

## **Exercise and Cancer Prevention**

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According to American Cancer Society (ACS) estimates, there will be just under 1.5 million new cases of cancer diagnosed in 2009. While most people are aware that certain lifestyle choices (such as smoking and excessive alcohol intake) as well as genetics are risk factors; according to The American Institute for Cancer Research (AICR) half of all Americans aren't aware of the role obesity plays in cancer risk.

More than 100,000 cancers in the US each year are linked to excess body fat according to the AICR. While the ACS estimates that about one-third of the 562,340 cancer deaths expected to occur in 2009 will be related to obesity, being overweight, physical inactivity, and poor nutrition.

Estimates show that that excess body fat is linked to 49% of endometrial cancers (20,700 cases per year), 35% of esophageal cancers (5,800 cases per year), 28% of pancreatic cancers (11,900 cases per year), 24% of kidney cancers (13,900 cases per year), 21% of gallbladder cancers (2,000 cases per year), 17% of breast cancers (33,000 cases per year), and 9% of colorectal cancers (13,200 cases per year).

In 2003, a study by The Fred Hutchinson Cancer Research Center found that increased physical activity (even when started in postmenopausal years) reduces overall breast cancer risk by 20 percent among women at all levels of risk. Another study in 2003 (this one by the ACS) found that, from all cancers combined, the heaviest men had death rates that were 52% higher than the rates among men of normal weight. The heaviest women had death rates that were 62% higher than the women of normal weight. There were more than 900,000 men and women in the study.

Normal body weight is determined using the body mass index (BMI). A BMI of 18.5 to 24.9 is considered normal for both men and women. BMI is a statistical measurement used to estimate healthy body weight based on how tall a person is.

Being overweight is believed to put someone at an increased risk for developing cancer for several reasons. First, excess body fat creates low grade inflammation within the body. Chronic inflammation has been linked with cancer development. Excess body fat is also believed to increase the amount of cancer promoting hormones circulating within the body. Additionally it disrupts how the body processes insulin, which has also been linked to cancer development.

### **The Role of Exercise**

Exercise plays a key role in cancer prevention due to its role in reducing excess body fat. When excess body fat is reduced so is the level of inflammation and the number of cancer promoting hormones. But exercise is not just beneficial for cancer prevention; numerous studies also show that regular physical activity improves cancer survival.

Recent Dana Farber Cancer Institute research has found that people who have been treated for colon cancer can substantially reduce the risk that the disease will return, and improve their overall chance of survival by engaging in regular exercise.

The researchers found that colon cancer patients engaging in moderate levels of exercise six to 12 months after completing therapy had approximately a 50 percent higher survival rate than those who didn't exercise. In this study moderate exercise was defined as the equivalent of walking six or more hours a week at an average pace of 2-2.9 miles per hour. The improvement took place in patients with very early and more advanced (but non-spreading) colon cancer; all of whom had undergone surgery intended to cure the disease.

Numerous other recent studies have shown clear evidence that sustaining a normal body weight and remaining physically active throughout life will have a major impact on cancer incidence. The exercise doesn't have to be strenuous to have a positive effect either. Moderate intensity activities such as taking a brisk walk, cycling, or swimming are achievable for most people and are extremely beneficial. What's most important is that the activity is done consistently.

### **A healthy balance**

As important as exercise is in achieving a healthy weight, proper nutrition is also a key part of the process. Therefore, the ACS recommends the following:

- Eat at least 5 servings of fruits and vegetables every day
- Choose whole grains over processed grains
- Limit red meat consumption
- Adults should engage in at least 30 minutes of moderate to vigorous physical activity 5 days per week (or more).
- Children and adolescents should engage in at least 60 minutes per day of moderate to vigorous physical activity at least 5 days per week.

Although the relationship between weight loss and cancer is still incomplete; study after study shows strong evidence supporting the power of exercise in both prevention and treatment of cancer. In my opinion this reinforces the concept that exercise is our best medicine. While it's not a cure all, it's a crucial ingredient in the recipe for good health. If you haven't yet made regular exercise a part of your life, what better motivator could there be to start now?

Sources: The American Cancer Society  
The Dana Farber Cancer Institute  
The Fred Hutchinson Cancer Research Center

[www.cancer.org](http://www.cancer.org)  
[www.dana-farber.org](http://www.dana-farber.org)  
[www.fhcrc.org](http://www.fhcrc.org)