

### ***Oxytocin, medication or supplement? A commentary on Ditzen's research***

Oxytocin is a powerful hormone. When we hug or kiss a loved one, oxytocin levels drive up. It also acts as a neurotransmitter in the brain. In fact, the hormone plays a huge role in pair bonding. Prairie voles, one of nature's most monogamous species, produce oxytocin in spades. This hormone is also greatly stimulated during sex, birth, breast feeding—the list goes on.<sup>i</sup> Numerous studies have been conveyed on the role and importance of oxytocin and the positive effects on social bonding and trust. These findings make one wonder whether its benefits outweigh the side effects for it being offered to the market as a supplement. If everybody started using oxytocin as a supplement would we have a better society and stronger relationships?

Oxytocin is used in medicine for clinical purposes. “Pitocin” is the brand name of the hormone oxytocin, which stimulates contractions in the uterus. Also, oxytocin nasal spray is currently under clinical investigation for treating lactation deficiency in nursing moms, autism, and schizophrenia.<sup>ii</sup> As a medicament it has been studied to promote better relationships among couples. Meanwhile, some cases of abuse has also been seen in administering illegal oxytocin to cattle in order to stimulate the milk production.<sup>iii</sup>

The safety of this hormone being used without supervision is questionable. While the occurrence of overdose in humans seem to be unlikely, the side effects can be mild or semi-serious. Some of the side effects include severe headache, confusion, excessive bleeding after childbirth, chest pain or breathing difficulties, fast or irregular heartbeat, pain near the injection site or the area where intravenous tubing is inserted. But no death has been reported as a result of its administration.

Nevertheless oxytocin is being sold online in giant stores such as amazon in nasal spray forms. The marketing campaigns claim reducing social fears, anxiety, stress, and create feelings of trust between others as well as enhance sex life and improved sleep. With oxytocin available in just a few clicks, hassle free and without a prescription, there seems no reason not to improve the quality of life for many. But consider no side effects for administering this hormone and then imagine a situation that your loved one is using it to improve their bond and relationship with you. Would this relationship be considered as a genuine affectionate one? Isn't the different levels of affecting hormones the reason creating different personalities? Hormones control human behaviour and their balance play a significant role in wellbeing. Some studies suggest that oxytocin and testosterone balance together<sup>iv</sup>, in this case tampering with one hormone can potentially change the mechanism the others act in a long run. Though it would be pleasant to have an affectionate partner for a short period of time, the effect of long term use of oxytocin is yet to be researched.

Some women may find it especially appealing that oxytocin modulates social distance between males and females<sup>v</sup> which might be a good enough justification for using it for a stronger family bound. They may find it “genuine manipulation” or “means for a cause” which again raises the question of its durability in time. Another claim against the ingenuity of oxytocin effect is a research that showed oxytocin also encourage us to lie to the benefit of our group, according to new research published in the Proceedings of the National Academy of Science.<sup>vi</sup> It looks like there is a price to pay for the creation of a hormonal imbalance. While it might be tempting to benefit from the positive effects of neurotransmitter oxytocin it should also be taken into account that the behaviour is only hormonal based and temporary. So no regrets after the effect of it has faded out.

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<sup>i</sup> <https://www.psychologytoday.com/basics/oxytocin>

<sup>ii</sup> <http://www.everydayhealth.com/drugs/oxytocin>

<sup>iii</sup> <http://www.mid-day.com/articles/banned-drug-injected-into-cattle-is-poisoning-your-milk/217645>

<sup>iv</sup> <http://theconversation.com/how-testosterone-and-oxytocin-hormones-interact-in-male-work-and-parenting-effort-38953>

<sup>v</sup> <http://www.jneurosci.org/content/32/46/16074>

<sup>vi</sup> <http://www.medicalnewstoday.com/articles/275040.php>