



Working Night Shift and Connection to Breast Cancer

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Background

- An estimated 310,720 women will have a new breast cancer diagnosis this year (American Cancer Society, 2024).
- In 2007, emerging evidence found a possible correlation between working night shift and breast cancer. (Sziela, 2020).
- A possible factor for the development of breast cancer is the circadian sleep rhythm disruption and associated low levels of melatonin (Lawson et al., 2022).
- About 30% of nurses work the night shift (Elmowitz et al., 2023). With approximately 46 million employed nurses (American Association of Colleges of Nursing, 2023), this would mean over 13 million nurses are working a schedule that disrupts their circadian rhythms.

Synthesis of Evidence

- Evidence was gathered from six different studies that sought to compare the incidences of breast cancer in night shift health care professionals versus non night shift healthcare professionals.
- Results from a cohort study of women in Poland displayed an odds ratio of 2.08, meaning that the odds of developing breast cancer was twice as high in night shift workers than non night shift workers (Sziela et al., 2020).
- A Sweden cohort study found that ever working night shift doesn't show an increased risk for breast cancer but working 8 or more years of night shift was associated with an increased hazard ratio of 3.43 (Gustavsson et. al., 2022).
- Salgado et al. 2021, found a higher percentage of breast cancer cases in professionals who worked more than 500 nights as well as those who worked 3 or more nights per month in the last 10 years.



<https://www.mamernurse.com/nursing-night-shift-and-nutrition/>

PICOT Question

Are women who continuously work night shift compared with women who continuously work day shift at a greater risk for breast cancer?



<https://www.practo.com/healthfeed/what-are-the-symptoms-of-breast-cancer-47284/post>

This work is not original. This is a systematic review of published research conducted by professionals. Guidance was provided by Nina Blakeman, professor of NU307: Evidence-Based Practice Research.

Application

- Health care access is necessary 24/7 making the need for night shift workers unavoidable.
- Prophylactic treatment should be in place for workers schedule to work night shift.
- Employers should provide education on healthy sleep habits tailored to the night shift professional.
- Upon hire, be forthcoming of possible side effects to working night shifts.

Limitations

- Non-probability sampling was used through selection of participants from specific medical centers. This type of sampling introduces bias as it is not representative of a true sample of a population.
- Limited data collection without the use of follow up's on the groups sampled.
- Self-reported diagnosis of breast cancer wasn't confirmed clinically.
- Recall bias and interpretation bias.
- Small sample sizes could be from chance alone instead of true differences.



References