Video Gaming-helpful or harmful?

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This is the question for a lot of parents. It's pretty clear that any person can spend too much time video gaming because doing too much of any fun thing makes for imbalance. Also, when a child lives in a world of many hours of video gaming, then their primary experience and sense of their world does not match the other parts of the world they need to live in. Dr Ruff, in a recent article in Clinical Pediatrics says "When kids get accustomed to such a rapid tempo, it's hard for them to adjust to the comparatively slow pace of the classroom. They transfer the sense of urgency they've seen at home to their academic endeavors."

Randy Kulman, Ph.D., founder and president of LearningWorks for Kids: "There is no question that playing video games affects the brain. In existing studies, neuroscientists have used functional magnetic resonance imaging (FMRIs) to see how video games can change the structure of the brain. And the results show that video games can actually improve brain-based skills and help kids with ADHD.

"Researchers Daphne Bavelier and Shawn Green have demonstrated that playing action-based video games can improve processing speed. Torkel Klingberg has shown that consistent use of adaptive video games improves working memory skills and alters brain structure.

"Increases in grey matter in the right hippocampus, the cerebellum, and right prefrontal cortex were observed in a study of adults playing Super Mario Bros. Another study demonstrated that playing Tetris resulted in a larger cortex and increased brain efficiency."

"StarCraft, an action game, can lead to improved brain flexibility and problem solving. Playing Rayman Raving Rabbids can improve reading in children ages 7 to 13. Brain-training video games change brain functioning and slow the degree of mental decay in the elderly. All of these findings are well documented."

"However, just as with virtually anything else in the world, too much of a good thing is bad for you. If you drink too much juice, eat too much fruit, or spend too much of your time jogging, there will be negative effects. Helping your child to have a balance of physical, social, unstructured, creative, and digital play, is vital. With video games, playing between 60 to 90 minutes a day appears to benefit kids the most."

The young brain is highly malleable. As it matures, some brain cells are continually making new connections with other brain cells, a process known as 'arborizing,' while others are being 'pruned' back. Arborizing and pruning determine how circuitry is wired in the prefrontal cortex, the region that is largely responsible for impulse control and the ability to concentrate. We've failed to acknowledge the extent to which environmental factors (possibly video gaming) influence these processes.".

Dr. Ruff: "There hasn't been much research on the role of the environment in ADHD, but some studies are suggestive. In 2004, University of Washington researchers found that toddlers who

watch lots of TV are more likely to develop attentional problems. For every hour watched per day, the risk rose by 10 percent.

Dr. Ruff: "I counsel parents to limit the amount of TV their kids watch. I urge them to read to their kids every day, starting at age one, and to play board games and encourage other activities that promote reflection and patience. I also urge parents to do more slow-paced, step-by-step activities with their children, like cooking and gardening. Carve out more quiet time, when you're not so busy. Put down the cell phone, and stop multitasking."

"As you turn off the TV, turn on human interaction. Social connectedness bolsters the skills that minimize ADHD's impact. So have family meals often, read aloud together, play board games, go outside and shoot hoops or throw a Frisbee — play, play, play.

Dr. Ruff: "The brain can relearn executive functions like planning and attention well into the fourth decade of life. Consistent discipline, less TV and video games, and an emphasis on exercise, seem to be key. Exercise promotes on-task behavior and helps relieve the 'desk fatigue' that makes it hard for kids to sit still in class."

Colin Guare, a 24-year-old freelance writer and co-author of *Smart But Scattered Teens*: "If playing video games for hours guaranteed future success, I would be President by now.

"This isn't the case, of course. Still, much of my mental dexterity and sharper executive function — brain-based skills required to execute tasks — can be chalked up to my hours spent in front of a screen. Gaming has helped me manage my ADHD-related shortcomings."

ADDitude editors: Though parents will argue that video games are distracting, and an obstacle to learning, research suggests otherwise. In his book, *What Video Games Have to Teach Us About Learning and Literacy*, James Paul Gee, Ph.D., notes that what makes a game compelling is its ability to provide a coherent learning environment for players. Not only are some video games a learning experience, says Gee, but they also facilitate metacognition (problem solving). In other words, good games teach players good learning habits.

Several video games offer individuals with ADHD the chance to have fun and to polish their executive skills at the same time. Four popular, entertaining, mentally rewarding, and cool games for teens are: Portal and Portal 2, Starcraft and Starcraft II: Wings of Liberty, The Zelda Franchise, and Guitar Hero."

Randy Kulman, Ph.D.: "Watch your child play Minecraft or other skill building games for a few minutes, and you'll see that he plans, organizes, and problem-solves while engaged in a video game — skills we'd all like our ADHD kids to develop. Wouldn't it be great if he could transfer those game-playing skills to everyday tasks? He can, with a little help from you. Use the following three steps to tap into the skill-building potential of video games:

1. Help your child identify the thinking and problem-solving skills that are necessary to play the game.
2. Encourage metacognition and reflection by talking about how these skills are used in the real world.

3. Engage your child in activities that use these skills, and then talk with your child about how the skills connect to game play."

Kulman recommends the games Bad Piggies, Roblox, and Minecraft to build these skills.

So, here is the vote, at least from a couple of people in the field of ADHD. Basically, they would say that gaming 60-90 minutes a day, depending on the types of games would be advantageous to a person who struggles with executive functioning skills related to ADHD. The challenge for the parent is to monitor which games and how much game time they are allowing. Wouldn't it be great to hear a teen tell their friends "….my mom makes me play video games!"