

# Exercise and Cancer Survival

What if preventing cancer was as easy as a walk in the park?

What if you could do something that was as effective as chemotherapy—without the side effects?

*Would you do it? When would you start?*

- More than 25 studies over the last 20 years have demonstrated that both premenopausal and postmenopausal women who are physically active have a **30-40% lower risk of developing breast cancer** compared with sedentary women.
- Approximately 2-3 h/wk of moderate intensity physical activity after a breast cancer diagnosis is associated with a **40-50% lower risk of dying** from breast cancer.
- Similar amounts of exercise after a diagnosis of **colon cancer** have shown approximately a **60% lower risk of death**.
- Women who begin to exercise after breast cancer reduce their risk of dying by 45%. IT'S NEVER TOO LATE!

*Exercise—walking 3.5-4mph about 30+ minutes a day, 5-6 days per week—improves survival in breast and colon cancer by 50 to 67%. That improvement is added to the protection that standard medical treatments provide.*

Five out of 6 cancer patients seek out and use some form of complementary therapy. Reasons vary but often are based on the idea that “something else might help and I don’t want to miss it.” Consumers spend \$40 billion on such quests for reassurance. The answer, supported by excellent research as described below, is much simpler: “Take a hike.”

For the cost of a new pair of Nikes you can reduce your risk of getting breast, colon or prostate cancer by at least 33%. If you’ve had breast or colon cancer you can decrease your chances of dying by 50-67%. You don’t have to be a marathon runner. You don’t have to spend the whole

day at the gym. It only takes 2% of your day—that's 30 minutes—and some determination to “keep on trucking.”

Why isn't something this simple replacing hormone or chemotherapy therapy? There are two main reasons.

For many cancers chemotherapy or hormone therapy is necessary; it works better than exercise alone. These data on exercise are based on patients who did standard treatments and exercised compared to patients who had standard treatments but did not exercise. No one has studied whether exercise alone without medical treatment would be sufficient.

The second reason is sad: for many of us it is easier to swallow a pill every day than to lace up our tennis shoes and walk for 30 minutes. The motivation to exercise peaks with New Years resolutions and falls off by Valentine's day. It's regrettable but true.

For those of you who really do want to do something that has been proven to prevent cancer or cancer recurrence, start, continue or increase your exercise program. If there is some physical barrier preventing you from exercise—bad back, sore knees, injuries, etc.—get the help need to solve these problems. If you need support from friends or families, ask for it. If you don't know how to exercise correctly, get someone to teach you.

Think of the billions of dollars spend on various supplements in hope that they will prevent cancer. There is little research validation for such claims. Why settle for unproven hope when you can have—for far less money—something that not only helps you live longer but also makes you feel better. The research that exercise decreases fatigue, decreases depression, decreases weight and increases quality of life is just as strong as the research proving that exercise prolongs survival. See the table of Metabolic Equivalent Tasks (METs) to calculate how much exercise you are doing or need to do.

The research studies:

- ❁ In a group of 3000 women with breast cancer, the ones who exercised (3mph walking) about 30 minutes/day, 5 days per week had 50% greater survival than those who weren't as active. This was the equivalent to 9-14 MET-hrs/wk. Holmes et al, Physical activity and survival after breast cancer diagnosis. JAMA 293:2479-2486, 2005.

- ✿ In a group of 832 patients with colon cancer who had completed chemotherapy, the ones who exercised vigorously (half hour of 6 mph jog x 5 days/wk or one hour 4 mph walk x 5 days/wk) had 60% greater survival than those who were sedentary. This was equivalent to 20 MET-hrs/wk. Meyerhardt, et al, Impact of Physical Activity on Cancer Recurrence and Survival in patients with Stage III Colon Cancer. J Clin Oncol 24:3535-3541, 2006
- ✿ In a study of 8762 men, there was a 33% decrease in cancer deaths for those with better muscular strength. This was **separate from** the benefit of cardio-vascular conditioning. (Greater muscular strength also decreased cardiovascular deaths by about 25%.) Ruiz JR, Sui X, Lobelo F, et al. Association between muscular strength and mortality in men: prospective cohort study. *BMJ*. 2008; 337:a439.
- ✿ Women who exercised 12-14 MET-hrs/week and ate at least 5 servings of fruits or vegetables daily decreased their risk of dying from breast cancer by 60-65% whether they lost weight or not. Pierce JP, Stefanick ML, et al; Greater survival after breast cancer in physically active women with high vegetable-fruit intake regardless of obesity. J Clin Oncol 25:2345-2351, 2007.
- ✿ Women who exercised 9 or more MET-hrs/week for at least 2 years after diagnosis reduced their risk of dying from breast cancer by 67%. Women who increased their level of exercise after diagnosis (compared to before diagnosis) had 45% less risk of dying compared to women who remained inactive. Women who decreased exercise after their diagnosis had a four-fold increased risk of death. Irwin ML, Smith AW, et al; Influence of Pre- and Post-diagnosis Physical Activity on Mortality in Breast Cancer survivors: the Health, Eating, Activity, and Lifestyle Study. J Clin Oncol 26:3958-3964, 2008.
- ✿ 9-10met-hrs/wk led to 60% decreased all cause mortality 13,000 men and women. This included decreased heart attacks, strokes, cancer, diabetes, etc.
- Blair, et al. JAMA 262:2395-2401,1989
- ✿ American Cancer Society Guidelines, Oct. 2006 “Adults should engage in at least 30 minutes of moderate to vigorous physical activity, above usual activities, on 5 or more days of the week. Forty-five to 60 minutes of intentional activity are preferable.” (<http://Caonline.AmCancerSoc.org>)

## What does it take?

### WHAT YOU WANT

### WHAT IT TAKES

#### **Longer Life**

- Burn an extra 200 calories per day. This takes 30 minutes of walking, gardening, climbing stairs, playing with the kids, lifting groceries or formal exercise daily. For every hour you are active you add 1 1/2 hours to your life.

#### **Better Health**

- Aerobic exercise 20 min. at least 3 times/week. You can get this walking briskly, running, biking, swimming, treadmill, etc. You have to get your heart rate up (exact rate depends on age) and sweat a little. Cholesterol, blood pressure and stress go down, immunity to infection goes up.

#### **Fitness/Strength**

- Aerobic exercise 20-60 minutes 3 to 5 times per week. This can be running, walking, biking, etc. On the other 2 to 4 days add floor exercises, weight lifting, stretching, yoga. Make exercise a priority and schedule time for it. Risk of dying from a heart attack, cancer, etc. decreases by 25% or more, your body will look and feel better.

#### **Slim & Trim**

- One hour of running, biking, brisk walking, etc. 5 days per week plus 3 days of floor exercise, weights, or machines. You still have to watch what you eat, but remember, nothing tastes as good as being thin feels. You might have to buy a new wardrobe to fit your new body.

#### **Cancer Prevention**

- Ten to 14 MET-hrs/week. That is the equivalent of 30 minutes walking at 3.5-4mph 5 to 6 days/week