

Pornography and the Brain

Some statistics about porn use and its effects:

- 70% of guys 18-24 watch porn regularly
- 1 in 3 girls watch porn regularly
- 17% of girls are addicted to porn
- The porn industry makes \$10-12 billion a year
- 12 million hours per day are spent on the most used pornographic website
- 25% of internet searches are of a pornographic nature
- 35% of downloads are of a pornographic nature
- The average age of someone being exposed to pornography is 11 years old
- 70% of New Brunswick students admit having watched porn at school
- 20% of men admit watching porn at work, while 13% of women do it
- Sunday is the most popular day to watch porn
- More than 50% of those who consume porn regularly have lost interest in sex and one third of their partners have as well
- 40% of sex addicts lose their spouse
- 58% of sex addicts suffer considerable financial loss
- One third lose their job
- The consumption of porn increases marital infidelity by more than 300%
- 56% of divorces involved a spouse that had an obsessive interest in porn
- 68% of men who go to church consume porn regularly
- 50% of pastors consume porn regularly.
- How is your brain involved in all of this?
- You see, your brain is full of nerve pathways that make up what scientists call your “brain map.” It’s kind of like a hiking map in your head, with billions of tiny overlapping trails. These pathways connect different parts of your brain together, helping you make sense of your experiences and control your life. It’s called neuroplasticity: the ability for your brain to change continuously.
- When you have a sexual experience that feels good, your brain releases a chemical called dopamine in the reward center of your brain (it’s the same chemical that gets released when you eat something sweet). In response to the good feeling, your brain starts creating new pathways to connect what

you're doing to the pleasure you're feeling. Essentially, your brain is redrawing the sexual part of your map so you'll be able to come back later and repeat the experience. The same thing happens the first time someone consumes porn. The porn consumer's brain starts building new pathways in response to this very powerful new experience. It's saying, "This feels great! Let's do this again." Neurons that fire together wire together.

- But here's the catch: brain maps operate on a "use it or lose it" principle. Just like a hiking trail will start to grow over if it's not getting walked on, brain pathways that don't get traffic become weaker and can even be completely replaced by stronger pathways that get more use.
- These neuronal pathways are reinforced by a protein called DeltaFosB. It's like having a troop of soldiers helping groom the trail that was used and help make it become a permanent pathway. With DeltaFosB floating around, the brain is primed to make strong mental connections between the porn being consumed by individuals and the pleasure they feel while consuming. Basically, the DeltaFosB is saying, "This feels good. Let's be sure to remember it so we can do it again."
- DeltaFosB is important for learning any kind of new skills, but it can also lead to addictive/compulsive behaviors, especially in adolescents. DeltaFosB is referred to as "the molecular switch for addiction," because if it builds up enough in the brain, it switches on genes that create long-term cravings, driving the user back for more. And once it has been released, DeltaFosB sticks around in the brain for weeks or months, which is why porn consumers may feel strong cravings for porn long after they've stopped the habit.
- Overloaded with dopamine, the brain will try to defend itself by releasing another chemical called CREB (It's called CREB because no one wants to have to say its real name: cyclic adenosine monophosphate response element binding protein!) CREB is like the brakes on a runaway reward center; it slows the pleasure response. The CREB protein will actually block the dopamine receptors in the brain. With CREB onboard, porn that once excited a person stops having the same effect. Scientists believe that CREB is partly why consumers have to keep increasing their porn intake to get aroused. That numbed-out state is called "tolerance," and it's part of any kind of addiction.
- As porn consumers become desensitized from repeated overloads of dopamine, they often find they can't feel normal without a dopamine

high. Even other things that used to make them happy, like going out with friends or playing a favorite game, stop providing enjoyment because of the dulling effects of CREB. They experience strong cravings and often find themselves giving more of their time and attention to porn, sometimes to the detriment of relationships, school, or work. Some report feeling anxious or down until they can get back to their porn. As they delve deeper into the habit, their porn of choice often turns increasingly hard-core. Users are more likely to become sexually deviant. And many who try to break their porn habits report finding it really difficult to stop.

