

Department of Clinical Neuroscience
Division of Insurance Medicine

Shift work, sleep, morbidity and mortality

This project aims to gain in-depth knowledge of the possible association between shift work, sleep, morbidity (such as cancer) and mortality, using data from the Swedish Twin Registry.

As an example, the reason why night work for example increases the risk of breast cancer and other cancers is not clear. One hypothesis is that night work leads to circadian rhythm disorders which affect the hormone melatonin. The presence of night work seems to play a central role in the development of breast cancer, although it is unclear how many years of night work is needed to develop this form of cancer. A somewhat uncertain estimate is that it takes quite a long time of exposure (> 20 years) in order for night work to lead to increased risk. Previous studies have also examined whether shift work increases the risk of other cancers such as prostate and colon cancer. For these types of cancers, the state of knowledge is still unclear and one cannot yet draw any conclusions on shift work is a risk factor for these tumors.

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Publications peer-reviewed

- 1) Åkerstedt T, Narusyte J, Svedberg P. Sleep duration and mortality – influence of age and occupational group in retired individuals. *Sleep Medicine*. 2021 Apr;80:199-203. doi.org/10.1016/j.sleep.2021.01.058.
- 2) Åkerstedt T, Narusyte J, Svedberg P. Night work, mortality, and the link to occupational group and sex. *Scand J Work Environ Health*. 2020 Sep 1;46(5):508-515. doi: 10.5271/sjweh.3892. Epub 2020 Apr 9. <https://pubmed.ncbi.nlm.nih.gov/32270204/>
- 3) Åkerstedt T, Narusyte J, Alexanderson K, Svedberg P. Sleep Duration, Mortality, and Heredity-A Prospective Twin Study. *SLEEP*. 2017;40(10). [Editor's choice] doi: 10.1093/sleep/zsx135. PMID: 28977668. <https://www.ncbi.nlm.nih.gov/pubmed/28977668>
- 4) Åkerstedt T, Narusyte J, Svedberg P, Kecklund G, Alexanderson K. Night work and prostate cancer in men – a Swedish prospective cohort study. *BMJ Open*. 2017;7:e015751. doi: 10.1136/bmjopen-2016-015751. PMID: 28600375. <https://www.ncbi.nlm.nih.gov/pubmed/28600375>
- 5) Åkerstedt T, Knutsson A, Narusyte J, Svedberg P, Kecklund G, Alexanderson K. Night work and breast cancer in women – a Swedish cohort study. *BMJ Open*. 2015;5:e008127 doi:10.1136/bmjopen-2015-008127. PMID: 25877283. <https://www.ncbi.nlm.nih.gov/pubmed/25877283>