

ABSTRACT

OXYGEN COST AND HEART RATE RESPONSE DURING INTERACTIVE WHOLE BODY VIDEO GAMING

This study examined heart rate response (HRR) and oxygen cost during Interactive Whole Body Video Gaming (IWBVG) in an effort to determine if IWBVG could be a viable alternative to traditional forms of exercise. In addition, this thesis explores the etiology, treatment, and prevention of obesity and the potential role IWBVG could play in the control and prevention of this disease. Indirect calorimetry and HRR are utilized to determine the aerobic demand of IWBVG. Although the level of intensity reached by participants during IWBVG was sufficient for developing and maintaining cardiorespiratory fitness in older adults, activity levels evoked by the specific video game were too low in duration (<10 min.) to meet requirements set by the American College of Sports Medicine. Further development and improvement of IWBVG could provide individuals with a more appropriate alternative mode of exercise.

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