# New study recommends using active videogaming ('exergaming') to improve children's health

EurekAlert!

Cincinnati, OH, May 17, 2013 -- Levels of physical inactivity and obesity are very high in children, with fewer than 50% of primary school-aged boys and fewer than 28% of girls meeting the minimum levels of physical activity required to maintain health. Exergaming, using active console video games that track player movement to control the game (e.g., Xbox-Kinect, Wii), has become popular, and may provide an alternative form of exercise to counteract sedentary behaviors. In a study scheduled for publication in *The Journal of Pediatrics*, researchers studied the effects of exergaming on children.

Dr. Louise Naylor and researchers from The University of Western Australia, Liverpool John Moores University, and Swansea University evaluated 15 children, 9-11 years of age, who participated in 15 minutes each of high intensity exergaming (Kinect Sports – 200m Hurdles), low intensity exergaming (Kinect Sports – Ten Pin Bowling), and a graded exercise test (treadmill). The researchers measured energy expenditure. They also measured the vascular response to each activity using flow-mediated dilation (FMD), which is a validated measure of vascular function and health in children.

They found that high intensity exergaming elicited an energy expenditure equivalent to moderate intensity exercise; low intensity exergaming resulted in an energy expenditure equivalent to low intensity exercise. Additionally, although the low intensity exergaming did not have an impact on FMD, high intensity exergaming significantly decreased FMD, suggesting that the latter may improve vascular health in children. High intensity exergaming also increased heart rate and the amount of energy burned. Participants reported similar enjoyment levels with both intensities of exergaming, which indicates that children may be equally likely to continue playing the high intensity games.

According to Dr. Naylor, "Higher intensity exergaming may be a good form of activity for children to use to gain long-term and sustained health benefits." These findings also support the growing notion that high intensity activity is beneficial for children's health, and high intensity exergaming should be considered a means of encouraging children to become more active.

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