- The good news is, neuroplasticity works both ways. If porn pathways aren't reinforced, they'll eventually disappear, so the same brain mechanisms that lay down pathways for porn can replace them with something else.
- As you might expect, consuming porn is a very powerful experience that leaves a strong and lasting impression in the brain. Every time someone consumes porn—especially if they heighten the experience by masturbating—the part of the brain map that connects arousal to porn is being strengthened. Meanwhile, the pathways connecting arousal to things like seeing, touching, or cuddling with a partner aren't getting used. Pretty soon, natural turn-ons aren't enough, and many porn consumers find they can't get aroused by anything but porn.
- How bad is the problem? Put it this way: doctors are seeing an epidemic of young men who, because of their porn use, can't get it up with a real, live partner.
- Thirty years ago, when a man developed erectile dysfunction (ED), it was almost always because he was getting older, usually past 40. As his body aged it became more difficult to maintain an erection. Chronic ED in anyone under 35 was nearly unheard of. But those were the days before internet porn. These days, online message boards are flooded with complaints from porn users in their teens and 20s complaining that they can't maintain an erection. They want to know what's wrong with their body, but the problem isn't in the penis—it's in the brain.
- Study after study has shown that porn is directly related to problems with arousal, attraction, and sexual performance. Porn leads to less sex and to less sexual satisfaction within a relationship. Researchers have shown a strong connection between porn use and low sex drive, erectile dysfunction, and trouble reaching orgasm. Many frequent porn users reach

a point where they have an easier time getting aroused by internet porn than by having actual sex with a real partner.

After being exposed to pornography, men reported being less satisfied with their partners' physical appearance, sexual performance, and level of affection and express greater desire for sex without emotional involvement.

Porn use has been found to influence some users' sexual preferences, leaving them wanting what they've seen onscreen and significantly less satisfied with sex in real life (even though they know that porn scenes are staged).

Among the effects of the use of pornography are an increased negative attitude toward women, decreased empathy for victims of sexual violence... and an increase in dominating and sexually imposing behavior.

The Department of Justice and the National Center for Missing and Exploited Children both recognize that pornography is an element that adds to the serious problem of sex trafficking.

Science is only just beginning to reveal the effects on the brain associated with porn consumption. But it is already clear that the mental health and sex lives of its widespread audience are suffering catastrophic effects. From depression to erectile dysfunction, porn appears to be hijacking our neural wiring with grave repercussions

In the long term, it seems that sexual dysfunctions stem from porn use, especially the inability to achieve erection or orgasm with a real life partner. The quality of a marriage and commitment also appear to be compromised.

The desensitization of our reward circuitry sets the stage for sexual dysfunctions to develop, but the repercussions don't end there. Studies show variations in the release of dopamine can facilitate depression and anxiety. In agreement with this observation, people who watch porn say they experience increased symptoms of depression, a lower quality of life and diminished mental health compared to those who don't watch porn.

Porn use has been correlated with the deterioration of the prefrontal cortex— the region of the brain that houses executive functions like morality, willpower and impulse control.

To better understand the role of this structure in behaviour, it's important to know that it remains underdeveloped during childhood. This is why children struggle to regulate their emotions and impulses. Damage to the prefrontal cortex in adulthood is termed hypofrontality, which essentially predisposes a person to be more compulsive and have poor decision making skills. The adult brain can actually regress back into a juvenile state!

Now for the Good News: Jesus!

Jesus came to the earth not only to save us, but to redeem us from the curse of sin. He lives in us through His Holy Spirit. He has given us everything we need to overcome sin:

James 4:7 Resist the devil, and he will flee from you

1 Corinthians 2:16 But we have the mind of Christ

1 John 3:9 No one who is born of God practices sin, because His seed abides in him; and he cannot sin, because he is born of God.

Romans 6:6-7 ...our old self was crucified with *Him*, in order that our body of sin might be done away with, so that we would no longer be slaves to sin; for he who has died is freed from sin.

Romans 6:12-14 Therefore do not let sin reign in your mortal body so that you obey its lusts, and do not go on presenting the members of your body to sin *as* instruments of unrighteousness; but present yourselves to God as those alive from the dead, and your members *as* instruments of righteousness to God. For sin shall not be master over you, for you are not under law but under grace.

Sources:

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- barna.com
- The Conversation (non-Christian articles by researchers and academics)