

Thinking Outside the Roblox-A guide to the healthy use of digital technology

Dr. Clifford Sussman, 14th March 2025

CAC Speaker Series

Dr. Sussman's talk focused on what screen time addiction is, how it impacts the brain and what warning signs we should be aware of as parents. Whether you are seeing negative behaviours in your children or you want to set healthy limits Dr. Sussman's insights and guidance can help us navigate the complex world of screen time addiction.

As parents in today's digital age where screen time is an inevitable part, it is important for us parents to ensure that kids are engaging with screens in an intentional, educational balanced and healthy way. Excessive screen time is harmful to the physical and mental health of our children and in some cases it may even develop into an addiction when you cant stop using a screen even though you know it is causing problems such as decreasing grades, sleep disorders, aggression, emotional and social problems.

Effects of excessive screen use on the brain

In his presentation, Dr. Sussman explained the impact of excessive screen use on the brain, and how dopamine levels can create addictive behaviour patterns.

Dr. Sussman explained that the human brain is like a car, with a driver and brakes. The driver is the need for immediate gratification and continuous stimulation, to get what you want when you want it. Dopamine is released in the brain which makes us continue to pursue whatever it is when we want it. The driver is the middle part of the brain which is very well developed by the time our kids are in Middle School. The pre frontal cortex which performs the role of the brakes in the car, fully develops fully much later around 25-30 years of age. So when the kids are in middle school, there are no brakes to tell them that they need to stop gaming/checking notifications/surfing the net and get back to their homework instead. Though humans have the most developed pre-frontal cortex, and are the only species who can exercise patience to wait to get what we want, this skill develops much later, only in the mid to late 20s'.

We have become functionally dependent on our devices, if we need to retrieve something, we don't dwell on it, or think back, we whip out a phone, and search for whatever it is we are looking for. This is a much faster version, our brain loves shortcuts and teenagers like shortcuts and phones are enabling us to take these shortcuts. So what is wrong with being on screens? There is nothing wrong with being on screens except when you do so endlessly and Dr. Sussman explains why digital bingeing has an adverse impact on the brain.

Why do kids choose screens?

Kids choose screens for multiple reasons, for enjoyment, entertainment, and as a means to escape from the real world. The more kids engage on screens the more they tend to get drawn into a virtual world, especially through gaming platforms like Minecraft, Fortnite etc which the user can control the game as he plays, and kids have the option of playing with other kids from their school, and around the world. Kids get to interact and socialise with kids from the safety of their room. When kids began to use gaming platforms to socialise the line between gaming and social media gets blurred and when kids get sucked into massive multiplayer games, the dimensions of addiction and peer pressure are added to the equation.

Kids take to screens and gaming because they have the possibility of slipping into a character they represent on screen. They can hide behind the mask of their character, and can escape from reality. Through Discord, which is social media for gaming, kids can talk to other gamers, make plans to meet at games, communicate through chat windows to kids in their game, they can jump games and talk about non video game, kids tend to use social media through discord.

All of us are susceptible to endless scrolling, because algorithms are designed to suck us in, constantly throwing at us what we want to see. Social Media is a shortcut to socialisation, you can sit in your room and connect with those you want to without going through the trouble of getting ready and physically going to meet others. Social media allows communication in abbreviations, and levels the playing field. Screen use may be safe but it can develop into an addiction because of the chemical reaction through dopamine so it is very important to look at the larger picture.

What is Digital Bingeing?

Digital Bingeing is when kids spend hours playing video games, accessing social media and other screen based entertainment. Digital bingeing has a residual impact on our children's brains and behaviour. Dopamine is a neurotransmitter, a messenger molecule that is released in the brain when it is engaged in an instantly gratifying activity, such as when you are playing a video game. If you zoom in on the microscopic brain function, dopamine molecules are released by the pre synaptic brain cells, and the molecules travel through the synapse (gap between two brain cells/neurons) and are received by receptors on the surface of the post synaptic nerve cell for the signal to continue. Our brain derives the greatest dopamine flow when it is getting instant gratification, when it doesn't have to wait for stimulation. Video games, social media are designed to draw users in, so if you click on a link

that is of interest to you, you will notice that you will receive links with more information on the topic designed to suck you in.

What is Dopamine Desensitisation?

When kids play video games. The games start to stimulate the brain right away, and there is a lot of dopamine reaching the dopamine receptors in the post synaptic brain cell. The user is deriving pleasure and feeling stimulated, and if the user is on the screen for a prolonged period of time, the brain cannot sustain being bombarded by dopamine, and it gets desensitised to the effects of dopamine and develops a tolerance to it. This happens because of a process called down regulation where the number of receptors in the post synaptic nerve cell decreases.

At this point the user is now playing the video game not to feel good, but instead not to feel bad. He is desensitised to pleasure even though he has plenty of dopamine. At this point if a parent comes in and asks him to stop playing, the source of dopamine stops, the dopamine level will drop and he will now feel even less stimulated and therefore less pleasure than when he set out to play. The user will exhibit withdrawal symptoms such as irritability, anger and aggression, and more reward seeking behaviour. This conditioning can last a day, a couple of weeks or longer.

