People With Anxiety Disorder Overreact to Stress

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People with generalized anxiety disorder (GAD) aren't as able to unconsciously regulate their emotional reaction to stressful situations as people without the disorder, according to a study published February 10 in the *American Journal of Psychiatry*.

People with GAD suffer from constant worry that can be crippling. Psychiatrists and psychologists have theorized about the nature and causes of GAD, but there are diverging opinions. "Patients experience anxiety and worry and respond excessively to emotionally negative stimuli, but it's never been clear really why," says Amit Etkin, MD, PhD, the lead author of the study and an acting assistant professor of psychiatry and behavioral sciences at Stanford University.

Etkin and his colleagues conducted tests on 17 people with GAD and 24 people without a psychological disorder. Participants were shown consecutive images of either a happy or a fearful face. They were asked to push a button identifying the expression on the face. The images were overlaid with the words "happy" or "fear." Sometimes the image did not correspond to the word, a situation that would create an emotional conflict in the participants. The participants' brains were scanned during the tests using functional magnetic resonance imaging (fMRI).

Usually, people's reactions are slightly slower when an image and a word don't correspond. If two incongruous word and image pairings occur consecutively, however, people get faster at correctly identifying the facial expression by the time the second image appears. In other words, their brains quickly adapt to the "stress" of being confronted with an incongruous word and image.

Ektin's team found that people with GAD don't adapt well to this stress, however. In fact, their reaction time actually slowed down when they saw two incongruous image and word pairings in a row. What's more, a part of the brain called the pregenual anterior cingulate failed to light up in people with GAD when they were confronted with incongruous images, while it did light up in people without GAD.

Ektins said this is the first study to demonstrate with both a brain scan and a traditional reaction-time test that people with a psychological disorder are less able to unconsciously control their emotional reaction to a situation.

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