The Brain Science Behind Internet Pornography Addiction

After many years of working with those caught in the trap of pornography addiction, we find that struggling individuals usually wrestle with feelings of deep shame, self-loathing, confusion and exhaustion. They are completely perplexed as to why they can’t break free, and why pornography is so powerful.

Pornography is powerful because it taps into intense emotional, biological and chemical connections throughout the brain and body. We have a divinely designed “built-in” sexuality and attraction. Pornography “mimics” or “counterfeits” this built-in attraction. Its goal is to ignite, excite and exploit these natural urges. We believe that sexual intimacy is good; it is a beautiful gift. God designed it to be powerful for some very specific reasons. We reject the perverted spin that the majority of modern media has put on it. They are wrong. They are promoting sexuality in a way that is directly contrary to physical, mental, spiritual and emotional health, loving relationships and overall success and happiness.

The most effective way we know to understand their perversion of sexuality is the “Funnel of Sexual Process,” an illustration first developed by the late Dr. Page Bailey and expanded by the RECLAiM Sexual Health Team.

The Funnel of Sexual Process

Imagine an hourglass or funnel, wide at the top and slowly narrowing down to a very small passageway in the center and then back to a wide opening at the bottom. This is a perfect illustration of how the brain behaves in sexual process. In every-day life, our brain has a relatively wide perspective. But once an individual becomes sexually aroused, the brain immediately begins narrowing its focus as it releases a tidal wave of neurochemicals, culminating at climax, and then returning to its wide perspective. Let’s look at this funnel experience from two opposite vantage points, in a healthy marriage relationship compared to using pornography and masturbation. In doing this, let’s track some of the neurochemicals released during the funnel experience.

Dopamine  First is the neurochemical dopamine. In the brain, dopamine narrowly focuses attention and energy; causes us to ignore negatives; triggers feelings of ecstasy and arousal; and creates a powerful dependency. In a loving marriage relationship this is a wonderful chemical because it causes the couple to focus narrowly on each other and to ignore the negatives—we really appreciate it when our spouse’s brain releases dopamine! Dopamine also creates a healthy “dependency” in the relationship. However, while this powerful chemical process in pornography use is almost identical, the outcome is radically different. The porn viewer’s energy and attention are narrowly focused on the images. Any thoughts of God, spouse, family, consequences, future goals, etc., are ignored. The release of dopamine blocks out any negative consequences of using pornography and creates a chemical dependency linked to the images that is so powerful it has been directly compared to drug addiction.

Norepinephrine  Next, let’s look at the neurochemical norepinephrine. Whatever is being experienced when this chemical is released, the smallest details of that experience are seared in the brain as if with a branding iron. In a loving marriage, wonderful details of the intimate experience are remembered and recalled with fondness, bringing the couple closer together. In lust, the release of norepinephrine causes the brain to remember the smallest details of every pornographic image. In the future, the vivid recall of these graphic images can be triggered for any number of reasons, even without a conscious desire or intention.

Oxytocin  The next neurochemical is known as oxytocin, the “cuddle chemical.” It was first discovered flooding the brains of mothers holding their newborn child for the first time, creating a powerful bond and causing the release of milk for nursing. Oxytocin is a “bonding chemical” and is released when people hold hands, embrace and kiss. During marital intimacy, a tidal wave of oxytocin is released in the funnel at climax, forging a powerful bond between husband and wife. But what happens when oxytocin is released during pornography viewing and masturbation? Since it’s all fantasy, with no real human connection and sharing, the oxytocin release is grossly insufficient and leaves the individual feeling even more empty and lonely than before. Unfortunately, this only pushes many to return to the funnel through pornography, trying to fill the “hole in the soul,” which of course, pornography can never accomplish.
**Serotonin** After climax, serotonin is released into the nervous system creating strong feelings of calmness, satisfaction and release from stress. Serotonin is referred to as the “natural Prozac.” In a marital intimacy this offers a bonding experience that brings joy in the midst of life’s challenges. Because many individuals turn to pornography as a way to self-medicate and escape the trials and pressures of life, the release of serotonin is a big factor in pornography becoming addictive and being their “drug of choice.”

**Vasopressin** This is a bonding and commitment chemical. It is released in the male brain during sexual activity, surging at the moment of ejaculation. Released during the marital embrace, it enforces a man to be loyal and protective of his marriage and family. In illicit sexual experiences, it bonds the man to the images, fantasies and objects involved, such as the computer, while it reinforces loyalty to self. It causes increased aggression towards against potential threats to the activity.

**Prolactin** The hormone prolactin contributes to the feeling of sexual satisfaction and relaxation. Intercourse orgasms release four times more prolactin than masturbatory orgasms. Thus, pornography and masturbation are not as satisfying and the search for more sexual release begins quickly, leading to the desire for more masturbation.

**Nitric Oxide** This is a molecule the body produces to help cells communicate with each other by transmitting signals throughout the entire body. Nitric Oxide allows for adequate blood flow needed for an erection and orgasm. In a normal marital relationship, the frequency of intercourse is usually at a safe level and doesn’t cause a drain of Nitric Oxide. Excessive masturbation causes the liver to release too much nitric oxide and this causes the nervous system to be overloaded. The result is a deficiency of elements, such as Nitric Oxide, which can cause visual problems, such as blurry vision and eye floaters, along with sexual dysfunctions, such as impotence, weak erections and premature ejaculations. Heavy porn users often have erectile dysfunction.

These chemical releases are just one way to understand that there is a logical, reasonable, scientific explanation behind how you got caught up in pornography. Comparing this “Funnel of Sexual Process” from two opposite vantage points — viewed through the “Funnel of Love,” which is God’s design for healthy marital intimacy, and then viewed through the “Funnel of Lust,” which takes place during pornography use and other unhealthy sexual experiences — compares the effects of the neurochemicals released. It demonstrates the beauty of God’s grand design for sexual intimacy and how it can go horribly wrong when not experienced in the right context.

---

**FUNNEL OF LOVE**

Sexual arousal with spouse . . .

Stresses, worries and distractions, fade . . .

Intercourse with spouse . . .

Feelings of intimacy, love, and closeness increase . . .

Strong sense of love and unity, with contentment . . .

**NORMAL DAILY PERSPECTIVE**

**TAKING IT ALL IN**

**NARROWING FOCUS**

**LEAVING THE WORLD BEHIND**

**CLIMAX**

**RETURNING TO THE BROAD VIEW OF THE WORLD**

**FULL IMPACT OF THE SEXUAL EXPERIENCE**

---

**FUNNEL OF LUST**

Sexual arousal with porn . . .

Willpower, anxiety, values, guilt, fade . . .

Masturbation with self . . .

Feelings of shame, and frustration increase . . .

Strong sense of isolation and anxiety with craving . . .

---

Keep in mind that you are a good and valuable human being who has developed a dependency on an extremely powerful “brain-chemical-releasing activity” for escape, self-medication and pleasure. This is similar to anyone who chooses alcohol, drugs, food or any other personal “drug of choice.” The good news is, just as with any other addiction, there is a logical way out. You can break free from pornography compulsion and addiction.

There are ever-growing numbers of individuals falling into the funnel of lust from pornography and other unhealthy sexual behaviors.

If you, or people you care about, are struggling with this challenge, know that there is hope and healing!

Visit our website to learn more!

www.ReclaimSexualHealth.com