

CHAPTER 2: ALL REVVED UP AND NOWHERE TO GO

How Electronic Screen Media Affects Your Child's Brain and Body

On the eve of his big sister Liz's high school graduation, **nine-year-old Aiden** sits with his parents and relatives at a celebration dinner, bored by their "adult" conversation and irritated at all the attention showered upon Liz. He can't wait to get back to his video game! Before dinner, Mom had (annoyingly) called him away to join the family, and then she got mad when he spent a few minutes getting to the next level and saving his game. So many people in the house make him restless; he squirms uncomfortably and drums his fingers on the table, waiting to be excused.

Finally, he is allowed to escape the dinner table, and he settles into a corner of the living room couch to play his Nintendo DS. For the next hour or so, **he is completely oblivious** to the company in the house. Although he's already played much longer than his mother likes, she lets him continue, knowing these family situations are a little overwhelming for him. And besides, **the game keeps him occupied. *What's the harm? she thinks. It's just for today.***

However, in the meantime, a perfect storm is brewing. As the play continues, Aiden's brain and psyche become overstimulated and excited — on fire! His nervous system shifts into high gear and settles there while he attempts to master different situations, strategizing, surviving, accumulating weapons, and defending his turf. His heart rate increases from 80 to nearly 100 beats per minute, and **his blood pressure rises from a normal 90/60 to 140/90 — he's ready to do battle, except that he's just sitting on the couch**, not moving much more than his eyes and thumbs. The DS screen virtually locks his eyes into position and sends signal after signal: "It's bright daylight out, nowhere near time for bed!" **Levels of the feel-good chemical dopamine rise in his brain**, sustaining his interest, keeping him focused on the task at hand, and elevating his mood. The intense visual stimulation and activity flood his brain, which adapts to the heightened level of stimulation by shutting off other parts it considers nonessential.

The visual-motor areas of his brain light up. Blood flows away from his gut, kidneys, liver, and bladder and toward his limbs and heart — he's ready to fight or escape! The reward pathways in his brain also light up and are reinforced by the flood of dopamine. He is **so absorbed in the game, he doesn't notice** when his little sister, Arianna, comes over until she puts her chubby hand on the screen, trying to get his attention.

"DooOOON'T!!" he shouts and **roughly shoves her** out of the way. Arianna falls backward, bursts into tears, and runs to their mother, who silently curses herself for letting Aiden play this long.

"All right, that's it. Time to start getting ready for bed. Get your pajamas on and you can have a snack before you go to bed," she says, **pulling the DS out of Aiden's hands and turning it off** in one fell swoop. Aiden looks at his mother with rage. How dare she ruin his game because of his stupid sister!



“Fine!” he shouts, runs up the stairs, and slams his bedroom door. **His primitive brain is fully engaged now, turning him into an enraged animal** ready to fight off all challengers. He rips all the sheets off his bed and then throws his lamp on the floor, providing a satisfactory crash and shatter. Thinking about how wronged he’s been and filled with visions of revenge, he kicks the wall a few times and then **pounds on his bedroom door, putting a big hole in it.**

Downstairs, his relatives sit in quiet shock and murmur to each other how they’ve never seen him act like this. Dad runs up the stairs to contain his son. Calmly, his dad holds him in a bear hug from behind, **waiting for the rage to subside.**

As **the dopamine in his brain and the adrenaline in his body begin to ebb**, his rage loses its focus. Now, the pent-up energy takes on a disorganized, amorphous form. Aiden feels like he can’t think straight or get himself together. While he spaces out, his dad helps him put his pajamas on and they go back downstairs. Stress hormones remain high, however, making it difficult for him to relax or think clearly. He seems a little confused, actually. His relatives look at him with a mixture of concern and love, but they also wonder why his parents let him “get away with” this kind of behavior. His mother intuitively knows that direct eye contact will overstimulate him again, so she approaches him slowly from the side, and rubs his back gently.

When his favorite aunt looks him in the face sympathetically, he immediately distrusts her intentions. Eye -to-eye interaction is interpreted by his primitive-mode brain as a challenge, and he starts getting revved up again. His mother intervenes, and takes him up to his room. She lowers the light, settles him into bed, and starts to read him a soothing story. **His nervous system attempts to regulate** itself back to normal, but it seems to still be held hostage by his hyped-up emotions. That night, after he does finally fall to sleep, Aiden **awakens repeatedly with panic attacks** — his heart races and blood pounds in his ears. He’s scared of the dark, and worried that his angry outburst has upset and alienated his parents. His mother, meanwhile, confiscates the DS and decides to take it with her to work on Monday. (**She really wants to throw it in the trash, but it was expensive!**)

The following morning, the fight in Aiden has subsided, but the aftermath leaves him in a fog, listless, weepy, and exhausted. He experiences an increased **craving for sweets while cortisol, the stress hormone, drives his blood sugar up and down erratically.** It will take weeks before his body, brain, and mind return to some sense of balance.

Meanwhile, his mother reaffirms her commitment “**to get rid of those damn video games.**”

Excerpted from the book *Reset Your Child's Brain: A Four Week Plan to End Meltdowns, Raise Grades, and Boost Social Skills by Reversing the Effects of Electronic Screen Time*

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