Bright Outdoor Lights Linked to Increased Colorectal Cancer Risk

In Spain, people who were most exposed to artificial outdoor light had a 60% greater chance of developing cancers of the colon or rectum.

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The blue short-wavelength light emitted by superbright white light-emitting diode (LED) streetlights that help your neighborhood feel safe have been linked to an increase in colorectal cancer, according to new findings published in the journal Epidemiology by researchers at the Barcelona Institute for Global Health (ISGlobal). The energy-efficient lights are increasingly popular in many communities in the United States and throughout the world.

Nighttime exposure to blue light has previously been associated with sleep disorders, obesity and a greater risk of breast and prostate cancer, among other adverse health effects, especially in night-shift workers. But scientists wanted to examine the artificial light's link to colorectal cancer.

The study included data on about 2,000 adults in Barcelona and Madrid. While some participants were randomly selected from the local population, 660 were chosen because they had colorectal cancer. Those with a history of working night shifts were not included. Scientists then used images from the International Space Station to determine night levels of outdoor artificial light.

Participants who had the most exposure to blue light had a 60% higher risk of developing colorectal cancer, compared with those who were less exposed. But the analysis didn't account for individual behaviors, such as the use of rolling shutters, which are commonly used in Mediterranean countries.

Thus, scientists believe that exposure levels are related to how much light people are exposed to both while outside and while in their homes before closing their shutters. (In Spain, it's common for people to spend a lot of time outside.)

"Research on the potential effects of light exposure is still in its infancy, so more work is needed to provide sound, evidence-based recommendations to prevent adverse outcomes," said study coordinator Manolis Kogevinas, PhD, scientific director of the Severo Ochoa Distinction at ISGlobal.

The best thing a person can do is to exercise caution by limiting the amount of time spent outside at night under artificial lights and the amount of blue light allowed into the home.

For related coverage, read “Shine a Light for Better Sleep” and “Can Light Therapy Help Cancer Survivors Sleep Better?”

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