

# Reducing sitting time to boost health in office workers

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Researchers at the National Institute for Health and Care Research (NIHR) Leicester Biomedical Research Centre (BRC)—a partnership between Leicester's Hospitals, the University of Leicester and

Loughborough University—have developed a program that, when paired with a height-adjustable desk, can reduce the time people spend sitting by over an hour. To date, it is the largest study worldwide looking into programs to overcoming sedentary behavior in the workplace.

The team tested their "SMART Work and Life" program—training for workplace champions, educational resources, ongoing behavior change support and a set of apps and software to monitor sitting time—which has been developed for people who spend a lot of their day sitting down, in six local authorities across Leicester, Greater Manchester and Liverpool.

756 desk-based workers were put in one of three groups. The first group were given the SMART Work and Life program alone; the second group received the SMART Work and Life program and a height-adjustable desk, so they could sit or stand while working at their computer. A third group acted as a control with neither the SMART Work and Life program nor the height-adjustable desk.

The research team monitored the sitting behavior of participants via a small device worn on the thigh.

Researchers found that compared to the control group, people using the SMART Work and Life program sat for 22 minutes less per day. For participants using both the SMART Work and Life program and a height adjustable desk, this tripled to over an hour more time spent on their feet across the working day.

Interestingly, while participants using the program and the height-adjustable desk reduced their sitting time in the workplace, this had little impact on behavior at home, indicating that it is challenging to break sitting habits in leisure time.

In the UK, sedentary behaviors are known to contribute to over £700 million in NHS costs and were responsible for 69,276 deaths in 2016. The COVID-19 pandemic has further exacerbated these behaviors, and their consequences for public health, prompting policy interest in [public health](#) strategies that promote safe physical activity and reduce sedentary behaviors.

Desk-based workers spend around 70 percent of their workday sitting down and many continue to spend time sitting once at home, with data showing they accumulate 9 to 10 hours per day of sitting. Sedentary [behavior](#) in the workplace also affects job performance and is associated with higher levels of presenteeism.

Dr. Charlotte Edwardson, Associate Professor of Physical Activity Sedentary Behavior and Health at the University of Leicester, and lead author of the paper, says that their "results suggest a combination of education, motivational resources, peer support and standing desks has the greatest effect on reducing sitting in the workplace."

"These results are a major step in providing evidence-based tools to reduce [sedentary behavior](#) and improve health in the workplace."

Dr. Alex Clarke-Cornwell, Reader in Public Health Epidemiology from the University of Salford, who is a co-author of the study, says that "alongside the reduction in sitting time, participants perceived small improvements in stress, well-being, and work vigor. They also reported feeling more energized, focused and productive, with the group who also received the desk reporting fewer musculoskeletal issues."

SMART Work and Life is a multi-component program including a package of training for health and well-being champions with workplaces. It also includes educational resources, apps and software to track sitting time and get reminders to stand up more regularly,

motivational posters, sitting less challenges, suggestions on how to make small environmental changes and many more helpful resources available to all who take part. It is facilitated by [workplace](#) champions who encourage participants and develop tailored strategies for individual teams.

Dr. Edwardson and her team have turned the SMART Work and Life program into an online resource kit which is easily accessible to organizations. SMART Work and Life is a great resource to use alongside height-adjustable desks, as part of an office environment change or as a stand-alone toolkit to encourage less sitting.

The research can be found in the *British Medical Journal*.

**More information:** Charlotte Edwardson et al, Effectiveness of an intervention for reducing sitting time and improving health in office workers: three arm cluster randomised controlled trial, *BMJ* (2022). [DOI: 10.1136/bmj-2021-069288](https://doi.org/10.1136/bmj-2021-069288)

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