

Keeping fit with high-intensity interval training really does work

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High intensity interval training has become increasingly popular as it's a quick and effective way to improve health. This is all the more important as countries around the world emerge from lockdowns due to coronavirus and are looking for quick and easy way to exercise again.

Recently, researchers have been studying whether shorter variations of

HIIT, involving as little as four minutes of high-intensity exercise per session (excluding a warm up and cool down), also improve [health](#).

A new review paper published in the *Journal of Physiology* collates a decade's worth of research on the topic of this so-called low-volume high HIIT for health.

The current World Health Organization (WHO) [physical activity guidelines](#) (150-300 minutes of moderate activity/week or 75-100 minutes of vigorous activity/week) may be unattainable for a large portion of the population who are time poor due to family or work commitments.

This hypothesis is supported by the increasing rates of physical inactivity amongst adults in high income countries.

The findings of this study show that low-volume HIIT (typically involving less than ~20 minutes total exercise time—inclusive of warm up and cool down) yields comparable improvements to interventions meeting the current guidelines despite requiring significantly less time.

So, what is low-volume HIIT? As HIIT involves active periods of work interspersed with recovery periods, the researchers defined low-volume HIIT as interventions which included less than 15 minutes of high-intensity exercise per session (not including recovery periods).

This review builds on the authors' recent study published in *Diabetes Care* which showed that as little as four minutes of HIIT 3 times per week for 12 weeks significantly improved blood sugar levels, fat in the liver, and cardiorespiratory fitness in adults with type 2 diabetes. They also showed that these improvements were comparable to an intervention involving 45 minutes of moderate intensity aerobic exercise.

Beyond its effect on metabolic health, the new review reported that low-volume HIIT can also improve heart function and arterial health.

While the overwhelming majority of available evidence shows that low-volume HIIT is a safe way to exercise, including in populations with metabolic and heart problems, individuals should always determine their individual suitability for such programs with their health care professional.

This research was performed by collating and critically appraising over a decade's worth of research on the topic.

Further research should explore whether low-volume HIIT is sustainable in the longer-term and whether combining low-volume HIIT with other training interventions, such as resistance training, can maximize health outcomes.

Many of the participants in the study published in *Diabetes Care* reported being in disbelief over how short the training was yet how great they felt after training.

Dr. Angelo Sabag, corresponding author of the study said:

"While the WHO guidelines may serve their purpose at a populational level, individualized and tailored low-volume HIIT interventions delivered by appropriately trained exercise professionals may be more effective at an individual level, especially for time-poor individuals.

This research is especially important now as people are looking for new and exciting ways to engage in regular [exercise](#), after a year of lower physical activity due to the pandemic."

More information: Angelo Sabag et al. Low-volume high-intensity

interval training for cardiometabolic health, *The Journal of Physiology* (2021). [DOI: 10.1113/JP281210](https://doi.org/10.1113/JP281210)

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