

## Preventing cancer... while sleeping

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*A study recently presented at the annual congress of the American Association for Cancer Research showed that men under 65 years of age who do not sleep enough are at higher risk of premature death from prostate cancer.*

**Sleep** plays essential roles in regenerating the energy reserves in the body, consolidating learning and memory, as well as permitting the proper functioning of the immune system. Numerous studies have also shown that lack of sleep (less than 6 hours nightly) increases the risk of premature death due to increases in several chronic diseases such as coronary disease, strokes and even diabetes. These negative effects can be partly explained by the higher incidence of obesity observed in people who sleep little.

Studies performed to date suggest that sleep problems are also associated with an increased risk for certain cancers. For example, people who sleep less than 6 hours per night have an incidence of colorectal polyps, an important risk factor for colon cancer, which is 50% higher than in those who sleep 7 hours nightly.

The quality of sleep seems to also play an important role: disturbed sleep is often a sign of respiratory problems (apneas), characterized by frequent halts in breathing which provoke fluctuations in arterial pressure and the development of inflammatory conditions. Beyond increasing the risk of cardiovascular events, these apneas have recently been associated with an increased risk of cancer.

### PROSTATE CANCER

The results of a study led by a group of epidemiologists at the American Cancer Society suggest the existence of a link between sleep and another type of cancer, that of the prostate<sup>1</sup>.

By using the results of two large population studies, namely CPS-I (407,649 men followed between 1950 and 1972) and CPS-II (416,040 men followed between 1982-2012), the researchers noted that men below age 65 who slept less than 5 hours per night had a 55% higher risk of dying from prostate cancer than did those who slept 7 hours.



The negative effect of a lack of sleep on the mortality linked to this cancer was quite marked, even being observed in those who slept 6 hours per night (a 29% higher risk). It should be noted that these increased risks in mortality were observed in young men, the lack of sleep not having any effect on mortality for those aged 65 years or more.

According to the authors, the increased risk of mortality associated with lack of sleep could be linked to a decreased production of melatonin, a hormone which modulates the sleep-wake cycles. Weak quantities of melatonin can promote the appearance of genetic mutations, an increase in cellular damage caused by oxidative stress, a decreased ability to repair errors in DNA and a diminution in the immune response, all factors which create an environment that is favorable to the appearance and progression of tumours.

### IMPORTANCE OF SLEEP

These observations indicate that sleep should be considered as a prime factor in the prevention of cancer, at the same level as a healthy diet or regular physical activity.

In our society with its hyper-connections and overstimulation, sleeping may seem to be a boring activity of little value, compared to the excitement obtained from hectic contemporary life, focused on performance. However, if we are programmed to spend one third of our life sleeping, this must be because a period of rest is absolutely essential for preventing myriad chronic diseases, including cancer, and thus sleep is an indispensable ingredient to maintaining good health.

<sup>(1)</sup> Gapstur SM et al. Sleep duration and risk of fatal prostate cancer in CPS-I and CPS-II. Abstract #2306, Proceedings of the American Association for Cancer Research, Volume 58, April 2017.