**



The spatial extent of the AEDT modeling exercise (black bounding box) in relation to the Civil Aviation Authority (CAA) annual-average aircraft noise contours for 2011 for  $L_{\text{night}}$  (top) and  $L_{\text{den}}$  (bottom). Credit: *Environment International* (2023). DOI: 10.1016/j.envint.2023.108016

The sound of airplanes flying overhead late at night is linked to a slight increase in hospital admissions for heart-related problems the following day, a study from Imperial College London suggests.

Researchers from Imperial and the University of Leicester combined [hospital admissions](#) and mortality data with environmental modeling to assess short-term associations between aircraft noise and cardiovascular events the following day in a population of 6.3 million residing near Heathrow Airport between 2014-2018.

## Risks of airplane noise

They found that a 10 decibel increase in noise during the previous evening and previous early morning was associated with a small increase in risk for all [cardiovascular disease](#) admissions. This risk was most prominent in men over the age of 65, and for people of Black ethnicity.

There was no evidence of an association between aircraft noise and deaths due to cardiovascular disease.

Late night and early hour aircraft sound may disturb sleep in locals, which could temporarily increase [blood pressure](#) and activate the [sympathetic nervous system](#)—responsible for adrenaline and the 'fight or flight' response—potentially leading to increased risk of cardiovascular

issues.

Longer term studies have found much larger risks associated with airplane noise.

Professor Marta Blangiardo, co-author of the report from the School of Public Health, said, "Heart disease costs NHS England over £7 billion a year, but studies assessing the short-term risks of airport noise on heart health are few and far between."

"Our research suggests that [aircraft noise](#), particularly late at night and in the early hours of the morning, potentially increases risk in cardiovascular hospitalizations."

"Next, [research](#) should look into the efficacy of measures that could be offered to local communities of busy airports, including runway rotation and noise insulation."

"This should see our study findings translated into action."

The study is published in the journal *Environment International*.

**More information:** Nicole Itzkowitz et al, Aircraft noise and cardiovascular morbidity and mortality near Heathrow Airport: A case-crossover study, *Environment International* (2023). [DOI: 10.1016/j.envint.2023.108016](#)

Provided by Imperial College London

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