# Video Games

## Play or "Playlike Activity"?

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What made the most money on its first day of release—the last *Harry Potter* book, the most recent *Star Wars* movie, or *Halo 3*? The surprising answer is *Halo 3*.[1] Have you even heard of *Halo 3*?

If not, it may be because it is not a book or a movie but a video game. In this issue of *American Journal of Preventive Medicine*, Weaver et al.[2] should be applauded for reminding us that video games are currently popular not only among young people but also among adults. Indeed, the average video-game player in 2009 is aged 35 years.[3]

In their cross-sectional study, Weaver et al.[2] find that video-game playing was associated with higher BMI among men and depression and poorer overall health status among women. As the authors appropriately acknowledge, further study will be necessary to determine whether these findings are causal given the study methodology. But do these relationships make theoretic sense?

### Playlike Activities

How might video games be like food? Michael Pollan, in his recent book *In Defense of Food: An Eater's Manifesto*, describes how many 21st-century health woes may be related to eating less "food" and more edible "foodlike substances."[4] Like food, foodlike substances stimulate the right taste buds and provide calories. However, foodlike substances do not provide many other things for which we *do* need food (e.g., vitamins, minerals, and micronutrients)—and they often provide extra things that we really *do not* need (e.g., trans fats).

Like food, play is essential to human development; it is through play that we develop crucial physical, emotional, social, and moral skills necessary to be functional beings.[5–7] It is not an accident that the more advanced a species is, the more it plays.[8]

However, just as there are differences between the actual foods to which our bodies have become accustomed during the past 200,000 years of being *Homo sapiens* and the foodlike substances introduced during the past 100 years, there are noteworthy differences between the oldest forms of play (e.g., chase games) and today's "playlike activities." These playlike activities may stimulate the right parts of the brain to be engaging—and they may even provide other values of play, such as improving hand–eye coordination and understanding of rules. However, the differences between today's playlike activities and original forms of play may illuminate some of the observed health-related correlates discovered by Weaver et al.[2]

Original forms of play were highly physical, whereas today's playlike activities are often sedentary. The first board game (probably *senet*) apparently did not appear until about 5000 years ago.[9] But the real increase in time with sedentary game-playing has come only in the past 40 years, as advances in technology and marketing have enabled video games to become more compelling and more stimulating.[3] It is not surprising that this increased time may be associated with increases in BMI.[10–12]

With regard to their finding of increased psychopathology among women, Weaver et al.[2] offer the hypothesis that women may self-medicate for psychopathology via video games. This is certainly possible. It is also possible that while original forms of play strongly facilitate human interaction, relationship, and bonding, today's playlike activities are more commonly used in isolation, minimizing some of the original value of these activities. And even during many "social" and "interactive" games, such as *World of Warcraft*, the participants are separated by hundreds of miles, pretending to be violent creatures completely different from themselves. Displacement of pro-social relationship-building play with these activities may hinder appropriate social and emotional development and contribute to depression.

### Serious Games

But what about the ingenuity of role-playing games such as *World of Warcraft* and *The Sims*? What about the ability of *Where in the World Is Carmen Sandiego* to educate and encourage love of learning? And what about the potential value of interactive multiplayer platforms that bring people together from all over the globe to play?

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As we consider the potential risks of video games, it is important to also acknowledge the great potential benefits of this medium and endeavor to co-opt these benefits for public health. Although video-game playing is often sedentary, there is a growing class of "active" video games.[10] Moving your legs back and forth in the living room as if you are skiing is not likely to increase your metabolism as much as actual skiing, but it is more convenient and feasible for today's lifestyles. Initial findings suggest that playing active video games is associated with some increases in objective measures of energy expenditure.[10,13] The question remains, however, of whether these games actually succeed in changing clinically relevant outcomes over time.

And physical activity is only the start. There is an entire industry developing around "serious games,"[14] which have been defined as

> mental contests, played with a computer in accordance with specific rules that use entertainment to further government or corporate training, education, health, public policy, and strategic communication objectives.[15]

In the area of health, a large Games for Health conference—part of the Serious Games Initiative of the Woodrow Wilson International Center for Scholars and assisted by a grant from the Robert Wood Johnson Foundation—is conducted annually.[16]

Much remains to be researched in this area, because video games have been developed to do everything from educate regarding street safety,[17] distract from pain,[18] improve self-esteem,[19] and train surgeons in endoscopy.[20] However, it is not clear to what degree these games actually work. Once more is understood about the effectiveness of these games, practitioners can be guided to effective games and designers can be encouraged to improve the ones that are not as effective.

However, the greatest challenge will be maintaining balance. How do we simultaneously help the public steer away from imitation playlike activities, harness the potentially positive aspects of video games, and keep in perspective the overall place of video games in our society? There are massive, powerful industries promoting many playlike activities. Those industry giants that can afford to will successfully tout the potential health-related benefits of products they develop. But who will be left to remind us that—for children and adults alike—Hide-And-Seek and Freeze Tag are still probably what we need most?

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