What falling in love does to your heart and brain

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Getting struck by Cupid's arrow may very well take your breath away and make your heart go pitter-patter this Valentine's Day, reports sexual wellness specialists at Loyola University Health System.

"Falling in love causes our body to release a flood of feel-good chemicals that trigger specific physical reactions," said Pat Mumby, PhD, co-director of the Loyola Sexual Wellness Clinic and professor, Department of Psychiatry & Behavioral Neurosciences, Loyola University Chicago Stritch School of Medicine (SSOM). "This internal elixir of love is responsible for making our cheeks flush, our palms sweat and our hearts race."

Levels of these substances, which include dopamine, adrenaline and norepinephrine, increase when two people fall in love. Dopamine creates feelings of euphoria while adrenaline and norepinephrine are responsible for the pitter-patter of the heart, restlessness and overall preoccupation that go along with experiencing love.

MRI scans indicate that love lights up the pleasure center of the brain. When we fall in love, blood flow increases in this area, which is the same part of the brain implicated in obsessive-compulsive behaviors.

"Love lowers serotonin levels, which is common in people with obsessive-compulsive disorders," said Mary Lynn, DO, co-director of the Loyola Sexual Wellness Clinic and assistant professor, Department of Obstetrics & Gynecology, SSOM. "This may explain why we

concentrate on little other than our partner during the early stages of a relationship."

Doctors caution that these physical responses to love may work to our disadvantage.

"The phrase 'love is blind' is a valid notion because we tend to idealize our partner and see only things that we want to see in the early stages of the relationship," Dr. Mumby said. "Outsiders may have a much more objective and rational perspective on the partnership than the two people involved do."

There are three phases of love, which include lust, attraction and attachment. Lust is a hormone-driven phase where we experience desire. Blood flow to the pleasure center of the brain happens during the attraction phase, when we feel an overwhelming fixation with our partner. This behavior fades during the attachment phase, when the body develops a tolerance to the pleasure stimulants. Endorphins and hormones vasopressin and oxytocin also flood the body at this point creating an overall sense of well-being and security that is conducive to a lasting relationship.

Provided by Loyola University Health System