

Why Sitting Down All Day is Killing You:

Taking a Seat Can Take Years Off Your Life

By Dr. Mercola

Your body is meant to have regular physical activity in order to function at its highest level. By this, I'm not referring to 30 to 60 minutes of exercise a few days or even every day, but rather movement that takes place during the other 15.5 hours or so that you're awake.

The research continues to mount that lack of such activity, or rather, too much sitting during the day, is detrimental to health, including longevity.

Sitting for Too Long May Shorten Your Lifespan

Research suggests that the more hours you spend sitting in a day, the shorter your lifespan may be.

Research published in the *Journal of the American College of Cardiology*, for instance, showed that women who sit for 10 or more hours a day may have a significantly greater risk of developing heart disease than those who sit for five hours or less.

Mounting research now suggests that sitting in and of itself is an independent risk factor for poor health and premature death—even if you exercise regularly.

One study found, for instance, that reducing the average time you spend sitting down to less than three hours a day could increase your life expectancy by two years.²

Other research, published in *Diabetologia*, analyzed 18 studies that in total included nearly 800,000 people, and found that those who sat for the longest periods of time were twice as likely to have diabetes or heart disease, compared to those who sat the least.

And, while prolonged sitting was linked to an overall greater mortality risk from any cause, the strongest link was to death due to diabetes. According to lead researcher Thomas Yates, MD: "Even for people who are otherwise active, sitting for long stretches seems to be an independent risk factor for conditions like diabetes, cardiovascular disease, and kidney disease."

The 'Active Couch Potato Effect'

Exercise is clearly important for optimal health and longevity... but research shows it is likely not enough to counteract the health damage caused by excessive sitting that is common to so many of you that are reading this.

One 2009 study highlighted much of the recent evidence linking sitting with biomarkers of poor metabolic health, showing how total sitting time correlates with an increased risk of type 2 diabetes, heart disease, and other prevalent chronic health problems. According to the authors:

"Even if people meet the current recommendation of 30 minutes of physical activity on most days each week, there may be significant adverse metabolic and health effects from prolonged sitting – the activity that dominates most people's remaining 'non-exercise' waking hours."

In other words, even if you're fairly physically active, riding your bike to work or hitting the gym four or five days a week – you may still succumb to the effects of too much sitting if the majority of your day is spent behind a desk or on the couch. Researchers have dubbed this phenomenon the "active couch potato effect."

The research linking too much sitting with increased risks of disease and premature death is quite eye-opening, especially considering that so many people, myself included, sit for long periods every day...

Men who were sedentary for more than 23 hours a week had a 64 percent greater risk of dying from heart disease than those who were sedentary less than 11 hours a week, according to a 2010 study in *Medicine & Science in Sports & Exercise*.⁶

A study of more than 17,000 Canadians found that the mortality risk from all causes was 1.54 times higher among people who spent most of their day sitting compared to those who sat infrequently.

Sitting time is a predictor of weight gain, according to a study of Australian women, even after accounting for calories consumed and leisure time physical activity, such as exercise time.

The risk of metabolic syndrome rises in a dose-dependent manner depending on your "screen time" (the amount of time you spend watching TV or using a computer). Physical activity had only a minimal impact on the relationship between screen time and metabolic syndrome.

People who use a computer for 11 hours or more a week, or watch TV for 21 hours or more a week, are more likely to be obese than those who use a computer or watch TV for five hours a week or less.

What You Can Do to Compensate for Sitting Too Much

There's nothing inherently "bad" about sitting, but when you sit for too long without changing your position or moving much at all, that's when the problems occur. Doing so places you in what Dr. Joan Vernikos, former director of NASA's Life Sciences Division and author of *Sitting Kills, Moving Heals*, calls "quasi-micro-gravity."

Did you know that the changes in bone and muscle that occur here on Earth in one year's time – approximately one percent loss of bone or one percent loss of muscle – occur in just one week to one month when you're in space? Incredibly, you get close to a 10-fold acceleration of the aging process when you live in a gravity-free environment! And this is part of the equation when it comes to explaining why chronic sitting is an independent risk factor for premature death.

In order to determine why regular exercise does not appear to compensate for the negative effects of prolonged sitting, some of Dr. Vernikos' research focused on finding out

what type of movement is withdrawn by sitting. What she discovered was as revolutionary as it was counterintuitive. Not only did she discover that the act of standing up is more effective than walking for counteracting the ill effects of sitting, the key is how many times you stand up.

