

Sit Less for Better Health

Introduction

As popular technologies advance, our population becomes more sedentary. Yet sedentary behavior — sitting in particular — diminishes energy use and contributes to a range of chronic diseases. In the U.S., 1 in 4 adults report sitting for more than 8 hours a day; 4 in 10 report being physically inactive; and 1 in 10 report both. On average, adults in the U.S. sit for 9.5 hours a day, with office workers (home or workplace based) averaging close to 15 hours a day. Routine periods of prolonged, uninterrupted sitting are associated with a variety of poor health outcomes.



The Active Couch Potato

The term “active couch potato” refers to adults who meet key physical activity guidelines but who still sit for long periods of time (10-12 hours) each day. As a group, active couch potatoes tend to have a higher risk of heart disease and stroke than those who meet physical activity guidelines in addition to engaging in light movement throughout the day. Sitting appears to have a dose-response association with cardiometabolic health, and this relationship appears to be more pronounced among the least physically active.

Physical Activity Guidelines for Adults

A minimum of:

- 150 minutes per week of moderate physical activity or 75 minutes per week of vigorous physical activity (or a combination); and
- Twice weekly muscle-strengthening activities of moderate intensity, involving all muscle groups.

Uninterrupted and prolonged sitting appears to be much more detrimental than disrupted sitting over the same period of time. And while only about 20%-25% of U.S. adults meet the physical activity guidelines, almost every adult could break up their hours of daily sitting by standing up and/or briefly stretching, to incorporate more movement into their current routines. This could improve the health of the active couch potato as well as the completely sedentary.

Sitting, Chronic Disease Risk and Wellness

A sedentary lifestyle, frequently characterized by prolonged periods of sitting, is associated with increased risk of obesity in addition to diminished cardiometabolic health. Sedentary behaviors are those requiring very low levels of energy expenditure; specifically, any waking behavior that utilizes no more than 1.5 metabolic equivalents (METs) while in a sitting, reclining or lying posture.

Sitting in particular has been associated with increases in body mass index, waist circumference, glucose,

insulin and triglycerides, which increases risk of Type 2 diabetes and cardiovascular diseases. But evidence suggests that periodic interruptions to otherwise continuous sitting sessions can help moderate glucose and insulin and improve circulation to help reduce these risks. For example, studies have demonstrated that among individuals diagnosed with Type 2 diabetes, getting up from the chair every 30 minutes for a 3-minute bout of light-intensity walking improves glucose and insulin levels after meals. Even just standing up and stretching for a few seconds every 30-60 minutes could be beneficial. This might also reduce the muscle stiffness or leg, lower back and neck pain that tends to set in during long periods of sitting.

A MET (metabolic equivalent or metabolic equivalent of task) is a way to describe the intensity of an activity. One MET represents the approximate amount of energy typically used by a body at rest, sitting still.

As the activity level increases, so does the MET score associated with the activity.

Sitting for long periods of time each day also affects mental and emotional health. The coronavirus pandemic, accompanied by social restrictions and shifts in work and workplaces, further increased sitting time among all age groups in the U.S. and underscored the association of prolonged sitting with depression, anxiety and poor quality of life. Additional research demonstrated that this association endured even among those who engaged in routine exercise.



Recommendations

The relationship among sitting, health and wellness suggests that getting up, moving more and sitting less can provide clear health benefits. To avoid prolonged sitting at home or at work:

1. **Set a reminder to stand up and move a little every 30-45 minutes.**
2. **Stand when checking your smartphone; walk around during your phone calls.**
3. **Drink more water. This can help you hydrate, and you will need to get up periodically.**
4. **Make your surroundings a little less convenient. Keep your snacks, supplies or equipment a little too far away, so you will need to get up to reach them.**
5. **At least once a day, try face-to-face communication (instead of emailing or texting) when you want to talk to a neighbor or colleague.**
6. **If it's an option, use a height-adjustable desk or worktable so you can work standing or sitting.**

Over time, these types of small changes in daily routines could improve your general health and well-being. Additional physical activity would likely increase the benefits, but let's start by getting up!

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Authors:

Elizabeth Gollub, Ph.D., M.P.H., R.D., Nutrition Specialist
School of Nutrition and Food Sciences

Daniela Quan, M.S.
School of Nutrition and Food Sciences



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Matt Lee, Interim LSU Vice President for Agriculture
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