

A hormone that enhances one's memory of happy faces

July 28 2008

Oxytocin was originally studied as the "milk let-down factor," i.e., a hormone that was necessary for breast-feeding. However, there is increasing evidence that this hormone also plays an important role in social bonding and maternal behaviors. A new study scheduled for publication in the August 1st issue of *Biological Psychiatry* now shows that one way oxytocin promotes social affiliation in humans is by enhancing the encoding of positive social memories.

Adam J. Guastella, Ph.D. and his colleagues sought to evaluate the effects of oxytocin on the encoding and recognition of faces in humans. They recruited healthy male volunteers and in a double-blind, randomized design, administered either oxytocin or a placebo.

They then presented a series of happy, angry and neutral human faces to the volunteers on a computer screen. Participants returned the following day where they were presented with a collection of faces and asked to distinguish the new faces from ones that they saw on the prior day. The results revealed that those who received oxytocin were more likely to remember the happy faces they had seen previously, more so than the angry and neutral faces.

Dr. Guastella notes that the "findings are exciting because they show for the first time that oxytocin facilitates the encoding of positive social information over social information that is either neutral or negative." John H. Krystal, M.D., Editor of *Biological Psychiatry* and affiliated with both Yale University School of Medicine and the VA Connecticut

Healthcare System, comments on the findings: "The findings from Guastella and colleagues provide new evidence about a chemical system in the body that may help us to connect socially to other people. One could imagine that our ability to recall a particularly happy face at the end of a day full of social contacts could reflect an action of oxytocin."

Social isolation can be a feature of several psychiatric disorders. The success of oxytocin in enhancing positive social memories raises the possibility that oxytocin, or drugs that might act like oxytocin in the brain, could be used to help people who are socially isolated and have difficulty making social connections. Future research will be needed to test this hypothesis.

Source: Elsevier

Citation: A hormone that enhances one's memory of happy faces (2008, July 28) retrieved 25 April 2024 from <https://medicalxpress.com/news/2008-07-hormone-memory-happy.html>

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