It's actually the change in posture that is the most powerful signal, in terms of having a beneficial impact on your health, not the act of standing in and of itself. Put another way, the key to counteract the ill effects of sitting is to repeatedly interrupt your sitting. Dr. Vernikos explained: "We were designed to squat. We were designed to kneel. Sitting is okay, but it's uninterrupted sitting that is bad for us. We are not designed to sit continuously. We are not designed to be in quasi-microgravity... It's not how many hours of sitting that's bad for you; it's how often you interrupt that sitting that is GOOD for you!"

Why I Now Stand Up Every 10 Minutes When I Sit for Long Times

When it comes to interrupting your sitting, Dr. Vernikos research was really clear that standing up around 35 times a day or so can counteract the cardiovascular health risks associated with excessive sitting. This is based on double-blind research where volunteers would spend four days in bed to induce detrimental changes. Dr. Vernikos tested two groups to see which was more effective, walking or standing, and how long would you have to walk or how many times do you have to stand up to get better again? Standing up once every hour was more effective than walking on a treadmill for 15 minutes for cardiovascular and metabolic changes

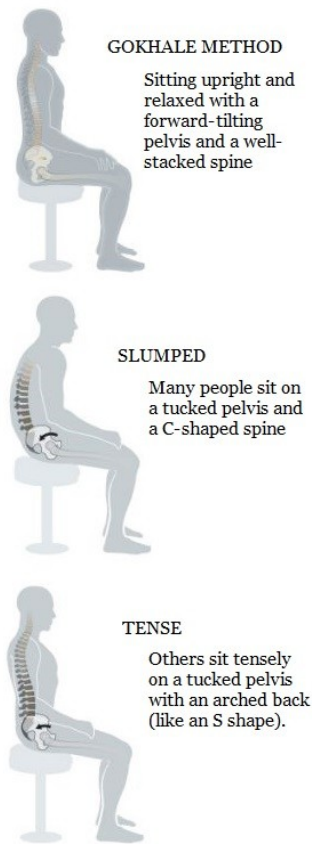
Sitting down and standing up repeatedly for 32 minutes does NOT have the same effect as standing up once, 32 times over the course of a day. To get the benefit, the stimulus must be spread throughout the day

Personally, even though I perform a lot of structured exercise, including high-intensity interval training, I was guilty of sitting down a vast majority of the rest of the day.

The Importance of Proper Posture

It is clear that most of the population has less than ideal posture and that the studies that identified issues with excessive sitting never accounted for this. It is highly probable that an ideal posture would mitigate against the damages from prolonged sitting. When you train your body to be in the ideal posture most of the time, especially while sitting, you minimize most of the damage that sitting causes.

Proper posture and properly using your body to work against gravity is the foundation upon which everything else related to your health is built. By understanding the functional biomechanics of your body and working with gravity instead of against it, you learn to optimize the way you move about your life all the time. This in turn effectively prevents aches and pains from ever developing in the first place.



The Gokhale Method quickly and efficiently teaches you to reclaim what its creator, Esther Gokhale, calls “primal posture,” which is the way your body was designed to stand, sit and move. While conventional advice tells you to tuck in your pelvis to maintain an S-shaped spine, Esther has found that a J-spine is far more natural. A J-spine refers to a posture where your back is straight, your lumbar relatively flat, and your buttocks are protruding slightly. This is the natural stance of toddlers, for example.

By tucking your pelvis, you lose about a third of the volume in your pelvic cavity, which squishes your internal organs. This can compromise any number of them in a variety of ways. Primal posture, on the other hand, provides an ideal architecture for your lungs to move freely and for your digestive organs to function without blockages. It’s important to use proper posture at all times, and doing so while sitting may help to counteract some of its adverse effects.

Non-Exercise Activity: a Key to Longevity

Going to the gym a few times a week for an hour simply isn’t going to counteract hours upon hours of chronic uninterrupted sitting, which essentially mimics a microgravity situation ~ i.e. you’re not exerting your body against gravity. Only frequent non-exercise movement (just plain non-specific moving around) will do that.

You need to make sure you’re engaging in more or less perpetual non-exercise movement, as this is an independent risk factor. So stand up at regular frequent intervals, about 35-40 times spread throughout your day if you can (about every 10 minutes). For times when you are sitting, try using an exercise ball instead of a chair, which forces you to make micro-movements to maintain your balance.

You want to include structured exercise along with that of course, to reap all the benefits associated with exercise, but, please don’t neglect the non-exercise waking hours of your day.

Interestingly, both Esther Gokhale and Dr. Vernikos believe non-exercise activities are even more important than regular exercise programs, but ideally you would do both. Dr. Vernikos states: “Yes, it’s my belief that the non-exercise activities are the foundation of your body tuning and your health, and more important than regular exercise... and regular exercise is the next step. You build on the foundation.”