

# The narrow line between love and jealousy

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A new study carried out at the University of Haifa has found that the hormone oxytocin, the "love hormone", which affects behaviors such as trust, empathy and generosity, also affects opposite behaviors, such as jealousy and gloating. "Subsequent to these findings, we assume that the hormone is an overall trigger for social sentiments: when the person's association is positive, oxytocin bolsters pro-social behaviors; when the association is negative, the hormone increases negative sentiments," explains Simone Shamay-Tsoory who carried out the research.

Previous studies have shown that the [oxytocin hormone](#) has a positive effect on [positive feelings](#). The hormone is released in the body naturally during childbirth and when engaging in [sexual relations](#). Participants in an experiment who inhaled the synthetic form of the hormone displayed higher levels of altruistic feelings, and it is supposed that the hormone plays an important role in the formation of relationships between people.

However, in earlier studies carried out by other investigators with rodents, it was found that the hormone is also related to higher levels of aggression. Therefore, it was decided to examine whether the hormone also affects negative social sentiments. The present study, which was published in the journal *Biological Psychiatry*, included 56 participants.

Half of the participants inhaled the synthetic form of the hormone in the first session and were given a placebo (a dummy drug) in the second session; the others were given a [placebo](#) in the first session and oxytocin in the second session. Following drug administration each participant was asked to play a game of luck along with another competitor, who

was in fact - and without their knowledge - a computer. Each of the participants was asked to choose one of three doors and was awarded the sum of money that was hidden behind that door. Sometimes the participant gained less money than the other player, and sometimes more, creating conditions in which a person might well develop feelings of envy and gloating.

The findings show that those participants who inhaled the "hormone of love" displayed higher levels of envy when the opponent won more money and of gloating when they were ahead. Another interesting result was that as soon as the game was over, no differences between the participants were evident with regards to these sentiments. This indicates that the negative feelings were empowered only in the course of the game itself.

"Following the earlier results of experiments with oxytocin, we began to examine the possible use of the [hormone](#) as a medication for various disorders, such as autism. The results of the present study show that the hormone's undesirable effects on behavior must be examined before moving ahead," Dr. Shamay-Tsoory concludes.

Source: University of Haifa ([news](#) : [web](#))

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