

Obesity Fitness Expo 2017: The new exercise regime: Active virtual reality games and health-Marialice Kern- San Francisco State University, USA

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With the increase in technology, individuals have begun thinking about new ways to increase their physical activity levels. People who are easily bored with conventional modes of exercise have begun looking to incorporation Virtual Reality (VR) into their fitness practices. Some VR games have very low activity levels associated with them, while others have very high levels. How much real exercise can you achieve when playing VR games? If you use your Heart Rate (HR) as the measure, is that just an indicator of your excitement or fear of the image coming at you, or is it a valid measure of exercise intensity? At San Francisco State University, we have been working with the VR Institute to quantify (through measures of oxygen consumption (VO₂) and HR), the level of physical exercise achieved in specific VR games. We have developed a rated system (VRMet) which allows us to compare the caloric expenditure of playing these games to more conventional forms of exercise (i.e., walking, jogging, running, etc.) with this information, individuals can make informed decisions on the use of their time playing VR games and each game's value to their health practices, as well as their added exercise enjoyment. This study will explore the evidence we have collected and where our information may lead VR and health in the future.

During the harshest months of Minnesota's long dark winters, when it only takes a few moments for your eyes to start watering and your cheeks to start biting, I give up my outdoor

hobbies and get creative to exercise indoors. Sometimes it means jumping on a stationary bike. But I find myself increasingly turning to a completely different landscape: virtual reality.

Putting a ski mask-like VR headset over your eyes immerses you in a virtual world where you can watch movies, play games and, yes, exercise. The sensors track the location of your hands, body, and head as you crush your opponents as Adonis Creed in *Creed: Rise to Glory*. Other apps allow you to dance, ride a bike, do yoga, and meditate.

On sites like Reddit, praise abounds on the mental and physical benefits of exercise in virtual reality, often from people who have struggled to make other exercise habits last. One of these RV enthusiasts, Robert Long of Maryland, said that he had used VR games to improve his health and lose over 100 pounds after years of pain management from two car accidents. There are many factors that contribute to weight loss, but the before and after Long photos have generated health discussions in forums that are generally devoted to sedentary entertainment.

"Most people never stick to training because it's not fun, and you know it's training," says Long but VR has the ability to deceive the mind into thinking it is a game, not an exercise."