



The One Thing You Didn't Know About Orgasms

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Often thought of as the Holy Grail of good feelings, having an orgasm is extolled by most people as pure pleasure. A roll of thunder through your brain, your body and likely your bed frame (as well as your housemates' ears): it's all good fun, right? Well, for some women, the mood implications of orgasms aren't all necessarily cheery all the time. In some cases, in fact, the post-climax come-down can be more of a serious cranky slump than an afterglow, and science is beginning to sketch out a picture as to why for some people, orgasms can lead to a bad mood.

And it's not just that the chemicals in your brain are receding after you've had a good time, leaving you feeling bereft — the body actually has a mechanism in place to make our normal comedown off our orgasm highs soft and sweet. But that mechanism isn't enough to prevent all people from falling into foul moods due to oxytocin and amygdala activity after you've gotten nasty. The orgasm is a complicated thing, as is brain chemistry, but as we understand the big O with more certainty, we're also getting to know what is, for some women, its less charming side.

So let's take a journey into the sticky, sweaty and, for some people, unhappy post-coital period, and examine why some folks get bummed out in bed.

What Happens After A Normal Orgasm

An orgasm is a spectacular firework in your neural pathways, releasing oxytocin (the "cuddle chemical"), dopamine and hormones like dehydroepiandrosterone. It also decreases activity in the parts of the brain that pay attention to fear and anxiety. Orgasms are intensely awesome, and typically, you should continue feeling awesome for a while after you have one.

According to Tufts's Neuroscience On The Brain blog, the post-coital neurochemistry of orgasm is designed to make you feel sated and happy, rather than empty or depressed. As dopamine levels deplete, the body produces prolactin, a chemical most commonly associated with breastfeeding in women but which is actually present in both genders. Prolactin is a big contributor to what's called the "refractory period" after sex, the resting period where a dude's not physically capable of having another orgasm. In both sexes, however, prolactin increases following sex, and is meant to make us feel completely sated; studies have shown we feel even more content after partner sex than we do after masturbation, because partnered sex leads to higher prolactin levels. Hence the post-coital "glow" (and why dudes are prone to fall asleep afterwards).

But for some people, that chemical cocktail isn't the recipe for happiness it seems to be for others. People on SSRIs (serotonin re-uptake inhibitors) will already know that less intense orgasms (or even an inability to orgasm) may occur as a result of their meds, because serotonin actually acts as an orgasm "brake" on dopamine rushes. But it goes deeper than that. Orgasms may cause you a bit of emotional trouble, and here's why.

For Certain People, Oxytocin Spells Suspicion

In most people, oxytocin is known as the "cuddle chemical;" it's heavily associated with human bonding, both between parents and children and between intimate partners. It's also being used as an aid for people with social anxiety, as it seems to help us read social cues with more dexterity. But for some, it turns out that

oxytocin release may actually do the opposite, creating the urge to be suspicious of our partners instead of bonding with them.

A 2011 study by the Mount Sinai School of Medicine was one of the first to highlight the possible dark side of oxytocin for some people — specifically, those with diagnoses of borderline personality disorder. In their study, subjects — some with the disorder and others without — were given either a dose of oxytocin or a placebo and then asked to collaborate with partners on a video game. In the non-borderline subjects, the oxytocin dose made them trust their partners more and want to work with them; but in people diagnosed with borderline personality disorder, it had the opposite effect. They became far more suspicious under the influence of oxytocin, and were prone to being anxious and distrustfully dropping out of the game.

Work hasn't yet been done to see how this might apply to people post-orgasm, but it does indicate that there may be a connection between certain mood disorders, oxytocin release, and a feeling of suspicion rather than a post-coital love-fest.

A Rebounding Amygdala May Lead To Post-Orgasm Depression

This is an interesting one: there's a phenomenon called post-coital tristesse, or PCT, which means an experience of serious anxiety, depression or malaise following sex. (Its technical medical name is post-coital dysphoria.) A 2015 study by *the Journal Of Sexual Medicine* raised the possibility that this isn't just a rare occurrence. A full 46 percent of the 230 young female university students the scientists had interviewed had experienced PCT at least once in their lives. Sadness after sex: it's officially a thing. (And an ancient one: VICE magazine, in an investigation of the problem, found that the ancient Greek physician Galen once commented, "Every animal is sad after coitus except the human female and the rooster." And *he was wrong*.)

So what's going on? Why the mood drop? Is it just that after a brief fling between the sheets, we're suddenly flooded with existential angst about the point of life, love and fleeting sexual pleasure? Well, that's quite possible — but scientists have also looked for more biological explanations.

One idea offered by Dr. Richard Friedman is based around the brain region called the amygdala. In a 2009 article for *the New York Times*, he outlined his theory: during sex, the amygdala, which is part of how the brain creates and learns about fear and anxiety, shows markedly low levels of activity. Post-orgasm, Friedman, suggested in the *Times*, it's possible that "some patients have particularly strong rebound activity in the amygdala after orgasm that makes them feel bad." Once the amygdala comes online after its sexual vacation, in other words, it can theoretically put us in a bit of emotional trouble.

It's not a fully accepted theory, though. Other scientists have put forward theories about PCT that are more about emotional history or hormonal shifts. A 2011 Australian study, for instance, found a link between past childhood sexual abuse and lifelong PCT, which is very understandable. *The Journal Of Sexual Medicine* study didn't find any link between anxiety or attachment and PCT, but they did seem to find a relationship between PCT and what's called "low sexual functioning," a phenomenon that occurs when somebody puts low scores on a test assessing their past sexual experiences for satisfaction and arousal levels. So if you haven't had great sex in your life, you're more likely to get depressed afterward. Makes sense.

So post-orgasm periods may not actually be all they're cracked up to be for everyone; but if you feel cranky, depressed or suddenly rather upset, be reassured that you're not alone and that science is pushing to find some kind of explanation (and with that, perhaps, a way to keep it from happening).