Physical Activity and Cancer Risk [1]

This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 09/2013

Key Messages:

- Physical activity may lower the risk of cancer by preventing obesity, reducing inflammation and hormone levels, and improving insulin resistance and immune system function.
- Research shows that physical activity is associated with a lower risk of several types of cancers, including breast cancer and colon cancer.
- Talk with your doctor about an exercise and eating plan that is right for you.

Participating in moderate to vigorous physical activity, such as walking, swimming, biking, or running not only lowers your risk of cancer, but of other chronic diseases, such as heart disease and diabetes.

Lowering cancer risk with exercise

It is important to remember that there is no proven way to completely prevent cancer, but there may be steps you can take to lower your risk. Research shows that physical activity may lower the risk of the following cancers:

Colon cancer. According to the National Cancer Institute, people who exercise regularly have a 40% to 50% lower risk of colon cancer, compared with those who don't exercise regularly. There is some evidence that suggests people who maintain active lifestyles throughout their lives have the lowest risk of colon cancer.

Breast cancer. Research shows that women who exercise at moderate-to-vigorous levels for more than three hours per week have a 30% to 40% lower risk of breast cancer. This result held true for all women, regardless of their family history or risk level of breast cancer.

Most studies show that the higher the level of activity, the lower the risk, although it is not clear whether there is a specific level of activity that must be met. Although activity throughout a person's life is important, activity at any age may help lower breast cancer risk.

Uterine cancer. Some research has found a 38% to 46% reduced risk of this type of cancer in active women. Exercise can help lower obesity and decrease estrogen levels, both of which are

factors that may be related to uterine cancer development.

Lung cancer. Studies show that people who are regularly active are less likely to develop lung cancer. However, it isn't clear why this link exists, although one reason may be that people who exercise are less likely to use tobacco.

How physical activity can lower cancer risk

Being physically active can help you avoid the following factors that contribute to the development of cancer.

Obesity. Being obese (substantially or extremely overweight) is defined as having a body mass index (BMI; the ratio of a person?s weight and height) of 30 or higher. Obesity increases a person's risk of developing and dying from certain types of cancer, including postmenopausal breast cancer, colorectal cancer, uterine cancer, kidney cancer, pancreatic cancer, gallbladder cancer, thyroid cancer, and esophageal cancer. Other cancers that may be linked to obesity include prostate cancer, liver cancer, ovarian cancer, cervical cancer, multiple myeloma, and non-Hodgkin lymphoma.

Several studies have shown that regular aerobic exercise combined with a low-calorie diet can help people lose weight and keep it off. Even when a person doesn't eat less, aerobic exercise results in small amounts of weight loss and lowers intra-abdominal fat (the dangerous fat that forms deep in the center part of the body and is linked with a higher risk of several diseases). Talk with your doctor about an exercise and eating plan that is appropriate for your medical history and goals. Read more about weight control [3].

Insulin resistance. Insulin is a hormone made by the pancreas that helps the body use blood sugar for energy. Insulin resistance (a rise in blood sugar because the body doesn't respond to insulin properly) increases the risk of some cancers. Regular exercise helps improve insulin resistance.

Inflammation. Inflammation is the body's response to injury and disease. Ongoing low-grade inflammation and chronic inflammatory diseases, such as inflammatory bowel disease, are associated with several cancers. Exercise may help reduce inflammation, which may help lower the risk of cancer.

Immune system function. Moderate-intensity exercise, such as brisk walking and biking, has been shown to improve some of the functions of the immune system, which the body uses to fight infectious disease and cancer.

Hormones. Being overweight and inactive increases the risk of cancers that use hormones to grow and spread, such as breast and uterine cancers. For instance, women who are overweight or obese have higher levels of estrogen in the blood compared with thinner postmenopausal women.

More Information

Physical Activity: Suggestions and tips [4]

Risk Factors and Prevention [5]

Additional Resource

Centers for Disease Control and Prevention: Physical Activity and Health [6]

Links:
[1] http://www.cancer.net/navigating-cancer-care/prevention-and-healthy-living/physical-activity/physical-activity-and-cancer-risk
[2] http://www.cancer.net/about-us
[3] http://www.cancer.net/node/25008
[4] http://www.cancer.net/node/24996
[5] http://www.cancer.net/node/24868
[6] http://www.cdc.gov/physicalactivity/everyone/health/