

Publication

Aircraft noise, air pollution, and mortality from myocardial infarction

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 1193526**Author(s)** Huss, Anke; Spoerri, Adrian; Egger, Matthias; Rösli, Martin; Swiss National Cohort Study Group,**Author(s) at UniBasel** [Rösli, Martin](#) ;**Year** 2010**Title** Aircraft noise, air pollution, and mortality from myocardial infarction**Journal** Epidemiology**Volume** 21**Number** 6**Pages / Article-Number** 829-36**Mesh terms** Air Pollution, adverse effects; Aircraft; Cohort Studies; Humans; Myocardial Infarction, mortality; Noise, adverse effects; Risk Assessment; Switzerland, epidemiology

OBJECTIVE: Myocardial infarction has been associated with both transportation noise and air pollution. We examined residential exposure to aircraft noise and mortality from myocardial infarction, taking air pollution into account. **METHODS::** We analyzed the Swiss National Cohort, which includes geocoded information on residence. Exposure to aircraft noise and air pollution was determined based on geospatial noise and airpollution (PM10) models and distance to major roads. We used Cox proportional hazard models, with age as the timescale. We compared the risk of death across categories of A-weighted sound pressure levels (dB(A)) and by duration of living in exposed corridors, adjusting for PM10 levels, distance to major roads, sex, education, and socioeconomic position of the municipality. **RESULTS::** We analyzed 4.6 million persons older than 30 years who were followed from near the end of 2000 through December 2005, including 15,532 deaths from myocardial infarction (ICD-10 codes I 21, I 22). Mortality increased with increasing level and duration of aircraft noise. The adjusted hazard ratio comparing ≤ 60 dB(A) with >45 dB(A) was 1.3 (95% confidence interval = 0.96-1.7) overall, and 1.5 (1.0-2.2) in persons who had lived at the same place for at least 15 years. None of the other endpoints (mortality from all causes, all circulatory disease, cerebrovascular disease, stroke, and lung cancer) was associated with aircraft noise. **CONCLUSION::** Aircraft noise was associated with mortality from myocardial infarction, with a dose-response relationship for level and duration of exposure. The association does not appear to be explained by exposure to particulate matter air pollution, education, or socioeconomic status of the municipality.

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