Love and Pain Relief

By TARA PARKER-POPE

Love really can be a drug, according to new research that shows feelings of intense love can relieve pain.

Researchers from Stanford University studied the link between love and pain by scanning the brains of 15 college students who all professed to being deeply in love. The eight women and seven men were placed in brain scanners that tracked their body’s response to pain — in this case a heated probe placed on the palm of the hand.

Then the researchers studied the brain’s pain response under three different conditions. In one scenario, the study subject looked at a picture of an acquaintance. In another, the student looked at a picture of his or her beloved. And because other research has shown distraction also can relieve pain, the student was given a distracting word task — in this case, they were asked to name sports that don’t use balls.

Looking at a picture of a loved one reduced moderate pain by about 40 percent and eased severe pain by about 10 to 15 percent, compared to viewing the picture of an acquaintance. The distraction task also provided similar levels of pain relief, but researchers noted that the analgesic effects of love and distraction occurred in different pathways of the brain. Love-induced analgesia was associated with the brain’s reward centers, while the pain relief resulting from distraction occurred mostly along cognitive pathways, the researchers said. The findings were published online in the journal PLoS ONE.

Other studies have shown that romantic love activates the brain’s dopamine system, much as addictive behaviors like gambling or drug use do. Researchers speculate that looking at a photo of a romantic partner prompts the dopamine system to interact with other brain systems that release natural opioids, or painkillers, in the body, similar to those credited with the “runner’s high” that can occur with exercise.

The findings add to scientists understanding of how the brain responds to discomfort and could lead to new treatments for people suffering from chronic pain. Dr. Sean Mackey, chief of the division of pain management at Stanford and senior author of the study, said the findings support the theory that pain patients may find some relief by seeking out pleasurable activities.

“Find things to give you pleasure in life, whether it be through the one you love or going and listening to great music or reading a good book,” Dr. Mackey said. “It suggests that activating this intrinsic reward system ultimately can reduce your pain.”

Dr. Mackey said the research should also help doctors better assess the condition of their...
patients, particularly those who are finding relief “that doesn’t involve a pill or procedure.” In his own practice he now not only encourages pain patients to seek out distractions but to also focus on pleasurable activities.

“It's caused me to change the education and how I talk with my patients and how they understand it,” he said.

Dr. Mackey says he also now pays more attention to the role that a relationship may be having on a patient’s health.

“When patients are doing markedly better and I find out they are in a new passionate relationship, I may be less likely to think it’s the new medication I put them on,” he said. “I realize that maybe it has nothing to do with me.”