

Brain Rewards Us for Laughing: Study

By Merritt McKinney

NEW YORK (Reuters Health) - They say laughter is the best medicine, and a new study may help explain how laughter makes us feel good.

Researchers report that humor seems to activate brain networks that are involved in rewards.

Humor is no laughing matter, according to Dr. Allan L. Reiss of Stanford University in California, who led the research. "Humor has significant ramifications for our psychological and physical health," he told Reuters Health. Our sense of humor, he said, "often dictates if, how, and with whom we establish friendships and even long-lasting romantic relationships." Humor is also a "universal coping mechanism" for dealing with stress, Reiss added.

Despite the importance of humor, Reiss said that little is known about the brain mechanisms that underlie humor. The Stanford researcher noted that most people are drawn to humor and that it makes people feel good. "We seem to feel rewarded" by humor, he said.

Now, Reiss and his colleagues report that they have zeroed in on the brain's reward system for humor.

In the study, volunteers had their brain activity monitored as they read a series of cartoons. Some of the cartoons were supposed to be funny, but others had the funny cues omitted.

After viewing each strip, participants pushed a button if they thought the comic was funny.

Researchers found that when a cartoon made a person laugh, a brain network that is known to be involved in reward was activated. In fact, the areas activated by humor have been shown previously to be activated by amphetamines and cocaine, according to a report in the December 4th issue of the journal *Neuron*.

"I believe that understanding humor is fundamental to understanding many aspects of 'normal' human social behavior," Reiss said.

Learning more about the brain mechanisms that underlie humor may also help scientists who study depression, according to Reiss. He noted that the loss of the ability to appreciate humor is a common symptom of depression.

"We believe that utilizing studies such as this may be one way to more specifically identify individuals at risk for depressive disorders," Reiss said. The research may also be useful in measuring a person's response to treatment for depression, according to Reiss. The humor reward system in the brain may come "on line" even before symptoms of depression change, he said.

The research may also help explain "humorless" people, who, Reiss noted, may have serious problems in relationships. "Perhaps they are missing this reward link in their circuitry," he said.

Finally, humor is known to play a role in the sleeping disorder narcolepsy and other conditions, Reiss said.

SOURCE: *Neuron*, December 4, 2003.

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