

# Exercise Is Key to Longer Life

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✓ Fact Checked

November 04, 2022

## STORY AT-A-GLANCE

- › In a study, estimated age based on an exercise stress test was a better predictor of mortality, as compared to chronological age; another study found adding activity of any type reduced the risk of early death
- › Increasing intensity of your workout improves your cardiorespiratory fitness, associated with longevity; exercise benefits also include improved mood, better cognitive performance, increased insulin sensitivity and health benefits for those suffering chronic disease
- › Although important to your overall health, you can't out-exercise your diet; despite an intense workout routine, poor nutrition contributes to insulin resistance, weight gain and increasing risk of chronic disease
- › Strongly consider including your children in your fitness routines as rates of obesity in children are rising rapidly; remember to listen to your body, exercise consistently and include proper sleep, hydration and nutrition to enjoy the greatest benefits

Results from a new study, shared in this short video, demonstrate the importance of exercise and movement to your health. Exercise may be one of the best preventive strategies against common chronic ailments, including heart disease and diabetes.

The more time you spend sitting, the shorter your life expectancy,<sup>1</sup> thanks to the negative impact on your cardiovascular and metabolic functions. The World Health Organization (WHO) lists inactivity as the cause of 3.2 million deaths each year.<sup>2</sup>

In one meta-analysis,<sup>3</sup> researchers found those who sat the longest were twice as likely to have diabetes or heart disease, as compared to those who sat the least. This combination takes a high cost on society, contributing to billions of dollars each year in health care costs and lost productivity.<sup>4</sup>

According to researchers, lack of activity is also the cause of more than 5 million deaths each year.<sup>5</sup> To put this in perspective, smoking kills nearly 7 million annually.<sup>6</sup> To achieve optimal health, you need to include a weekly workout regimen and move as much as possible throughout each day. In three recent studies,<sup>7,8,9</sup> researchers evaluated the effect of exercise on longevity.

## **Exercise Is a Better Predictor of Longevity Than Your Age**

A study published in the *European Journal of Preventive Cardiology*<sup>10</sup> sought to estimate a patient's age based on performance during an exercise stress test. Over a 125,000 patients referred for exercise stress testing were included.

Estimated age was based on exercise capacity. After nearly nine years of follow-up, researchers discovered the patient's estimated age based on their exercise stress test was a better predictor of mortality as compared to chronological age. The results held true for both men and women.

Researchers believe the key take-home messages were that exercise variables are powerful predictors of survival, and health care providers could consider using their physiological age as a way to motivate their patients to exercise more.<sup>11</sup> A similar study<sup>12</sup> evaluated 8,000 middle-aged and older adults and found adding physical activity of any intensity or duration cut their risk of early death.

The researchers believe the findings highlight the importance of movement, regardless of intensity. Participants wore activity monitors over a four-day period to record the intensity of physical activity. Death rate was tabulated through 2017 and this data was used to estimate how substituting exercise for time spent sitting would affect the risk of early death.<sup>13</sup>

The researchers discovered the risk could be cut by 17% by replacing 30 minutes of sitting with low intensity exercise, such as walking. However, replacing 30 minutes with moderate to vigorous exercise cut the risk by 35%. In the third study,<sup>14</sup> Ball State researchers examined fitness levels, finding ramping up exercise intensity increases the level of benefits.

Rather than a goal of simply moving, researchers recommend increasing the intensity to boost cardiorespiratory fitness (CRF) levels. This is the first study to directly measure CRF in men and women, rather than using estimation. According to the press release:<sup>15</sup>

- Improving fitness increases control over how long and well we live.
- Women with low fitness levels had a higher risk of dying from any cause, cardiovascular diseases (CVD), including cardiac arrest, coronary artery disease, heart failure, myocardial infarction, stroke and cancer than women with moderate and high fitness.
- Participants in the low-fit group were more likely to die early from any cause, including CVD and cancer.
- Low-fitness men had a threefold greater risk for CVD mortality compared with high-fitness men.

## **You Can't Out-Exercise Your Diet**

Although results from these new studies are encouraging, it's important to remember you cannot out-exercise your diet. In other words, exercising in the belief this allows you to eat whatever you want significantly reduces the benefits you'll achieve, and a diet based on processed junk food reduces your chances of getting fit and healthy even further.

Obesity is associated with an increased risk of disease and death, including CVD, cancer and Type 2 diabetes.<sup>16</sup> If you'd like to take off a few pounds and keep it off, it's crucial to understand your diet is more important than exercise. Even though physical movement

is a leveraging agent allowing you to optimize your health and fitness, you'll never out-exercise your mouth.<sup>17,18</sup>

This discrepancy is a major clue to the strategy likely to have the greatest impact on your weight. Morgan Spurlock's documentary "Supersize Me" was one of the first to demonstrate the consequences of sustaining yourself on a fast food diet. After just four weeks his health had deteriorated to the point his physician warned he was putting his life in serious jeopardy if he continued the experiment.

However, it doesn't take 30 days to experience the health effects of a poor diet. According to research published in the Journal of the American College of Cardiology,<sup>19</sup> changes can happen after a single meal. Thus, it is vital to recognize the importance of balancing a nutritional diet with increased activity and exercise.

