

Does Your Shift at Work Put You at a Greater Risk for Developing Cancer?

April 3 2009

Does your shift at work put you at a greater risk for developing cancer?

The answer may surprise you in that studies are finding that late-night exposure to light may diminish levels of a natural cancer-fighting hormone.

Dr. David Blask, professor of the practice in the Tulane University School of Medicine Department of Structural and Cellular Biology, is a widely acclaimed expert on cancer biology, circadian rhythms and the health implications of exposure to light. In the early 1980s, Blask was one of only a handful of scientists studying regulation of [breast cancer](#) development and growth by [melatonin](#), a hormone produced by the pineal gland during sleep in the darkness of night. Melatonin modulates many of the body's natural circadian rhythms, including the sleep/wake cycle, and has been shown to have important anti-cancer properties.

He was the first to demonstrate that nighttime doses of melatonin suppress human breast cancer cell growth. He has become a world-renowned expert on the negative health implications and increased cancer risk associated with melatonin suppression due to exposure to light at night.

Using specially designed photoperiodic chambers, which allow precise control over light exposure at night, he and his research team have demonstrated that manipulating light intensity at night, and thus melatonin production, dramatically affects human breast cancers

growing in rats. Their experiments show that reduced levels of melatonin coupled with higher levels of light at night boosted human breast cancer tumor growth in rats.

This landmark research helped to lay the groundwork for a scientific working group (of which Blask was a member) appointed by the World Health Organization to add shift work and exposure to light at night to its list of possible carcinogens. Shift workers have been shown to have higher risks for breast, prostate and other cancers.

Blask has advised Congressional staffers on the implications of light pollution on the environment as part of an effort to get the Environmental Protection Agency to address the problem.

Provided by Tulane University

Citation: Does Your Shift at Work Put You at a Greater Risk for Developing Cancer? (2009, April 3) retrieved 19 December 2022 from <https://medicalxpress.com/news/2009-04-shift-greater-cancer.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.