

Researchers find brief, intense stair climbing is a practical way to boost fitness

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Martin Gibala, professor, Department of Kinesiology, McMaster University. Credit: JD Howell, McMaster University

There are no more excuses for being out of shape. Researchers at McMaster University have found that short, intense bursts of stair climbing, which can be done virtually anywhere, have major benefits for heart health.

The findings negate the two most common excuses of couch potatoes: no time and no access to the gym.

"Stair climbing is a form of [exercise](#) anyone can do in their own home, after work or during the lunch hour," says Martin Gibala, a professor of kinesiology at McMaster and lead author on the study. "This research takes interval training out of the lab and makes it accessible to everyone."

Previous studies have proven the benefits of vigorous [stair climbing](#) over sustained periods of time—up to 70 minutes a week—but scientists set out to determine if [sprint interval training](#) (SIT), which involves brief bursts of [vigorous exercise](#) separated by short periods of recovery, was an

effective and time-efficient alternative for improving cardiorespiratory fitness.

Investigators recruited 31 sedentary but otherwise healthy women and tested the effect of two different protocols, each of which required a 10-minute time commitment, including warm-up, cool down and recovery periods.

The exercise sessions were conducted three times a week over the course of six weeks.

The first protocol involved three, 20-second bouts of continuous climbing in an 'all-out' manner. The results were then compared and contrasted to participants who ran through the same protocol using an [exercise bike](#) which has already been shown to improve fitness.

For the second experiment, participants vigorously climbed up and down one flight of stairs for periods of 60 seconds, an experiment which could be easily adopted for the home.

Both protocols, each involving a total time commitment of 30 minutes a week, increased [cardiorespiratory fitness](#), an important healthy marker that is linked to longevity.

"Interval training offers a convenient way to fit exercise into your life, rather than having to structure your life around exercise," says Gibala, who has studied high-intensity [interval training](#) for more than a decade and recently wrote a book on its efficacy entitled, "The One Minute Workout."

The findings are published in the journal *Medicine & Science in Sports & Exercise*.

Provided by McMaster University

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