Cardiorespiratory Fitness Linked to Cancer Risk, Mortality?

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TOPLINE:

Higher levels of cardiorespiratory fitness (CRF) may offer protection from colon and lung cancer and from lung and prostate cancer mortality among men, a large Swedish cohort study suggests.

METHODOLOGY:

- A prospective cohort study included 177,709 Swedish men (mean age, 42; mean body mass index [BMI], 26 kg/m^2) who completed an occupational health profile assessment and were followed for a mean of 9.6 years.
- CRF was assessed by determining maximal oxygen consumption during an aerobic fitness test, known as a submaximal Åstrand cycle ergometer test.
- Participants reported physical activity habits, lifestyle, and perceived health.
- Data on prostate, colon, and lung cancer incidence and mortality were derived from national registers.
- Outcomes from three higher CRF groups (low, >25–35; moderate, >35–45; high, >45 mL/min/kg) were compared with those from the very low CRF group (25 mL/min/kg or less). Models were adjusted for various factors, including age, BMI, education, dietary habits, comorbidity, and smoking.

TAKEAWAY:

- During follow-up, investigators identified 1918 prostate, 499 colon, and 283 lung cancer cases as well as 141 prostate, 207 lung, and 152 colon cancer deaths.
- In the fully adjusted model, higher CRF levels were associated with a significantly lower risk for colon cancer (hazard ratio [HR], 0.72 for moderate; HR, 0.63 for high).
- In this model, higher CRF was also associated with a lower risk of death from prostate cancer (HR, 0.67 for low; HR, 0.57 for moderate; HR, 0.29 for high).
- For lung cancer mortality, only high CRF was associated with a significantly lower risk of death (HR, 0.41).

- An association between CRF and lung cancer incidence (HR, 0.99) and death (HR, 0.99) was only evident among adults aged 60 and older.

IN PRACTICE:

"The clinical implications of these findings further emphasize the importance of CRF for possibly reducing cancer incidence and mortality," the authors conclude. "It is important for the general public to understand that higher-intensity [physical activity] has greater effects on CRF and is likely to be more protective against the risk of developing and dying from certain cancers."

SOURCE:

The study was led by Elin Ekblom-Bak, PhD, from the Swedish School of Sport and Health Sciences, Stockholm. It was published online June 29 in *JAMA Network Open*.

LIMITATIONS:

The study was limited by voluntary participation, inclusion of only employed individuals, and estimations of CRF via submaximal tests. Data on smoking status were not optimal and there was a small number of cancer cases and deaths.

DISCLOSURES:

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