

CAN KILLER WORKOUTS LEAVE CANCER FOR DEAD?

Emma Hogan

Imagine cutting the risk of metastatic cancer by 72 percent. Scientists from Tel Aviv say it's entirely possible and believe high-intensity interval training has the power to make it happen.



High-intensity interval training is well regarded for its [transformative effects](#); it can rapidly increase fitness, reduce cardiovascular disease risk factors, build lean muscle and cut body fat. Now, a comprehensive new study provides an even more compelling reason to add HIIT to your life – it can create a permanent defence against cancer.

[Researchers at Tel Aviv University](#) in Israel have found that intense aerobic exercise can reduce the risk of metastatic cancer by 72 percent. This is because the high-intensity activity creates adaptations within organs that act as a metabolic shield against highly invasive cancer cells.

This is the first time researchers have investigated the impact of exercise on the internal organs in which metastases usually develop – notably the lungs, lymph nodes and liver. What they found is that high-intensity exercise promoted a rise in glucose receptors in these organs. With increased glucose intake, these organs begin to act like muscles and consume energy more effectively. This reduces the available energy for cancerous tumors to grow.

“It changes the whole body, so the cancer cannot spread, and the primary tumor also shrinks in size,” says lead researcher Professor Carmit Levy, from Tel Aviv University's Sackler Faculty of Medicine. Not only does the increased competition for glucose limit the available energy that is critical to metastasis, but it also seems that the unique metabolic and physiological effects of regular exercise are so

powerful that they can create permanent changes to the organ tissues and provide long-term protection.

The researchers say the protective qualities of intense exercise exhibit a higher level of cancer prevention than any medication or medical intervention to date.

More evidence HIIT helps you live longer

The life-prolonging potential of HIIT was also highlighted by Norwegian researchers as part of the [Generation 100](#) study. Unprecedented in scale, the [research](#) kicked off back in 2012 when scientists recruited 1,500 men and women aged 70-77 years to explore how exercise may extend life expectancy.

The participants were randomly divided into three groups. Then, over five years, one group completed two HIIT workouts a week, and another did 50 minutes of steady-state moderate-intensity training twice a week – either with an Instructor or on their own. The final control group was advised of the health authorities' exercise recommendations but did no organized training.

After five years of regular testing, the researchers concluded that HIIT had the most dramatic effect on quality of life and fitness levels. "Both physical and mental quality of life was better in the high-intensity group after five years than in the other two groups. High-intensity interval training also had the greatest positive effect on fitness," says Stensvold Dorthe Stensvold, Professor, NTNU.

The HIIT workouts may have also extended lives. The group that did HIIT had the smallest number of deaths – just three percent of the participants had died after five years. Six percent of those doing moderate exercise passed away. Stensvold says the difference is not statistically significant, but the trend is very clear.

So does HIIT actually prolong life? Stensvold certainly believes so. "I'd like to answer with a clear and unequivocal yes, because we believe that this is true." However, she notes that because so few of the Generation 100 participants died (compared to what's expected in this age group) this is also likely to be associated with their high motivation to train – they all opted into the program – and their relatively good health.

What we do know for sure is that you're never too old to leverage the transformative benefits of HIIT.

Read on to discover more of the science behind HIIT ...

STUDY OUTLINES OPTIMUM WEEKLY DOSE OF HIIT

How much HIIT should you aim for? Ground-breaking [research](#) highlights that it's intensity, not volume, that delivers HIIT's transformative results. According to experts, success relies on carefully-measured doses of HIIT and adequate recovery between sessions. "The recovery period is when all the positive adaptations and developments take place and insufficient recovery can reduce your training's effectiveness," says lead researcher Dr. Jinger Gottschall

SET YOUR HIIT WORKOUT SCHEDULE

RESEARCH REVEALS HOW THE FIT GET FITTER

If you're a regular exerciser, or an athlete looking to advance your fitness, what should you do? [Science](#) says add HIIT to the mix. Bryce Hastings, Les Mills Head of Research, notes that with just two time-efficient workouts a week you can see significant changes in your fitness and body composition, lower the risk factors for cardiovascular disease, and smash through your fitness plateau.

FIND OUT WHAT HAPPENS AFTER SIX WEEKS OF HIIT

HOW HIIT TARGETS DANGEROUS VISCERAL FAT

High-intensity interval training is known to burn serious amounts of fat, seriously fast. But not just any fat. [Researchers from Cyprus](#) have found that specific forms of HIIT can be key to cutting the dangerous visceral fat from your tummy.

LEARN HOW TO CARVE INCHES FROM YOUR WAISTLINE

EXPERT OPINION: HOW HIIT IMPACTS YOUR SLEEP

What happens if you get hooked on HIIT? According to Dr. Jinger Gottschall, too much time with your heart rate in the extreme zone can mitigate spikes in cortisol production and cause a training plateau. It can also negatively impact your sleep quality, mood and energy levels. Gottschall says the secret is to stick to the recommended HIIT dose to maintain optimal energy.

HOW TO MAINTAIN ENERGY FOR HIIT

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