

What Brain Scans Tell Us About Porn Addiction

WHAT BRAIN SCANS TELL US ABOUT ADDICTION

Cambridge Neuropsychiatrist, Valerie Voon, was featured last year in the UK documentary *Porn on the Brain*. Her research demonstrates that the brains of habitual porn users show great similarity to the brains of alcoholics. A brain structure called the ventral striatum plays a significant role in the reward system of the brain—the pleasure pathways. It is the same part of the brain that “lights up” when an alcoholic sees a picture of a drink.

Dr. William Struthers, author of *Wired for Intimacy*, sounds a similar alarm, teaching that viewing pornography and masturbating actually weakens the region of our brain known as the cingulate cortex—the region that is responsible for moral and ethical decision making and willpower.

THE BRAIN CHEMICALS OF PORN & SEX

In *The Porn Circuit*, Sam Black describes the various hormones and neurotransmitters involved when someone views porn and how each ingredient in this neuro-cocktail contributes to the problem:

- When having sex or watching porn, dopamine is released into a region of the brain responsible for emotion and learning, giving the viewer a sense of sharp focus and a sense of craving: “I have got to have this thing; this is what I need right now.” It supplies a great sense of pleasure. The next time the viewer gets the “itch” for more sexual pleasure, small packets of dopamine are released in the brain telling the user: “Remember where you got your fix last time. Go there to get it.”

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THE BRAIN CHEMICALS OF PORN AND SEX (CONT)

- **Norepinephrine** is also released, creating alertness and focus. It is the brain's version of adrenaline. It tells the brain, "Something is about to happen, and we need to get ready for it."
- Sex or porn also trigger the release of oxytocin and vasopressin. These hormones help to lay down the long-term memories for the cells. They "bind" a person's memories to the object that gave him or her the sexual pleasure.
- The body releases **endorphins**, natural opiates that create a "high," a wave of pleasure over the whole body.
- After sexual release serotonin levels also change, bringing a sense of calm and relaxation.

This system works the way it is supposed to work when you're having sex with your spouse. Together you can experience a high, an alertness of sexual pleasure, and the deep calm afterwards (norepinephrine, endorphins, and serotonin). With each sexual embrace you are emotionally bonding to this person (oxytocin and vasopressin). Over time a craving for sex is transformed into a desire for one another (dopamine).