

Influence of physical activity at a young age and lifetime physical activity on the risks of 3 obesity-related cancers: systematic review and meta-analysis of observational studies

According to the International Agency for Research on Cancer, overweight and obesity are risk factors for 13 types of cancer including breast, colon, and endometrial cancer. There is evidence to confirm that being active can lower the risk of developing cancers, mainly by helping people achieve and maintain a healthy weight. Nevertheless, studies to date have not looked at the impact of physical activity (PA) throughout life. They have analysed cohorts during middle and late adulthood to conclude that the risk of all obesity-related cancers can be lowered with PA. This study adds to the existing evidence base on the topic to determine the timing of PA that is most effective for cancer prevention.

The systematic review and meta-analysis searched PubMed and Web of Science databases for observational studies (cohort and case-control) until July 2018. After screening, 80 publications were found that considered the association between PA and the risk of cancer. The overall objective was to confirm whether PA may lower the risk of developing breast, colon, and endometrial cancer.

The results suggested that being active over a lifetime, starting at early childhood may lower the risk of developing obesity-related cancers. Menopausal status for women did not deviate trends and it was found the benefit of exercise for endometrial cancer risk reduction was not significant at just a young age without a life course approach.

The present findings may have strong public health implications with the growing concerns that children and adolescents do not meet PA recommendations and a concurrent upward trend in childhood obesity. Intervening at a young age is important as early habits modestly influence PA habits in adulthood. In turn, by helping individuals control their weight at a young age, one can lower their risk of developing obesity-related diseases, including certain types of cancer. Future studies should focus on the frequency, intensity, and duration of exercise required for cancer-risk reduction, and consider potential influences of sex, ethnicity, hormone replacement therapy use, and menopausal status for women.

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