

## Shift work may be associated with decreased risk of skin cancer

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Melatonin is known to have cancer-protective properties, and shift work can induce desynchrony of the circadian system, reducing melatonin production. Shift work has been thought to have important health impacts, with evidence linking shift work to an increased risk of several cancers including breast, endometrial, prostate, and colorectal, and non-Hodgkin lymphoma. In a recent study, researchers at Brigham and Women's Hospital (BWH) found that shift work may be associated with a reduced risk of skin cancer in women. These findings are published online in the *Journal of the National Cancer Institute*.

"Shift work has been associated with increased risk of certain cancers and chronic non-malignant diseases such as gastrointestinal disorders, cardiovascular disease, and diabetes," said lead study author Eva Schernhammer, MD, DrPh, a researcher in the Channing Laboratory at BWH. "However, while shift work has been associated with other cancers, the risk of [skin cancer](#) among night-shift workers is unknown."

The researchers documented 10,799 incidents of skin cancer in 68,336 women in the Nurses' Health Study over 18 years of follow-up and examined the relationship between rotating night shifts and skin cancer. They found that higher duration of working rotating nightshifts was associated with a significantly lower risk of skin cancer.

When examining the effect of night shift work on different types of skin cancer, although the risk for each skin cancer ([basal cell carcinoma](#), [squamous cell carcinoma](#), and melanoma) decreased, the strongest

association was observed for melanoma. Working ten or more years of rotating night-shifts was associated with 44 percent decreased risk of melanoma.

The researchers also found that darker-haired women in the study had the lowest risk of skin cancer. There were no differences in risk by sunlight exposure level at baseline, geographic residence or body location of skin cancer. That the inverse association was strongest among women with dark hair raises the possibility for several mechanistic explanations, including a genetic component that may affect both the extent of melatonin suppression during night work and skin cancer risk.

"Although higher melatonin levels appear to be beneficial in individuals with stable circadian rhythms, in shift workers, for certain disease outcomes melatonin suppression may actually be more beneficial," concluded Dr. Schernhammer.

Provided by Brigham and Women's Hospital

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