

Psychologist explains the neurochemistry behind romance

February 12 2007

The Beatles' George Harrison wondered in his famous love song about the "something" that "attracts me like no other lover." A University at Buffalo expert explains that that "something" is actually several physical elements that -- if they occur in a certain order, at the right time and in the right place -- can result in true love.

"There are several types of chemistry required in romantic relationships," according to Mark Kristal, professor of psychology at UB. "It seems like a variety of different neurochemical processes and external stimuli have to click in the right complex and the right sequence for someone to fall in love."

First, there's smell, made up of learned or cultural preferences, such as the smell of a dozen long-stemmed red roses.

"Smell forms part of the framework that conforms to cultural attractiveness standards; for example, smelling like a strawberry instead of mildew," he says. Next, there are pheromones, which are more mysterious to us humans.

"Pheromones are unlearned, and perhaps unsmellable, signals that enter the brain through the olfactory system. They can function in sex, alarm, territoriality, aggression, and fear," Kristal said, adding that while sex attractant pheromones may explain changes in libido, they don't explain why we choose a specific person for a mate.

"In humans, specific mates are more probably chosen on the basis of other sensory cues: visual, regular olfactory, auditory and tactile cues," Kristal notes. And these cues, especially smell, strengthen with time.

"After a certain amount of bonding, specific mates may be more recognizable to each other by smells rather than by pheromones. Studies show that people can recognize unwashed t-shirts belonging to their mates by the smell."

Then there is the brain, which produces its own substances that are involved in bonding.

"Two related brain peptides, vasopressin and oxytocin, have been shown to be involved in both the permanent or long-term social bonding that underlies mating," Kristal says. "The neurotransmitter dopamine, in a part of the brain called the VTA, is certainly involved in the rewarding properties of love and sex."

But aphrodisiacs -- foods, drugs and other substances that claim to increase sexual interest -- are a "myth," according to Kristal, who advises that it would be better to "smell good and look successful" in order to attract a potential mate this Valentine's Day.

And keep handy a copy of the "Something" CD, just in case.

Source: University at Buffalo

Citation: Psychologist explains the neurochemistry behind romance (2007, February 12)
retrieved 24 April 2024 from
<https://medicalxpress.com/news/2007-02-psychologist-neurochemistry-romance.html>

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