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# Why Standing May Be as Important as Exercise

Analysis by Dr. Joseph Mercola Fact Checked | August 19, 2022

## STORY AT-A-GLANCE

- Sitting and other forms of prolonged, uninterrupted sedentary time promotes cardiometabolic disorders, obesity, depression and all-cause mortality in adults and in children are linked to obesity, anxiety and depressive symptoms
- More than two dozen chronic diseases, from diabetes and high blood pressure to back pain and deep vein thrombosis, have been linked to excessive sitting
- Children at standing desks burn 15% to 25% more calories during the school day than those who remain sitting; students were also less likely to report neck and shoulder discomfort when using standing desks
- In the workplace, standing desks have also been found to trigger increased brain activity and do not hinder cognitive performance as has been suggested
- If you want to take your fitness to the next level, make standing a workout of its own by standing on a wobble board at your standing desk

**During the pandemic, the already largely sedentary American population moved even less, with daily steps plunging by an average of 20%.[1] With more people working from home, the tendency to sit at a computer for long hours is taking a toll on both physical and mental health, but the upside is that many are increasingly realizing the important of daily movement.**

**While regular physical exercise is important, so, too, is doing virtually anything other than sitting — even standing. This is why many fitness trackers have goal settings for**

not only calories burned and steps taken in a day, but also reaching a standing-time goal.[2]

## What Sitting Does to Your Body

Sitting is a behavior with a very low energy expenditure that's associated with poor health outcomes in both adults in children. Sitting and other forms of prolonged, uninterrupted sedentary time promote cardiometabolic disorders, obesity, depression and all-cause mortality in adults and in children is linked to obesity, anxiety and depressive symptoms.[3]

Increased musculoskeletal symptoms are also associated with prolonged sitting,[4] and being sedentary for long periods of time each day even appears to accelerate aging at the cellular level.

Among close to 1,500 older women included in one study, those who sat the longest were, on average, eight years older, biologically speaking, than women who moved around more often, with researchers concluding, "avoidance of a highly inactive lifestyle may provide health benefits at the cellular level."[5]

Another study found that excessive sitting increases lung cancer risk by 54%, uterine cancer risk by 66% and colon cancer risk by 30%, with researchers noting:[6]

> *"Sedentary behavior contributes to an interrelated network of increased body fat, altered production of sex hormones, metabolic dysfunction, leptin, adiponectin and inflammation, encouraging cancer development."*

Separate research, published in the American Journal of Preventive Medicine, further found that sitting for more than three hours a day causes 3.8% of all-cause deaths in the 54 countries surveyed.[7]

Cutting your sitting time to less than three hours a day could increase your life expectancy by 0.2 years (about 2.4 months), the researchers concluded. More than 60% of people globally spend more than three hours a day sitting.[8]

## Why You Should Break Free From 'Chair Addiction'

"Chair addiction has become a hallmark of modernity," according to Dr. James Levine, author of the book "Get Up!: Why Your Chair Is Killing You and What You Can Do About It," and the inventor of the treadmill desk.[9] "Sitting kills more people than smoking because more people sit excessively than smoke, and the health sequelae of sitting are more numerous," he added.[10]

More than two dozen chronic diseases, from diabetes and high blood pressure to back pain and deep vein thrombosis, have been linked to excessive sitting, and fitting in an exercise session isn't likely to offset excessive sitting's harmful effects.[11]

It was during the Industrial Revolution, when people moved from agricultural communities to cities, that sedentary behaviors and many of their related health problems became common. Levine wrote in Mayo Clinic Proceedings:[12]

> *"Once the Industrial Revolution took hold, lethal sitting became inevitable. In the 1800s, factory production lines were invented to diminish the need for a worker to waste time walking. Soon after that, modern offices were developed with the premise that the fewer minutes workers moved during the workday, the less time was wasted.*
>
> *The 1930s saw the rise of the archenemy — the office chair. Workplace automation and mechanization followed with the introduction of typewriters, Dictaphones, intercoms, and adding machines — all of which diminished movement. By the 1950s, mass-produced and affordable cars came onto the market and people forewent walking to work and drove.*
>
> *Last came desk-based computerization and the conversion of active play to electronic play. It took nature 2 million years to design the walking, dynamic human, and it took those humans 200 years to reverse the art of nature and cram people all day long into chairs … The human genome has not substantially changed in 200 years, but over that time the humans' default posture has changed from ambulatory to chair-based."*

## Standing Benefits Mind and Body

One of the most obvious benefits of standing is that it increases energy expenditure, or calories burned, which can help to ward off obesity. Sitting increases metabolic rate by only 5% compared to lying down, but walking, even at a slow pace, increases energy expenditure 100%.[13]

According to Stand Up Kids, an organization whose mission is to bring a standing desk to every public school child within 10 years, children at standing desks burn 15% to 25% more calories during the school day than those who remain sitting — and the difference was even greater among children with obesity, who burned 25% to 35% more calories at standing desks.[14]

When standing desks were introduced to a fourth grade classroom at one school, standing time increased by 17 to 26 minutes per school day while sitting time decreased by 17 to 40 minutes.[15] The students were also less likely to report neck and shoulder discomfort when using standing desks.

