Ouch! Heartbreak Really Can Cause Body Aches

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The brain responds the same to emotional pain as it does to physical pain, according to a study published in Proceedings of the National Academy of Sciences and reported by Health.com.

For the study, researchers recruited 21 women and 19 men who had no medical history of chronic pain or mental illness. But they had experienced relationship breakups within the previous six months.

To measure participants' brain activity, researchers used fMRI (functional magnetic resonance imaging) scans to track their blood flow changes during two painful tasks.

For the first task, scientists strapped a heat source to participants' left arms to simulate the physical pain caused by holding a hot cup of coffee without the sleeve. For the second task, researchers asked participants to look at photos of their former lovers and remember certain shared events.

Results showed that rejection elicited a response in two areas of the brain associated with physical pain: the secondary somatosensory cortex and the dorsal posterior insula.

"What's exciting about these findings is that they outline the direct way in which emotional experiences can be linked to the body," said Ethan Kross, PhD, lead researcher and assistant professor of psychology at the University of Michigan in Ann Arbor.

Furthermore, the new findings can also help people with chronic pain understand how their emotions can affect their physical condition, said Judith Scheman, PhD, psychologist and director of the chronic pain rehabilitation program at the Cleveland Clinic.

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