



Improved Fitness Linked to Lower Prostate Cancer Risk

Men who were moderately fit at baseline experienced the greatest amelioration of risk.

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When their cardiorespiratory fitness improved over time, men were less likely to develop [prostate cancer](#), according to study findings published in the [British Journal of Sports Medicine](#).

A growing body of research shows that cardiovascular and respiratory physical fitness is associated with [reduced cancer risk and improved outcomes](#), but previous studies of prostate cancer that were limited to a single point in time have yielded mixed results.

Kate Bolam, PhD, of the Swedish School of Sport and Health Sciences GIH in Stockholm, and colleagues examined links between changes in cardiorespiratory fitness (CRF) and the occurrence of prostate cancer and related mortality.

“In this study of employed Swedish men, change in cardiorespiratory fitness was inversely associated with risk of prostate cancer incidence, but not mortality,” the researchers concluded. “Improvements in CRF in adult men should be encouraged and may reduce the risk of prostate cancer.”

For this prospective study, the researchers used data from the Health Profile Institute in Sweden. The analysis included information on more than 180,000 men who completed an occupational health profile assessment between 1982 and 2019. Data on prostate cancer incidence and mortality were taken from national registries.

The analysis included men who had two or more tests of cardiorespiratory fitness conducted at least 11 months apart. The test gauges how efficiently oxygen is delivered from the heart and lungs to the muscles while exercising. Participants pedaled on a stationary bike and their heart rate was used to estimate the volume of oxygen consumed during exercise.

Men who experienced a 20% increase or decrease in CRF in a year were excluded, leaving a study population of 57,652. The average age was 41 years, and the mean body mass index was 26 (in the overweight range) at the beginning of the study.

Over an average follow-up period of 6.7 years, 592 men (1%) were diagnosed with prostate cancer

after their last fitness test, and 46 (0.08%) died with prostate cancer as the primary cause of death.

The study authors found a clear positive association between improved cardiorespiratory fitness and lower risk of prostate cancer occurrence, but not death. Overall, better fitness was linked to a 2% lower risk of developing prostate cancer. When fitness levels improved by at least 3% per year, men were 35% less likely to develop prostate cancer than men whose fitness dropped by 3%. The authors suggested that the number of deaths due to prostate cancer may have been too small to detect an association with fitness.

When the researchers grouped participants according to their initial fitness, more dramatic improvements in prostate cancer risk were observed for men who were moderately fit at baseline. In this group, the risk of prostate cancer dropped by 15%. For people on either end of the fitness spectrum, however, risk improvements were more limited.

According to the researchers, people who were already physically fit may be unable to further improve their fitness to a point where additional risk reduction is possible. On the other hand, people with low fitness levels may be in poorer health and may have other conditions, such as obesity, that affect prostate cancer risk.

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