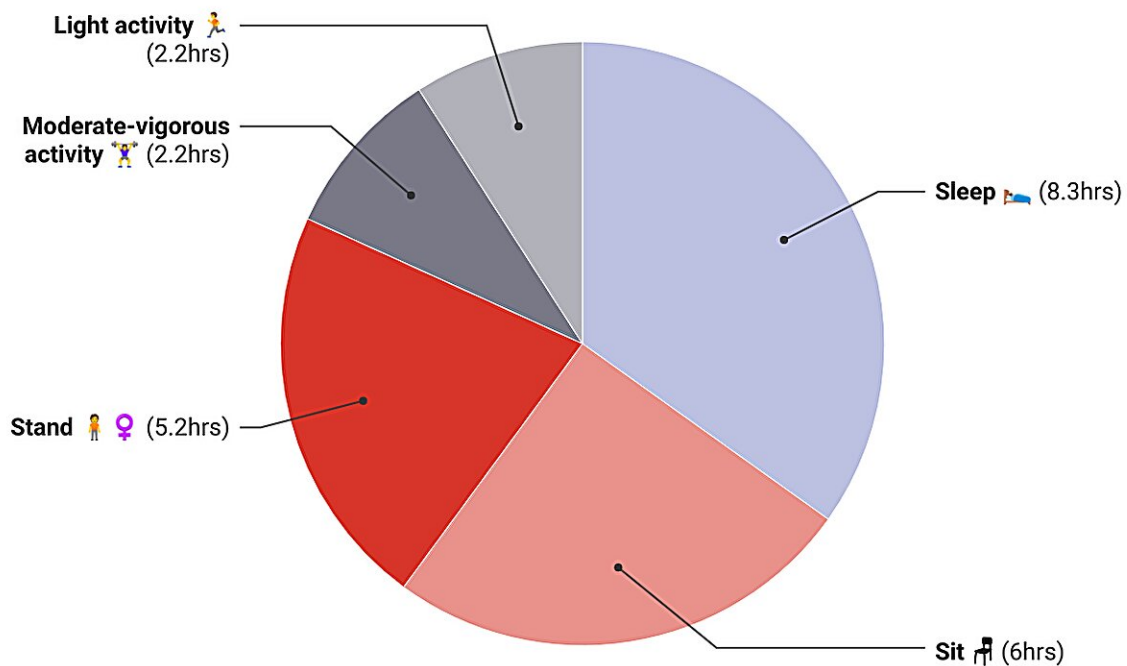


How much time should you spend sitting versus standing? New research reveals the perfect mix for optimal health

May 2 2024, by Christian Brakenridge

The optimal time to spend in each behaviour in 24 hrs

Looking at five common activities **sleeping**, **sitting**, **standing**, **light activity** and **moderate to vigorous activity**, modelled these against cardiovascular health and blood-glucose levels



The optimum ranges of the activities – sit: 5h40min - 7h10min; stand: 4h10min - 6h10min; light activity: 2h - 2h20min; moderate-vigorous activity: 1h40min - 2h20min; sleep: 7h30min - 9h

Chart: The Conversation • Source: Brakenridge, C.J., Koster, A., de Galan, B.E. et al. • Created with Datawrapper

Credit: The Conversation

People have a pretty intuitive sense of what is healthy—standing is better than sitting, exercise is great for overall health and getting good sleep is imperative.

However, if exercise in the evening may disrupt our sleep, or make us feel the need to be more sedentary to recover, a key question emerges—what is the best way to balance our 24 hours to optimize our health?

[Our research](#) attempted to answer this for [risk factors](#) for heart disease, stroke and diabetes. We found the optimal amount of sleep was 8.3 hours, while for light activity and moderate to [vigorous activity](#), it was best to get 2.2 hours each.

Finding the right balance

Current health guidelines recommend you stick to a [sensible regime](#) of moderate-to vigorous-intensity [physical activity](#) 2.5–5 hours per week.

However [mounting evidence](#) now [suggests](#) how you spend your day can have meaningful ramifications for your health. In addition to moderate-to vigorous-intensity physical activity, this means the time you spend sitting, standing, doing light physical activity (such as walking around your house or office) and sleeping.

Our research looked at more than 2,000 adults who wore [body sensors](#) that could interpret their physical behaviors, for seven days. This gave us a sense of how they spent their average 24 hours.

At the start of the study participants had their [waist circumference](#), [blood sugar](#) and insulin sensitivity measured. The body sensor and assessment data was matched and analyzed then tested against health risk markers—such as a heart disease and stroke risk score —to create a

model.

Using this model, we fed through thousands of permutations of 24 hours and found the ones with the estimated lowest associations with heart disease risk and blood-glucose levels. This created many optimal mixes of sitting, standing, light and moderate intensity activity.

When we looked at waist circumference, blood sugar, [insulin sensitivity](#) and a heart disease and stroke risk score, we noted differing optimal time zones. Where those zones mutually overlapped was ascribed the optimal zone for heart disease and diabetes risk.

You're doing more physical activity than you think

We found light-intensity physical activity (defined as walking less than 100 steps per minute)—such as walking to the water cooler, the bathroom, or strolling casually with friends—had strong associations with glucose control, and especially in people with type 2 diabetes. This light-intensity physical activity is likely accumulated intermittently throughout the day rather than being a purposeful bout of light exercise.

Our experimental evidence shows that [interrupting our sitting](#) regularly with light-physical activity (such as taking a 3–5 minute walk every hour) can improve our metabolism, especially so after lunch.

While the moderate-to-vigorous physical activity time might seem a quite high, at more than 2 hours a day, we defined it as more than 100 steps per minute. This equates to a brisk walk.

It should be noted that these findings are preliminary. This is the first study of [heart disease](#) and diabetes risk and the "optimal" 24 hours, and the results will need further confirmation with longer prospective studies.

The data is also cross-sectional. This means that the estimates of time use are correlated with the disease risk factors, meaning it's unclear whether how participants spent their time influences their risk factors or whether those risk factors influence how someone spends their time.

Australia's adult physical activity guidelines need updating

Australia's [physical activity guidelines](#) currently only recommend exercise intensity and time. A [new set of guidelines](#) are being developed to incorporate 24-hour movement. Soon Australians will be able to use these guidelines to examine their 24 hours and understand where they can make improvements.

While our new research can inform the upcoming guidelines, we should keep in mind that the recommendations are like a north star: something to head towards to improve your health. In principle this means reducing sitting time where possible, increasing standing and light-intensity physical activity, increasing more vigorous intensity physical activity, and aiming for a healthy sleep of 7.5–9 hours per night.

Beneficial changes could come in the form of reducing [screen time](#) in the evening or opting for an active commute over driving commute, or prioritizing an earlier bed time over watching television in the evening.

It's also important to acknowledge these are recommendations for an able adult. We all have different considerations, and above all, movement should be fun.

This article is republished from [The Conversation](#) under a Creative

Commons license. Read the [original article](#).

Provided by The Conversation

Citation: How much time should you spend sitting versus standing? New research reveals the perfect mix for optimal health (2024, May 2) retrieved 26 June 2024 from <https://medicalxpress.com/news/2024-05-reveals-optimal-health.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.