A study published in the Journal of Medicine and Sport also revealed that in first grade boys, lower levels of physical activity and higher levels of sitting time were linked to poorer reading skills.[16]

In the workplace, standing desks trigger increased brain activity and do not hinder cognitive performance as has been suggested.[17] Other benefits of standing, reported by Stand Up Kids, include:[18]

- Prevention of the body's tissue adaptation to static positions, such as short hip flexors and hamstrings, rounded upper back and poor shoulder position
- Prevention of orthopedic degradation and dysfunction, including back and neck pain, repetitive stress injuries, pelvic floor dysfunction and knee and hip disorders
- Increased creativity and educational test scores
- Increased engagement and active learning in the classroom

## How to Gradually Break Free From Your Chair

Kelly and Juliet Starrett are the husband-and-wife team who founded Stand Up Kids. Kelly has a Ph.D. in physical therapy and is the author of "Deskbound: Standing Up to a Sitting World." He is one of the leaders in the CrossFit movement and stresses the importance of proper body mechanics, both in and outside the gym.

His first book, "Becoming a Supple Leopard," addresses biomechanical inadequacies that might increase your risk of injury. Juliet is a former competitive athlete, CrossFit authority and co-founder of the healthy movement website Mobility WOD. In 2016, I interviewed Kelly about his book, “Deskbound,” which helped me address some of my own movement challenges and is an eye-opening read about why standing is a simple way to radically improve your health.

If you’re not convinced, Kelly mentioned a study that found office workers who smoked to be healthier than nonsmokers simply because they got up every 30 minutes or so and walked outside to have a cigarette.[19] “That activity was enough to be a considerable change in the function and health of the human being,” he said.

However, if you’re used to sitting for hours a day, be prepared for a gradual transition and avoid trying to switch to a standing desk “cold turkey.” The Starretts recommend first transitioning to a standing desk with a perching stool and sitting on that for 20 or 30 minutes, then gradually increasing your time.[20]

In addition, be sure your desk is adjusted to the proper height. Also, many people feel more comfortable having somewhere to put a foot on and off, such as a stepstool.

If you don’t have a standing desk, it’s possible to fashion one out of a regular desk by propping up your computer on a box or an overturned wastebasket. Or, if you have an island or breakfast bar in your kitchen, use that. If standing isn’t an option, you can reap many similar benefits by getting up from your chair every 20 minutes and taking a two-minute walk. For times when you do sit, “sit with skill,” the Starretts said.

They advise sitting on your sit bones, engaging your legs and trying to look over the chair. When you're first starting out, divide your day into optional sitting and nonoptional sitting. Don't worry about the times when you have to sit, but take stock of what they call "junk sitting" and try to whittle that down.

## Try a Wobble Board While Standing

Standing is classified as a light-intensity activity when it's "active" rather than "passive."[21] Active standing might include standing while doing dishes whereas passive standing is waiting in a line. If you want to take your fitness to the next level, make standing a workout of its own by standing on a wobble board at your standing desk.

This has added benefits for improving balance and posture while working your core muscles and boosting coordination. Beyond this, a transition to more active schools and offices, which promote not only standing but also more daily movement, could have far-reaching public health benefits, according to Levine.

> *"Offices can incentivize protocols for walking meetings, incentivize leg-based interactions (eg, walk across the office versus e-mail), and install walking tracks or treadmill desks. Active offices not only report improved health but less perceived stress and improved productivity.*
>
> *Schools can be designed to promote active learning, and research demonstrates improvement to health, attentiveness, and educational outcomes. Bright, clean, attractive stairwells with visible prompts promote walking up steps better than do poorly lighted, dirty, dank ones."*[22]

The more you try to incorporate standing and movement into your day, gradually you'll get used to the idea of standing and will find that you don't automatically look for a chair the way you used to. You'll be surprised by how many opportunities you have to move in a day if you start opening your eyes to them.

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