

Excessive Sitting & Cancer Risk in Times of COVID-19 Lockdowns

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PROLONGED sitting is known to cause a number of health problems like overweight, depression or anxiety, heart disease and even type II diabetes. But do you know that by sitting for several hours a day, you are putting your life at much higher risk? Even if you exercise daily, by sitting for several hours a day you may be putting your life at much higher risk.

It is believed that every year worldwide physical inactivity causes more than 3 million deaths that are preventable otherwise. It encompasses 6 per cent of total deaths. Physical inactivity is the main cause for almost 27 per cent of diabetic cases. It also includes 30 per cent of total ischemic heart diseases.

Many young boys and girls today spend too much time playing online and offline games often giving rise to health issues. The problem has been further compounded with the extended lockdowns due to the coronavirus pandemic. With much of the time spent inside homes studying, watching TV, reading, or even playing games – all the while sitting – there must be a heavy price to pay.

Excessive Sitting – The Link with Cancer

Globally, the incidence and prevalence of cancer are increasing at a rapid rate, with an estimated 18.1 million new cancer cases, and 9.6 million cancer-related deaths in 2018 as

compared to 12.7 million cancer cases and 7.6 million deaths due to cancer in 2008. The reasons cited for the rising rates of cancer incidence and mortality include population growth, growing life-span and increasingly widespread lifestyle risk factors that are modifiable, like the use of tobacco, consumption of alcohol, unhealthy diet, as well as physical inactivity or sedentary lifestyle.

Several studies have shown that excessive sitting is bad for health and associated with a cluster of health ailments. These ailments include obesity and a group of conditions such as high blood pressure, increased blood sugar, excessive body fat around the waist as well as abnormal cholesterol levels.

Now, what does sedentary behaviour actually mean? It is defined as any waking behaviour in which a person is sitting, reclining or just lying down and has an energy expenditure of less than or equal to 1.5 metabolic equivalents (METs). These sedentary behaviours are pervasive, which are accumulated throughout the week like in the evenings and weekends and across multiple domains like transport, leisure and occupation. These activities require minimal effort.

Studies by Clarke B. *et al.* (2018) on sedentary behaviours using devices that were used to measure the sedentary time for various age groups showed that adults on an average typically spend 9 hours sitting per 24 hours and older adults spend 10 hours daily while sitting.

In fact, long hours of sitting has many other disadvantages. A person who sits excessively is inactive, uses lower amount of energy, has slower metabolism, reduced social skills, is lonely and may develop depression, has compromised posture which can lead to chronic spine and back injuries. A paper published in the *American Journal of Public Health* on evaluating the evidence of sitting and smoking on health by Jeff K. Vallance *et al.* (2018) says that sitting is frequently equated with smoking, with few sources even saying that smoking is safer than sitting. They pointed out the absolute risk differences of more than 2000 higher deaths from any cause per 100 000 individuals per year among the heaviest smokers compared with non-smokers, versus 190 more deaths per 100 000 persons per annum when comparing people who sit more with people who sit less. Similarly, effect on the risk of breast cancer due to excessive sitting has been studied by several researchers.

In another research by Hildebrand *et al.* (2013), it was found that most active women experienced 25% lower breast cancer risk than females who are least active. In females where walking was the only recreational activity, the risk for cancer was less than 14%. However, in this case, sitting time was found not to be associated with risk. Thus, in post-menopausal women, this shows an inverse association between physical activity and breast cancer that did not differ by Body Mass Index or weight gain. This inverse relationship was further worked upon by Lynch *et al.* in 2013 who pointed out that in post-menopausal women higher amounts of occupational sitting are associated with lesser odds of breast cancer.

In yet another paper published in 2019 by Carmen Jochem *et al.*, which listed the relationship between sedentary lifestyle (excessive sitting) and cancer, it was found that greater sedentary behaviour is associated with the development of many types of cancers whose probability is very low in non-sedentary persons. As per research, there is a 28-44% increased risk of developing colon cancer if you sit for a longer period. Similarly, you have 8-17% greater risk of getting breast cancer, and 28-36% higher risk of developing endometrial cancer for the same reasons.

A study by Carlos Nunez *et al.* (2018) also found that physical inactivity, obesity and sedentary behaviour are associated with a greater and increased risk of colon cancer.

Another paper by Junga Lee (2019) showed that the risk of ovarian cancer is decreased by physical activity. The greatest reduction of risk of ovarian cancer was due to physical activity of moderate intensity and in low amounts. However, the prolonged sitting time had the greatest risk for developing ovarian cancer in females. At least two hours of moderate physical activity every week and less than 3 hours of sitting time per 24 hours has been found to provide a preventive effect on ovarian cancer.

The relationship between prostate cancer and sitting has also been studied. As per a paper published in 2018 by Hoang *et al.*, the risk of prostate cancer was found to get reduced by physical activity even in patients who sat for prolonged times. There is thus a low risk of prostate cancer for males who engaged in medium and high levels of physical activity.

What can be done?

Humans are vertebrates with a vertebral column that stays in the right shape when we stand upright. Most of our organs work effectively when we are in an upright manner. For example our bowel, our heart as well our cardiovascular system work efficiently when we are in an upright posture.

So, sitting for too long is not advisable. You need to exercise. Exercising here does not mean exercising hard. It just means taking a walk after every hour at least. This light activity throughout the day will help decrease the probability of cancer to a considerable amount.

Avoid online work or watching TV or playing online games for long hours. Be physically active. Engage in gardening or just have a walk, even if for short periods of time. Exercises at short intervals are highly recommended to reduce cancer risk. An additional 30 minutes of walk every day, instead of just sitting, lowers your risk of cancer by 31%.

So, remember to just get up and take a walk after short intervals. It will do you a world of good.

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