

Studies expand oxytocin's role beyond 'cuddle hormone'

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New human research suggests the chemical oxytocin — dubbed the "cuddle hormone" because of its importance in bonding between romantic partners and mothers and children — also influences feelings of well-being and sensitivity to advertising. Additional animal research shows that oxytocin may relieve stress and anxiety in social settings and may be more rewarding than cocaine to new mothers. The findings were presented at Neuroscience 2010, the Society for Neuroscience's annual meeting and the world's largest source of emerging news about brain science and health.

Oxytocin is best known for its vital role in childbirth and breastfeeding, and animal studies have shown that it is also important in monogamous social relationships. Recently, economic research in humans implicated oxytocin in trust and empathy.

Today's new findings show that:

- Oxytocin is linked to happiness and well-being. When trusted with money from a stranger, women who showed the greatest increase in oxytocin also reported being more satisfied with their lives, resilient to adverse events, and less likely to be depressed (Paul Zak, PhD, abstract 387.18, see attached summary).
- Oxytocin increases sensitivity to advertising. Researchers found that after sniffing oxytocin, people were more empathetic toward

public service announcements and more likely to donate to their causes (Paul Zak, PhD, abstract 387.21, see attached summary).

- In the presence of their newborns, rat mothers' brains did not respond to learned cues associated with addictive drugs. This suggests that maternal bonds — a function of oxytocin — profoundly influence brain activity and behavior, with important implications for drug-addicted mothers (Martha Caffrey, abstract 888.22, see attached summary).
- Oxytocin reduces anxiety in stressed animals, but only if they recover in the presence of a friend. It is less effective at relieving stress for isolated animals, suggesting that social contact is an important factor in its ability to reduce anxiety (Jason Yee, PhD, abstract 190.7, see attached summary).

Other recent findings discussed show that:

- Oxytocin is important in evaluating social signals and may be as rewarding as drugs of abuse in some monogamous animals. The findings have important implications for designing novel treatments for several psychiatric disorders that affect social interactions, including autism spectrum disorders and schizophrenia (Larry Young, PhD, see attached speaker's summary).

"Converging evidence from different research studies indicates [oxytocin](#) and other hormones have a profound influence on value judgments, shaping emotions and behaviors in humans and other animals," said press conference moderator Margaret M. McCarthy, PhD, from the University of Maryland School of Medicine, an expert on the effects of hormones on the developing brain.

More information: PDF: www.sfn.org/am2010/press/OmniP...s/data/press/001.pdf

Provided by Society for Neuroscience

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