What this means is that digital bingeing is a high dopamine activity that is instantly and continually stimulating, leading to seeking of more stimulation, more boredom, more reward seeking behaviour and more digital bingeing. When kids go to school after bingeing on their phones, they tend to withdraw, because they are experiencing a reward deficiency system, they become aggressive, with a deeper reward seeking behaviour and so on into a disruptive downward spiral.

So Why Not Practice Abstinence?

When kids are addicted to drugs, as parents we try to get them off drugs, so why shouldn't we do the same when we know that excessive screen use can lead to addiction. The reality is that we are functionally dependent on screens. And it also presents an opportunity to learn important skills, like delayed gratification where kids need to finish their homework first to get onto to a video game. Each time kids practice delayed gratification they are exercising their pre-frontal cortex. Kids can also use screens as an opportunity to learn to apply brakes, play video games for an hour and then stop, and these are skills that kids should practice so they get better at them.

The common misconception is that if they are on a screen they are not being productive. That's not true, it is important for kids to have a balance between high dopamine activity (playing a video game, web surfing, scrolling on social media) and low dopamine activity.

Low dopamine activity is any activity with some delayed gratification such as playing board games, working on a hobby, reading a book, exercising.

What can we do as parents so our kids develop healthy tech habits

1) Balance high dopamine and low dopamine activities

Dr. Sussman's acclaimed original treatment model for excessive screen use is advising parents to help kids maintain a balance between high dopamine activities and low dopamine activities, i.e a balance between activities that are instantly and continually stimulating such as video games, social media and websurfing and low dopamine activities i.e activities with delayed gratification such as reading, playing board games, exercising, homework, pursuing a hobby etc.

So what can we do to get the kids to maintain a balance between High Dopamine Activities and Low Dopamine Activities.

2) Set Limits

How much time our kids spend on a screen matters, as being on a screen for a prolonged period of time implies constant release of dopamine rather than short bursts of dopamine. The constant release of dopamine over a stretch of time leads to down regulation of post synaptic dopamine receptors and a consequent desensitisation to the effects of dopamine and to the downward spiral of boredom and more reward seeking behavior and so on.

It is important to set aside a consistent and age appropriate block of time for kids to access screens, for a younger kid, around 30 mins and for an older kid, around 1 hr. Have the kids alternate low dopamine activities with their time on the screen. When the kids wait for their time on the screen they are practicing delayed gratification which is a very important skill and which also exercises their pre frontal cortex.

3) Enforce Short-term logical consequences

Kids are motivated by immediate, logical and short term consequences, so as parents we should enforce these consequences so kids know that we are serious and that their actions will draw consequences. If your kid doesn't stick to his time block on the screen, enforce another hour of LDA into the routine, so he has to wait longer the next day to access his time block for screens.

Don't punish non-screen behaviour such as bad grades with less screen time as that is not a logical consequence. And don't reward good behaviour with extra screen time, as the goal should be to enforce a consistent plan for a healthy balance.

4) Balance between micro-management and hands-off parenting

Dr. Sussman pointed out that as parents we tend to swing between two extremes, micromanaging kids or completely giving up and being too permissive. When we are too permissive we enable screen problems, and when we micro manage, our kids become dependent on us regulating them and do not develop skills for self regulation. It is important for us to strike a balance and also have our parenting style evolve as the child grows. When they are younger they would need us to manage and regulate but as they grow older we should allow kids the independence to self regulate while setting clear limits and enforcing logical consequences.

5) The Impact of Environment Cues on the Brain

The Human Brain is impacted by cues in the environment, when you step into the bar, you see bottles lined up in front of you, you smell alcohol, you hear the tinkling of glasses, and your brain produces dopamine in anticipation of the alcohol you might consume. Similarly at home, when a kid walks into a room full of devices, phones, tablets, laptops, the kid will want to get on to the device. Parents should put away devices in a room that is not a thoroughfare for the kids, out of sight from the areas where the kids spend the most time like the family room. Dr. Sussman recommends a separation of areas with HDA with devices as it is easier to have the kids go into a room with devices and come out of it, rather than us taking the devices away from the kids.

6) Do not allow screen use in bed

Dr Sussman recommends that kids should not be allowed to take their devices to bed as that is the time they need to unwind and prepare to sleep rather than get sucked into high dopamine activity of surfing and social media use. Kids should not be getting stimulated when they should be preparing to go to sleep.

7) As parents model behaviour

Kids look up to parents as role models, and learn more from what we do as parents than from what we say to them. So we as parents should also be conscious of modeling healthy screen behaviour.

The Red Flags that Parents should watch out for

So what happens when your interventions are not working and your kids are showing signs of addiction. What are the red flags to watch out for and seek professional help

Aggression when screen time is restricted/denied

Lying about screen time use

Stealing to pay for game upgrades, loot boxes etc

Suicidal Threats when screen time is restricted/denied

About Dr. Sussman

Dr. Clifford Sussman is a child and adolescent psychiatrist and a pioneer in recognizing and treating internet gaming disorder since 2008, long before it was recognized by the WHO as an official diagnosis. He has been running a private practice for over 12 years in Chevy Chase where he specialises in internet and video game addiction. He is an educator and a presenter on this topic and trains other clinicians as well. As a programmer, software developer and gamer himself, he is dedicated to helping people achieve healthier, more balanced relationships with digital technology.

For more information on the topic, Dr. Sussman's videos & poodcasts please visit www.cliffordsussmanmd.com