

Study finds little increased risk of injury in high-intensity functional training program

December 5 2019

High-intensity group workout classes are increasingly popular at fitness centers. While research has shown that these workouts can have cardiovascular and other benefits, few studies have been conducted on whether they lead to more injuries.

A Mayo Clinic study that closely tracked 100 participants in a six-week high-intensity functional [training](#) program showed a statistically insignificant increase in the rate of [injury](#), compared with less intensive workouts.

The study, published in *Mayo Clinic Proceedings*, reported an injury rate of 9 injuries per 1,000 training hours during the six-week training, compared with 5 injuries per 1,000 training hours during the six weeks preceding enrollment. The data showed that 18% of participants reported an injury during the training period, and 37.5% reported an injury during a training session.

"These types of classes, which can include ballistic movements such as throwing or jumping with weights, and resistance training with kettlebells or free weights, have become very popular, but other than studies of similar programs in military training, there are no prospective research studies on injuries that can occur in these classes," says Edward Laskowski, M.D., co-director of Mayo Clinic Sports Medicine. "Our findings show a trend toward an increase in injury during the course of a typical class."

"Emphasizing proper technique and movement patterns is very important in all exercise, especially strength training," says Dr. Laskowski, the study's corresponding author. Most injuries in this study were related to movements that are ballistic or have an increased risk of injury if not performed with optimal technique.

"Though not statistically significant, the injury rate was almost three times the rate reported in previous studies," he says. "Hopefully, these results will provide a stimulus for interventions, including focusing on optimal technique and eliminating exercises that are higher-risk when not performed correctly, that will help reduce the risk of injury."

The study also emphasizes the importance of participants informing the trainer of preexisting injuries or medical conditions, monitoring fatigue during the [workout](#), and modifying or eliminating exercises that put an individual at risk.

The research involved 100 adults, 82% of whom were female, who participated in a high-intensity functional training class at Mayo Clinic's Dan Abraham Healthy Living Center from January 2017 to April 2018. One-hour group workout classes were held weekly for six weeks, and participants completed a survey before and after the classes ended. Participants had the advantage of a small instructor-to-participant ratio, which allowed for closer monitoring of technique and movement.

Injuries were self-reported, and the most common injuries were to the back and knees. Burpees and squats were the most common movements causing injury, according to the study.

The growing popularity of high-intensity group workout programs should lead to more study of benefits and risks, Dr. Laskowski says, with the goal of further reducing the risk of injury. "The United

States is in the midst of an epidemic of obesity and sedentary lifestyle. Programs that promote [physical activity](#), such as high-intensity functional training, can help to mitigate the effects of this epidemic and provide the motivation needed to get people moving."

Provided by Mayo Clinic

Citation: Study finds little increased risk of injury in high-intensity functional training program (2019, December 5) retrieved 16 August 2024 from <https://medicalxpress.com/news/2019-12-injury-high-intensity-functional.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.