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Could "Love Hormone" Help Treat Depression?

Gazing into your lover's eyes isn't only romantic; it also releases a brain chemical called oxytocin that strengthens social bonds in a variety of species. For some people who suffer from depression, the so-called "hormone of love" might hold out hope. Researchers at the UC San Diego School of Medicine are conducting a clinical trial to study whether oxytocin – the brain hormone released with touches, hugs, or when a mother and her newborn baby bond – might help patients with depression.

"In humans, oxytocin is released when they hug or experience other pleasant physical touch, and it plays a part in the human sexual response cycle," said Kai MacDonald, MD, assistant clinical professor of psychiatry at UC San Diego School of Medicine.

MacDonald went on to explain that oxytocin appears to change the brain signals related to social recognition via facial expressions, perhaps by changing the firing of the amygdala, the part of the brain that plays a primary role in the processing of important emotional stimuli. In this way, oxytocin in the brain may be a potent mediator of human social behavior.

"That's why oxytocin is sometimes called 'the love hormone,'" said MacDonald. "It's said that the eyes are the window to the soul...they certainly are the window to the emotional brain. We know that the eye-to-eye communication, which is affected by oxytocin, is critical to intimate emotional communication for all kind of emotions – love, fear, trust, anxiety."

UC San Diego researchers have previously discovered that oxytocin may help patients with schizophrenia, and MacDonald and colleague David Feifel, MD, PhD, UCSD professor of psychiatry, are now enrolling participants to examine its role in clinical depression.

"Studies of blood levels and genetic factors in depressed patients point to the possibility that this natural hormone might play a part in helping clinical depression," said MacDonald. "Previously, studies of healthy individuals have shown that intranasal doses of oxytocin reduce activation of brain circuits involved in fear, increase levels of eye contact, and increase both trust and generosity," MacDonald said. "Interestingly, people given oxytocin don't report feeling any different, but they *act* differently."

Early clinical data also indicates oxytocin may help women with anxiety disorders.

"A hug or a touch that causes a release of this hormone might somehow change brain signals," MacDonald said. "We want to see if we can harness this response to help patients who suffer from depression."

For more information on the clinical trial, contact 1-866-550-UCSD.

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