

Can exercise limit lung cancer?

by Dr. Charles Albrecht

In a study of more than 36,000 women, researchers observed that women smokers who exercise are less likely to develop lung cancer than similar smokers who do not exercise. The study's authors make it clear, however, that exercise is not a substitute for stopping smoking.

The researchers, from the Universities of Minnesota and Pennsylvania, report in the December issue of *Cancer Epidemiology Biomarkers & Prevention* that a high level of physical activity in women who smoked reduced their relative risk of developing lung cancer by 72 percent. Moderate activity among smokers was associated with a 65 percent risk reduction, and lower relative risks were also seen in former smokers who had moderate or high activity levels.

While this may sound like welcome news to female smokers who don't want to quit, the investigators emphasize that the absolute risk of developing lung cancer is still much greater in current and former smokers regardless of activity level.

The most important thing a smoker can do to reduce risk is to quit smoking. That said, exercising and being active can offer a marginal change in risk.

In other words, a physically active smoker has a 35 percent lower risk of lung cancer than a sedentary smoker, but if both smokers quit, they would both reduce their risk by as much as 10- or 11-fold. Smokers who exercise are at a 35 percent lower risk of developing lung cancer relative to smokers who don't exercise, but if you smoke at all, your risk of developing lung cancer is 10 to 11 times higher than if you didn't smoke.

The helpful message from this study is that if a smoker is having trouble quitting, exercise can be a first step toward better health.

The findings were derived from the Iowa Women's Health Study, which in 1986 began to follow almost 42,000 women between the ages of 55 and 69. Over the years, five questionnaires were sent to the participants, who recorded their smoking status and physical activity, among other variables. This analysis, which began in 2002, included 36,410 participants, including 777 women diagnosed with the cancer. Among this group, 125 were non-smokers, 177 were former smokers, and 475 were current smokers.

Researchers don't know why activity could lower lung cancer risk, but suggest that improved pulmonary function may reduce both the concentration of carcinogenic particles in the smoker's airway and the extent to which



they are deposited in the lungs. They also theorize that exercise training improves immune function and reduces the inflammatory responses that can impact cancer development.

Finally, it should be pointed out that while it is possible that women who exercise clear carcinogens from their lungs more efficiently, it is also possible that sedentary women smoke more heavily than active women.

Best advice: If you're smoking, quit. If you're not, don't start!

About the Author Dr. Charles Albrecht is the Director of the Finger Lakes Radiation Oncology Center in Clifton Springs, NY.

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