



SURPRISE! VIDEO GAMES CAN ACTUALLY GET US MOVING

Related reading

▶ [Activ8 your family while watching TV](#)

▶ [Getting active with video games and other techno helpers](#)

▶ [The Wii: as good as the real thing?](#)

Let's face it: we are a nation of couch potatoes. Despite the apparent popularity of all kinds of outdoor and indoor sports and physical activities, more than half of Canadian adults 20 years of age and older are not physically active, according to the Canadian Fitness and Lifestyle Research Institute's (CFLRI) 2005 Physical Activity Monitor. These inactive lifestyles, notes CFLRI, mean that most Canadians are facing an increased risk of chronic disease.

Youth in Canada, ages 13-19, are at even higher risk. Findings from the 2005 report show that 73-91% of teens don't get enough regular, physical activity to meet national guidelines for optimal growth and development. Girls are more likely to be inactive than boys.

Glued to the TV and the computer

For the most part, kids are sitting in front of a computer, a television or both, say parents. In the CFLRI Research Institute's 2003 capacity study, parents reported that on average, their kids spend almost three hours per weekday watching television and playing computer or video games and an additional 77 minutes on a typical weekend day playing computer/video games.

Well, if you can't beat them, join them. If we can't tear ourselves and our kids away from virtual reality, maybe we should be putting the appeal of video games to good use and take advantage of technology to help us to be active.

It's not as far-fetched as it sounds.

Working out with the video game bike

Researchers in British Columbia are testing interactive video games to see what kind of workout they can provide.

"If you can link physical activity with the attractive properties of video games, you've got a recipe for success," says Darren Warburton, assistant professor of cardiovascular physiology at the University of British Columbia (UBC). "This could be great for people who don't like physical activity but who do like video games."

An ongoing study enrolls sedentary male university students aged 18 to 24 years. All participants are matched for age and fitness levels and randomly assigned to one of two exercise groups. Half the group is assigned to a regular stationary bike that can be pedalled while listening to music. The other half uses a stationary bike equipped with a cycle ergometer—a device that measures how far you've travelled—hooked up to a video game console/machine with a full menu of games, including race car driving. In the race car driving game, the faster you pedal, the faster your onscreen race car goes. Participants use the bike's handlebars to steer around the onscreen race track.

Before starting the workouts, participants hear a lecture on the health benefits of physical fitness and a review of recommendations in the Physical Activity Guide. Then they're instructed to work out on the bikes three times a week for at least 30 minutes. Each participant wears a heart monitor and is supervised to make sure he is exercising at the intensity needed to improve fitness. After six weeks, fitness assessments are carried out in both groups.

Promising preliminary results reflect the fun factor

Preliminary results with the video game bike indicate that it delivers the same cardiovascular benefits as a regular stationary exercise bike by giving riders a workout that gets the heart into the fitness-building zone.

But the video game bike may do an even better job of keeping people exercising since the fun factor appears to keep riders coming back for more—and staying on longer and longer—even if they're not usually video game players.

Preliminary results show that in the regular stationary bike group, measures of VO₂-max—the gold standard of fitness which looks at the amount of oxygen your body can transport to working muscles during vigorous exercise—improved by three %. By comparison, fitness improved by 11% in the video game bike group.

“We didn't put an upper limit on the amount of time participants could ride the bike,” says Dr. Warburton. On average, people riding the video game bike stayed on 10-15 minutes longer than their counterparts riding the regular bike with music. Even though half of the participants were not avid video game players, they too were motivated by the new technology, notes Dr. Warburton.

“Getting people to get moving and to stay with it is our goal”

Looking ahead

The UBC/U-Vic group is planning another study to look at the impact of a dance video game on fitness levels in young women, as well as a study to test a computerized 12-week fitness program incorporating yoga, tai chi and martial arts into a workout routine that uses a video game console and a television.

It may be that the fun experience distracts from the initial discomfort and fatigue that often derails wannabe fitness buffs, points out Dr. Ryan Rhodes, associate professor of behavioural medicine at the University of Victoria (U-Vic). “We want to know if these games will help people stick with being active or if they're just a flash in the pan.”

Being active on a consistent and regular basis is the key to boosting fitness and enjoying health benefits. “Getting people to get moving and stay with it is our goal,” explains Dr. Warburton. “Interactive video games may be a way to get sedentary young people to get physically active,” he says, “but simply walking regularly has also been shown to lead to real health benefits.”

This article was prepared by the Alberta Centre for Active Living.

It can be found at www.centre4activeliving.ca/publications/chn/feature-articles/.

Production of this material has been made possible through a financial contribution from the Public Health Agency of Canada. The views expressed herein do not necessarily represent the views of Public Health Agency of Canada.

Date published: January 15, 2007