

# Your office may be affecting your health

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Workers in open office seating had less daytime stress and greater daytime activity levels compared to workers in private offices and cubicles, according to new research led by the University of Arizona.

That greater [physical activity](#) at the [office](#) was related to lower

physiological stress during after-work hours outside the office, researchers said. This is the first known study to investigate the effects of office workstation type on these objective measures.

The study was led by the UA Institute on Place, Wellbeing and Performance, directed by Dr. Esther Sternberg, and the UA Center for Integrative Medicine, in collaboration with Aclima Inc. and the Baylor College of Medicine. The research is under the Wellbuilt for Wellbeing program, funded by the U.S. General Services Administration, which owns and leases more than 370 million square feet of space that houses more than 1 million federal employees.

The study evaluated 231 people who work in federal office buildings and wore stress and activity sensors around the clock for three workdays and two nights. The intent was to evaluate the workers' activity and stress levels both inside and outside of the office environments.

The study found that workers in open bench seating arrangements were 32 percent more physically active at the office than those in private offices and 20 percent more active than those in cubicles. Importantly, workers who were more physically active at the office had 14 percent less physiological stress outside of the office compared to those with less physical activity at the office.

"This research highlights how office design, driven by office workstation type, could be an important health promoting factor," said Sternberg, research director of the UA Center for Integrative Medicine and senior author on the study.

Office workers are at a particularly high risk for low levels of physical activity and the associated poor health outcomes. According to a 2015 report published by the U.S. Centers for Disease Control and Prevention, workplace-related illnesses cost the U.S. economy more than \$225

billion a year.

"Objective measurements using wearable sensors can inform policies and practices that affect the health and well-being of hundreds of millions of office workers worldwide," said Casey Lindberg, UA Institute on Place, Wellbeing and Performance research associate and lead author on the study.

Bijan Najafi, director of Interdisciplinary Consortium on Advanced Motion Performance at the Baylor College of Medicine in Houston, Texas, said it is satisfying to know that his work on wearable devices to measure stress and activity can help improve health and well-being for millions of [office workers](#).

The study adds an objective voice to an ongoing debate about how best to weigh the advantages and disadvantages of open seating designs to optimize [worker](#) health. The paper, "Effects of office workstation type on physical activity and [stress](#)," was recently published in *Occupational and Environmental Medicine*, a publication of British Medical Journals.

**More information:** Effects of office workstation type on physical activity and stress, *Occupational & Environmental Medicine*, [oem.bmj.com/lookup/doi/10.1136/oemed-2018-105077](https://oem.bmj.com/lookup/doi/10.1136/oemed-2018-105077)

Provided by University of Arizona

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