

中年期のフィットネスはその後の人生におけるがんを予防する (Abstract # 1520)

中年男性の心肺フィットネスはその後の人生におけるがん発症およびがん死を予防する

Men's cardiopulmonary fitness in middle age protects against developing and dying from cancer later in life

第49回ASCO年次集会で、17,000人余りの男性を対象とした20年間の追跡調査の結果から、中年男性の心肺フィットネスはその後の人生における肺がんおよび大腸がんの発症やがん死亡を予防することが分かった。スタディでは、専門的な予防検診の一部として単回の心血管フィットネス評価を施行された男性17,049人(平均年齢50歳)を対象とした。参加者は彼らの心肺フィットネス度の成績に従って、5分位に分類された。追跡期間中央値20～25年の間に、2,332人が前立腺がん、276人が大腸がん、277人が肺がんとして診断された。がんによる死亡は347例であり、心血管疾患死は159例であった。肺がんまたは大腸がんとして診断されるリスクは、最もフィットネス度の高い男性において最もフィットネス度の低い男性に比べ、それぞれ68%および38%低いことが示された。フィットネス度は前立腺がんリスクには影響しなかった。フィットネス度が少し改善するだけでも生存率には有意な差があった。がんによる死亡および心血管疾患のリスクがそれぞれ14%および23%低下した。心肺フィットネス度が低いと、肥満がなくてもリスクが高かった。

Full Text

Findings from a large, prospective 20-year study to be presented on June 2 at ASCO's 49th Annual Meeting indicate that a high level of cardiovascular fitness in middle age reduces men's risk of developing and dying from lung and colorectal cancer, two of the most common cancers affecting men. Better fitness also reduces the risk of dying from, though not developing, prostate cancer.

"While poor fitness is already known to predict future cardiovascular disease, this is the first study to explore fitness as a marker of future cancer risk prognosis," said lead study author Susan Lakoski, M.D., assistant professor of medicine at the University of Vermont. "This finding makes it clear that patients should be advised that they need to achieve a certain fitness level, and not just be told that they need to exercise. And unlike exercise behavior, which relies on patient self-reporting, fitness can be objectively and accurately measured in a clinical setting."

The study included 17,049 men who had a single cardiovascular fitness assessment as part of a specialized preventive health check-up visit at a mean age of 50 years offered at the Cooper Institute. The fitness test, which is similar to a stress test for heart disease risk, entailed walking on treadmill under a regimen of changing speed and elevation. The men's performance was recorded in established units of fitness called metabolic equivalents or METs. Study participants were divided into five quintiles according to their fitness performance.

Researchers subsequently analyzed Medicare claims data to identify the participants of this study who had developed lung, colorectal, or prostate cancer – the three most common types of cancer among U.S. men. Over a median follow-up period of 20-25 years, 2,332 men were diagnosed with prostate cancer, 276 were diagnosed with colorectal cancer, and 277 were diagnosed with lung cancer. There were 347 deaths due to cancer and 159 men died of cardiovascular disease.

Researchers found that the risk of being diagnosed with lung or colorectal cancer was reduced by 68 and 38 percent, respectively, in men who were the most fit, relative to those who were the least fit. Fitness did not significantly impact prostate cancer risk. In the analysis, data were adjusted for smoking and other factors, such as body mass index and age.

Among the men who developed cancer, those who were more fit at middle age had a lower risk of dying from all the three cancers studied, as well as cardiovascular disease. Even a small improvement in fitness (by 1 MET) made a significant difference in survival – reducing the risks of dying from cancer and cardiovascular disease by 14 and 23 percent, respectively.

Another interesting finding was that men who had low fitness had an increased risk of cancer and cardiovascular disease even if they were not obese. This suggests that patients should focus on improving their fitness, regardless of their body weight. Adequate fitness level depends on gender and age. In this study, men who fell in the lowest quintile for fitness achieved less than 13.5 minutes during the treadmill exercise test if they were 40-49 years old, less than 11 minutes if they were 50-59, and less than 7.5 minutes if they were 60 or older.

ASCO Perspective: "This important study establishes cardiorespiratory fitness as an independent and strong predictor of cancer risk and prognosis in men. While more research is needed to determine if similar trends are valid in relation to other cancers and among women, these results indicate that people can reduce their risk of cancer with relatively small lifestyle changes," said ASCO President Sandra M. Swain, M.D., FACP.

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