## **Exercise Triggers Positive Changes and Better Health**

There are many benefits to attaining at least two and a half hours of moderate-intensity aerobic work and strength training activities each week. Unfortunately, nearly 80% of U.S. adults do not get the recommended amount of aerobic and strength training activity.<sup>20</sup>

Although you may find it difficult to find time, once you discover the benefits of including even a short workout in your day, the question will become, how can you afford not to? As well as the cardiovascular, weight loss and longevity benefits of exercise, those who are most physically active also have better brain oxygenation, brain activity and cognitive function.<sup>21</sup>

Exercising creates new excitable neurons along with neurons designed to release the GABA neurotransmitter, which inhibits excessive neuronal firing, inducing a naturally calm state.<sup>22</sup> As a result, you feel calmer and happier. Exercise also has benefits for your skin, promoting wound healing and making your skin appear more taut and lifted as you increase lean muscle mass.<sup>23</sup>

Exercise also benefits those suffering from chronic diseases<sup>24</sup> such as osteoarthritis,<sup>25</sup> depression, anxiety and cancer.<sup>26</sup> Additionally, exercise helps normalize your glucose, insulin and leptin levels,<sup>27</sup> improves the quality of your sleep<sup>28</sup> and boosts your self-confidence.<sup>29</sup>

## **Start Small for Long-Lasting Benefits**

Habits take time to form and time to break. If you've never exercised before, it's important to start slowly and build for long-lasting results. Remember, exercising is a marathon and not a sprint. In other words there isn't a shortcut to get to the benefits you're looking for, and this is a habit you want to form for life.<sup>30</sup>

Many give up on a fitness routine due to lack of free time, or because it's costly or tiring. However, exercise does not have to be stressful, expensive or time-consuming. When you find the type of exercise you enjoy, doing it reduces your stress level and increases the likelihood you'll establish a regular routine.

It's important to treat exercise as a stress relief tool to help you release negative feelings rather than one more thing you have to accomplish during the day. If you're just starting out, try incorporating walks after lunch every day and build from there. You may find listening to music will help motivate you and focus your attention during your workout.

Once walking has become routine, consider incorporating bodyweight exercises or resistance bands three times a week. Resistance bands are portable, inexpensive and versatile. You can do just about any strength training exercise and they are the ideal companion when you're traveling or want to raise the intensity of your workout.

You can also incorporate strength training using bodyweight exercises that do not require weights or any equipment. However, it is crucial you observe proper form, prioritizing quality over quantity. This reduces your risk for injury and helps improve your results.

## **Get Your Children Involved**

In the U.S., the number of children and adolescents affected by obesity has skyrocketed since the 1970s. In 2012, more than one-third of all children and adolescents were either obese or overweight.<sup>31</sup>

While body mass index (BMI) is used widely for screening, the number is not highly related to the direct measurement of body fat, especially in adults. The Centers for Disease Control and Prevention<sup>32</sup> recommends using BMI in children age 2 and up.

They define being overweight as a BMI at or above the 85th percentile and less than the 95th percentile for young people of the same age and sex. Obesity is defined at or above the 95th percentile.

With the growth of the digital age, getting children to exercise has become increasingly difficult. What used to be a common daily activity for children has turned into a chore and the effects of this are showing up in the growing number who suffer from obesity.

A recent study<sup>33</sup> showed children may benefit from short periods of high intensity physical exercise as it lowered triglyceride levels and reduced waist circumference of the children in the study. Researchers also found an unexpected advantage as students increased the amount of physical activity by 16 minutes each day on their own, outside of the structured activity for the study.

This suggests increasing structured exercise may have a carry-over effect during unmonitored hours. Children experience many of the same benefits as adults with an increasing amount of exercise and movement during their day. In addition, these habits may also carry over to adulthood and may reduce the risk of cardiovascular disease and diabetes in later years.

## **Slowly Ramp Up Intensity and Enjoy Greater Benefits**

Once exercise has become a daily habit, you may want to consider ramping up the intensity in order to enjoy greater benefits. In the study from Ball State University,

researchers found mortality risks declined as men and women improved their CRF levels. Matt Harber, director of Ball State's clinical exercise and physiology laboratory, commented on the results, saying:<sup>34</sup>

*"The overall results suggest that obtaining a moderate fitness level for one's age and sex is associated with lower risk of early death. Our team looked at CRF in relation to all causes of death, cardiovascular diseases and cancer. One of the outcomes of this study tells us that people should exercise with the intention of improving their CRF levels."*

Choosing to include high-intensity interval training (HIIT) in your weekly routine is one of the best ways to get in shape, stay in shape, and enjoy the benefits of exercise. Because HIIT is so intense, plan to do it only two to three times a week maximum. This makes HIIT a workout even time-crunched individuals can fit into their schedule.

As the most effective and efficient form of exercise, it provides health benefits you can't get from regular aerobics. Using HIIT, you'll experience a remarkable boost in human growth hormone (HGH), known for beneficial effects on fitness and muscle development.

In a study published in the Journal of Obesity,<sup>35</sup> participants reported 12 weeks of HIIT not only resulted in significant reductions in abdominal, trunk and visceral fat, but also increased fat-free mass and aerobic power.

Another study<sup>36</sup> found unfit, but otherwise healthy, middle-aged adults improved their insulin sensitivity and blood sugar regulation after just two weeks of three sessions per week.

## **Key Points to Remember When Exercising**

As you start a new fitness routine there are a few key points you'll want to remember:

- **Listen to your body** – If you exercise improperly or use improper form you may increase your risk for injury.

- **Consistency** – In order to develop a habit you must change your behavior consistently. You will enjoy significant health benefits and help normalize many health challenges by consistently exercising each day.
- **Four pillars** – Remember to include several different types of exercise in your workouts each week, including aerobic exercise, strength training, flexibility (stretching) and balance training to get the most from your exercise program, reduce your risk of injury and improve your balance.
- **Sleep, hydration and food** – Although you are focused on your exercise program, don't overlook these elements of your overall health as they will support your health goals.

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