

## Prevention of cancer and exercise: 13 new good reasons to get active

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*The largest study performed to date on the link between physical activity and cancer shows that regular exercise is associated with a decreased risk for 13 distinct forms of cancer.*

**Physical exercise** is often considered as a sort of “universal medication” due to its multiple positive effects on health.

To be physically active is not limited to making the muscles move; it is also an action that provokes a series of biochemical and physiological modifications which increase the function of the heart and lungs, improve arterial pressure, stabilize glycemia and diminish the risk of depression, to name only a few.

### LESS RISK OF BEING SICK

Consequently, regular physical activity is associated with a marked decrease in risk for heart disease, type 2 diabetes, cancer and diminished cognitive function, which results in a marked increase in life expectancy and quality of life, since the most active people can live on average more than four extra years, compared to those who are sedentary.

As is often pointed out here, if a pill could bestow all of the benefits of physical activity, it would be the biggest commercial success in the history of the pharmaceutical industry.

### ANTICANCER MOVEMENT

Over the years, a number of studies have shown that people who are more physically active have a considerably reduced risk of developing one of numerous cancers, compared to those who lead a sedentary way of life. This protective effect is particularly well documented for cancers of the colon and breast, but the impact of physical activity on other, less common, forms of cancer remains poorly understood because the incidences of these cancers are far lower, requiring studies to be performed with an extremely large number of subjects in order to be able to perform appropriate statistical analysis.

A major advance in this field came about when a team of American researchers used a type of systematic risk analysis for 26 distinct forms of cancer diagnosed in a population of 1.4 million people<sup>1</sup>. By comparing the incidences of these cancers between individuals who were more active in their spare time with those who were more sedentary, the scientists observed significant reductions in risk for 13 different cancers:

- Oesophagus -42%
- Liver -27%
- Lung -26% (smokers & ex-smokers only)



- Kidney -23%
- Stomach -22%
- Uterus -21%
- Myeloid Leukemia -20%
- Myeloma -17%
- Colon -16%
- Head and neck -15%
- Rectum -13%
- Bladder -13%
- Breast -10%

It should also be noted that the risk of malignant melanoma was increased by 27% in more active subjects, probably due to increased exposure to the sun during their outdoors activities. This is another illustration of the importance of suitably protecting oneself from the sun during leisure times.

### ACTIVE, BUT NOT EXCESSIVE

What is the level of physical activity associated with these reductions in cancer risk? According to the results obtained by the authors of this study, the physical activity of individuals who were the most active (90<sup>th</sup> percentile) was about 22 metabolic equivalents (MET) per week, which corresponds to about 7 hours of rapid walking or 2.5 hours of jogging at a moderate pace, in one week. This is certainly an elevated level of activity, but it is quite accessible to the very large majority of the population.

To reach this point, we must redefine the place occupied by exercise in our lives. Currently, exercising is too often only looked upon as a way to “burn” calories in order to stay slim or to eliminate excess weight. This vision is much too reductive and we should rather consider the level of physical activity as an essential ingredient for the prevention of chronic diseases, including a large number of cancers, and as an improvement to our quality of life. There is even the bonus of the “runner’s high” generated by the production of endorphins and endocannabinoids, the endogenous drugs which accompany physical activity!

<sup>(1)</sup> Moore SC et al. Association of leisure-time physical activity with risk of 26 types of cancer in 1.44 million Adults. JAMA Intern. Med. 2016;176(6):816-825.