

Prolonged daily sitting linked to 3.8 percent of all-cause deaths

23 March 2016



Credit: Vera Kratochvil/public domain

Sedentary behavior, particularly sitting, has recently become a prevalent public health topic and target for intervention. As work and leisure activities shift from standing to sitting, increased sitting time is starting taking a toll on our bodies. A new study in the *American Journal of Preventive Medicine* found that sitting for more than three hours per day is responsible for 3.8% of all-cause mortality deaths. Investigators also estimate that reducing sitting time to less than three hours per day would increase life expectancy by an average of 0.2 years.

In order to properly assess the damaging effects of sitting, the study analyzed behavioral surveys from 54 countries around the world and matched them with statistics on population size, actuarial table, and overall deaths. Researchers found that sitting time significantly impacted all-cause mortality, accounting for approximately 433,000, or 3.8%, of all deaths across the 54 nations in the study. They also found that sitting had higher impact on mortality rates in the Western Pacific region, followed by European, Eastern Mediterranean, American, and Southeast Asian countries,

respectively.

This type of information is crucial to evaluating the effect sitting has on our lives, especially in light of recent research that shows prolonged sitting is associated with an increased risk of death, regardless of activity level. Researchers now believe that periods of moderate or vigorous physical activity might not be enough to undo the detrimental effects of extended sitting.

While researchers found that sitting contributed to all-cause mortality, they also estimated the impact from reduced sitting time independent of moderate to vigorous physical activity. "It was observed that even modest reductions, such as a 10% reduction in the mean sitting time or a 30-minute absolute decrease of sitting time per day, could have an instant impact in all-cause mortality in the 54 evaluated countries, whereas bolder changes (for instance, 50% decrease or 2 hours fewer) would represent at least three times fewer deaths versus the 10% or 30-minute reduction scenarios," explained lead investigator Leandro Rezende, MSc, Department of Preventive Medicine, University of Sao Paulo School of Medicine.

Studies are beginning to show us exactly how detrimental prolonged sitting is for our health, even when coupled with exercise; however, changing habits is a difficult proposition. "Although sitting is an intrinsic part of human nature, excessive sitting is very common in modern societies," commented Rezende. "Sedentary behavior is determined by individual, social, and environmental factors, all strongly influenced by the current economic system, including a greater number of labor-saving devices for commuting, at home and [work](#), and urban environment inequalities that force people to travel longer distances and live in areas that lack support for active lifestyles."

The results of this analysis show that reducing sitting time, even by a small amount, can lead to

longer lives, but lessening time spent in chairs may also prompt people to be more physically active in general. "Although sitting time represents a smaller impact compared with other risk factors, reducing sitting time might be an important aspect for active lifestyle promotion, especially among people with lower physical activity levels," emphasized Rezende. "In other words, reducing [sitting time](#) would help people increase their volumes of physical activity along the continuum to higher physical activity levels."

The public health burden of prolonged sitting is real. Accounting for 3.8% of all-cause mortality in this study, sitting is shortening the lives of people across the world. "The present findings support the importance of promoting active lifestyles (more [physical activity](#) and less [sitting](#)) as an important aspect for premature mortality prevention worldwide, and therefore the need for global action to reduce this risk factor."

More information: Leandro Fórnias Machado Rezende et al. All-Cause Mortality Attributable to Sitting Time, *American Journal of Preventive Medicine* (2016). [DOI: 10.1016/j.amepre.2016.01.022](#)

Provided by Elsevier

APA citation: Prolonged daily sitting linked to 3.8 percent of all-cause deaths (2016, March 23) retrieved 9 September 2022 from <https://medicalxpress.com/news/2016-03-prolonged-daily-linked-percent-all-cause.html>

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