

'Exergames,' a great way to burn calories, studies find — as long as they're fun

BY JEANNINE STEIN, LOS ANGELES TIMES MARCH 11, 2011 [COMMENTS \(1\)](#)

"Exergames," interactive digital or video-based games such as Wii Fit and Dance Dance Revolution, are part of today's fitness landscape for children and young adults. But do they really offer a substantial calorie burn? Two studies find that some of the games do, but whether they're fun enough for people to stick with them is another thing.

The first study, published online this week in the Archives of Pediatrics and Adolescent Medicine, set out to quantify how many calories children burned while engaging in a number of exergames, and compared those activities with walking on a treadmill at 3 mph.

Researchers analyzed energy expenditure among 39 boys and girls, average age about 11, as they spent time on the games and the treadmill. The participants were also asked to rate how well they enjoyed the games, a mix of commercial and consumer products: Sportwall, the Jackie Chan Alley Run by Xavix, Lightspace Bug Invasion, Cybex Trazer Goalie Wars, Dance Dance Revolution and Nintendo Wii Boxing.

Walking at 3 mph on a treadmill produced a metabolic equivalent, or MET, of 4.9 among the children. MET values approximate how much oxygen the body uses during an activity. Light gardening has a MET of 2, a challenging hike has a MET of 6 to 7, and running at 8 mph has a MET of 13.5.

The Wii game came in at 4.2, Dance Dance Revolution was 5.4, the Lightspace game was 6.4, the Xavix game was 7, the Cybex Trazer was 5.9, and the Sportwall was 7.1. All games were played at a moderate to vigorous intensity, and four of the games surpassed treadmill walking in calorie burn.

The children liked the Sportwall game the most, and the Xavix game the least. Children who were overweight or at risk for becoming overweight enjoyed the games more than kids with lower body mass indexes.

<http://www.montrealgazette.com/health/Exergames+great+burn+calories+studies+find+long+they/4423938/story.html>

In the study, the authors said that although exergaming may not be the answer to getting sedentary children moving, it does have potential: "It appears to be a potentially innovative strategy that can be used to reduce sedentary time, increase adherence to exercise programs, and promote enjoyment of physical activity," they wrote. "This may be especially important for at-risk populations, specifically children who carry excess body weight.

But when it comes to sticking with a fitness program, it's all about what people like to do. In a study on interactive video games published online recently in the journal *Medicine & Science in Sports & Exercise*, researchers measured calorie burn and enjoyment among 100 men and women age 18 to 35 who played four types of games: shooter, band simulation, dance simulation and fitness.

All but the shooter games substantially provided greater calorie expenditure over resting. On average, the shooter games created a 23 per cent increased energy expenditure over rest, band simulation produced a 73 per cent increase, dance simulation came in at 298 per cent over rest, and fitness games was highest: 322 per cent more burn than rest.

Although the band simulation games were the most popular, they didn't provide the highest levels of activity. In fact, they didn't even reach light levels of exercise. Despite that, the authors were optimistic that the games could have some effect on couch potato lifestyles: "Replacement of television watching with play of these games may be a tactic for reducing sedentary behaviour."

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