

Are Videogames and Cartoons Bad for my Child?

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Background

Everything we do has a two-way interaction with our brain. Our brain sends signals out to our body to initiate all the actions we perform. And, our body sends signals to our brain about what is happening.

There is a centralized timing control mechanism for all our voluntary actions. It is a series of circuits (oscillators) in the basal ganglia of the brain. Whenever we do anything, all of those signals going out to our body go through these timing circuits. These circuits provide the correct timing relationships between the brain and the body. Coordination happens in our movements because these circuits have learned how to move the various parts of our body to achieve the actions we want to perform.

If these circuits are badly adjusted or poorly programmed, coordination suffers. Depending on the condition of these circuits, there can be many more problems than just poor coordination; there can be ADHD or CAPD or other developmental problems. Measuring the adjustment and the programming of these circuits is an important part of understanding what is going on for someone who has coordination or developmental problems.

Adjusting and programming these circuits

The brain is malleable. The brain builds circuits to manage anything we repeat. The way the brain does this is that it uses those signals that come from the body which tells the brain what is happening in the body. These are called proprioceptive signals.

If we have poor coordination, the proprioceptive signals from the body tell the brain about the poor coordination. As we repeat these poorly coordinated activities, the brain builds and maintains circuits which support this poor coordination. It keeps the poor coordination continuing. This also keeps the other conditions of ADHD, CAPD, and/or PDD continuing to be maintained.

To break this cycle, we must subject the body to highly rhythmic activities. We give the brain proprioceptive signals which are coordinated. After we have done this enough (many tens of thousands of rhythmic repetitions) the brain has built new circuits which provide coordination. These new circuits replace the older

(poor coordination) circuits and the ADHD, CAPD, and/or PDD conditions start to melt away. After the circuits are re-built most difficulties go away within 6 months.

To provide these rhythmic activities, we have a program which families do for themselves at home. It is an Internet-delivered, rhythmicity training program that includes testing and rhythmic exercises. These exercises increase in complexity as the person progresses through the program. The progression is guided by the results of their testing each training session.

What about the videogames and cartoons?

Whatever we repeat, our brains adapt and adopt. If we play videogames or watch cartoons, our brains develop circuits to manage that. If we are highly rhythmic, our brains develop highly rhythmic timing circuits. If we do things which are arrhythmic (non-rhythmic) our brains develop timing circuits which are non-rhythmic.

Cartoons are arrhythmic. They do not have rhythm. They change speed and tempo constantly. Those who watch cartoons constantly are subjected to non-rhythmic stimuli. But, these stimuli are not the types of signals which build new timing circuits. Building new timing circuits (with those proprioceptive signals) require physical actions. Cartoons may hold the focus of those who have non-rhythmic timing circuits. When the cartoons and the timing circuits are both non-rhythmic, they can easily stay in rapport. Cartoon watching doesn't actually build non-rhythmic timing circuits. But, it does help a person stay non-rhythmic.

Interestingly good rhythm and timing will help a child be much better at video games, but playing them in no way helps the timing circuits. In fact most videogames are arrhythmic. Just like watching cartoons, those who play videogames are subjected to non-rhythmic stimuli. But, with videogames there is a lot of physical activity. The game-player is acting and reacting to the non-rhythmic stimuli. This sends strong, repetitive, non-rhythmic proprioceptive signals to the brain. This means that playing these non-rhythmic videogames causes non-rhythmic circuits to be built. Non-rhythmic videogames (the overwhelming majority of videogames) cause the development of the circuits which foster poor coordination, ADHD, CAPD, and other PDD difficulties.

Videogame developers and cartoon producers need to understand this aspect of their products and they need to include more rhythmic activities to counteract the destructive characteristic of their media.

Parents need to understand this about videogames and cartoons. They need to manage more effectively the types of stimuli with which their children interact. They need to moderate the effects of these non-rhythmic activities with other or additional activities which are very rhythmic.