

Result



The NORAH project was able to establish many exposure–effect relationships. These are curves that reflect the statistical connection between acoustic stress and the corresponding health effects. Individually they do not say anything about the numbers of “lost complaint-free years of life” or the trafficnoise-related heart attacks, as some publications calculate. However, they show us the statistically clear effects of traffic noise and the possible consequences of increasing exposure to noise. The strongest effect of noise is that the residents feel annoyed by it. This applied to all three traffic types at NORAH: most strongly to air traffic, followed at some distance by rail and road traffic. At a long-term energy equivalent aircraft noise level, the share of badly annoyed persons was between 40 and 55 percent, depending on the examined airport. In 2012, nearly 350,000 persons in the area of the Frankfurt airport were exposed to this noise level.

The Study on Health Risks, in contrast, showed that air traffic does not always hold the dominant role as cause of diseases. Depending on the area of disease, aircraft, rail and road traffic alternated. All three traffic noise sources bring statistically clear risks at least in specific groups or for specific diseases. In the Blood Pressure Study, no clinically relevant influence on blood pressure could be shown specifically for aircraft noise. When comparing the three noise types, it was noticed that aircraft noise had a special effect on the psychological level, and specifically on the annoyance and the risk of depression. The risk increase for cardiovascular diseases was partially stronger in rail



and road traffic noise than in aircraft noise. The maximum noise level at night may be more important in flight noise than the long-term energy equivalent noise level. In general, the authors conclude that the effects of all three traffic noise types have to be re-evaluated.

Further information

Further information on the results of the NORAH study can be found in NORAH Knowledge No. 14. Or click here for [all results in detail](https://www.laermstudie.de/en/results/) (<https://www.laermstudie.de/en/results/>).

- [NORAH Knowledge no. 14 PDF, 2 MB](https://www.laermstudie.de/media/download/norah_knowledge_14.pdf)
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Overview of NORAH Results: Documents for Download

Here you can download the main results reports and statements on the NORAH study in German language.

- [Scientific Results Report \(German\) PDF, 3 MB](https://www.laermstudie.de/media/download/norah_eb_gesamt_wiss_ergebnisbericht_auflage_2.pdf)
(https://www.laermstudie.de/media/download/norah_eb_gesamt_wiss_ergebnisbericht_auflage_2.pdf)
 - [Summary of the Scientific Results Report \(German\) PDF, 296 kB](https://www.laermstudie.de/media/download/norah_gesamt_zusammenfassung.pdf)
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 - [Statements WBQ \(German\) PDF, 171 kB](https://www.laermstudie.de/media/download/norah_gesamt_stellungnahme_wbq.pdf)
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Do you have any questions?

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