

Hardly any connections discovered for breast cancer



Three studies of the past had suggested that traffic noise also promotes the development of breast cancer. However, there were much fewer indications for this assumption than for the other diseases examined by NORAH. Breast cancer is one of the most frequent cancers in Germany: The tumour disease is diagnosed in approx. 70,000 women in the Federal Republic every year.

There are hardly any indications of a connection between the breast cancer risk and traffic noise

The scientists were unable to find any connection between the 24-hour continuous noise level and the breast cancer risk. The type of traffic causing the noise – airplanes, cars or trains – also plays barely any role for the development of the disease.

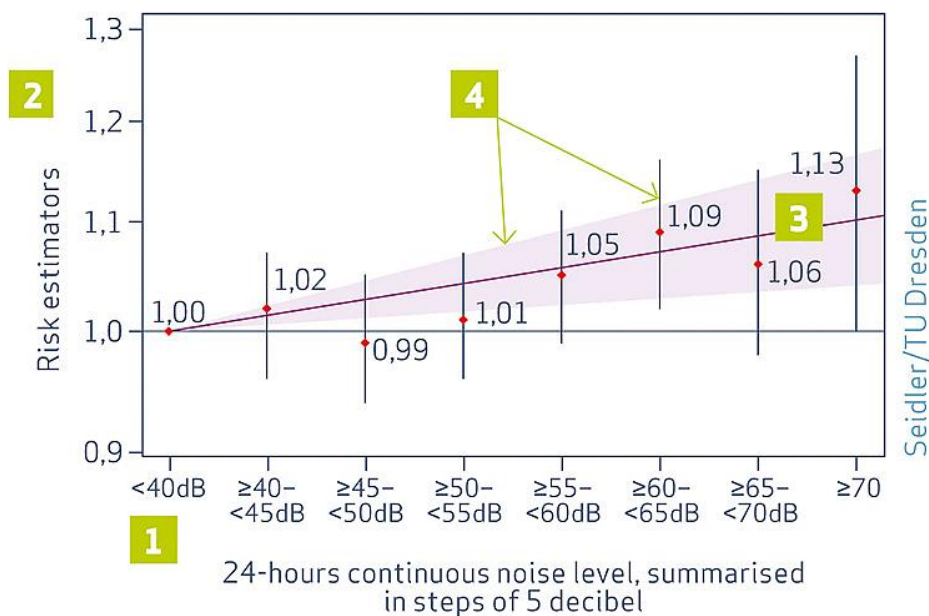
The only exception is loud aviation noise data night

The NORAH team was able to find a statistically significant connection between noise and breast cancer only for a very small part of the insured persons: Women at whose places of residence the

continuous noise level between 11 PM and 5 AM was between 55 and 60 decibel were nearly three times as likely to develop breast cancer than any other women. However, the authors note that the insured persons only included 145 women from places of residence where the aviation noise exposure was so high. Six of them had been diagnosed with breast cancer. Since 2011, Frankfurt has had a prohibition of planned flights between 11 PM and 5 AM; therefore, the continuous noise level during this time is now clearly reduced.

A reading aid for this issue of NORAH Wissen

Heart attack and road noise

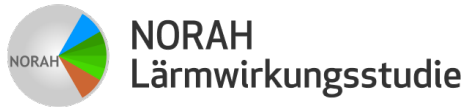


(https://www.laermstudie.de/media/3-3_reading-aid4_16.jpg)

The study on health risks examines whether the risk of developing one of the five examined diseases increases when exposed to more traffic noise. The scientists present the results of their research in exposure-effect curves. Since you will find many of these curves on the following pages, we are providing a reading aid here:

1 | Continuous noise level

This axis shows the continuous noise level. The noise increases from the left to the right. For some calculations, the scientists also used "Noise level classes". If, e.g., the continuous noise level at the address of an insured person was at 63.7 decibel, his health data was included in the calculation for the noise level class " 60 dB – < 65 dB".



2 | Risk estimators

Risk estimators indicate how high the "relative illness risk" is. 1 corresponds to the "basic risk" of a person not subject to traffic noise. If the value is higher, this suggests that noise at this degree may contribute to the disease. Additional calculations must show whether an increased or reduced relative risk is statistically significant and thus with a high probability not coincidental.

3 | Exposure-effect-curve

The exposure-effect-curve shows how the health risk changes with increasing noise. In this example, the risk increases by 2.8 percent per ten decibel. Additional calculations show whether this increase is statistically significant.

4 | Confidence intervals

The confidence interval is a statistically calculated trust range above or below the risk estimator. The smaller the confidence interval, the more reliable and indicative the risk estimator. It is usual to apply 95-percent confidence interval. Simplified, this means that the "actual" risk is within this range with a probability of 95 %. The figures show the 95-percent confidence intervals of the individual risk estimators (black vertical lines) as well as the 95-percent confidence interval above and below the exposureeffect curve (pink area).

Do you have any questions?

Icon Kontakt Lärmstudie

Get in touch with us

Gemeinnützige Umwelthaus GmbH

Rüsselsheimer Str. 100

65451 Kelsterbach

Germany

Tel. +49 6107 98868-0

Fax +49 6107 98868-19

norah@umwelthaus.org