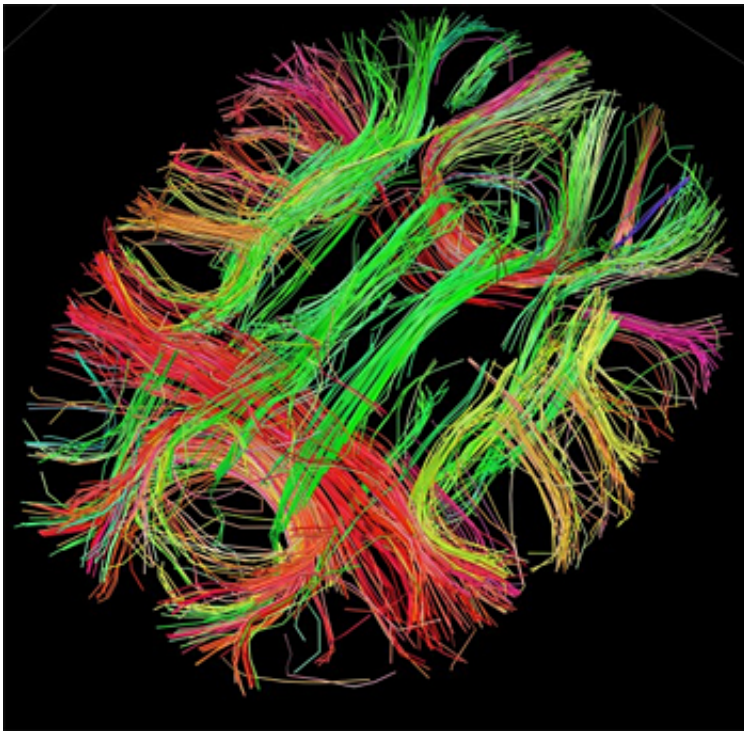


# Brain's response to threat silenced when we are reminded of being loved and cared for

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White matter fiber architecture of the brain. Credit: Human Connectome Project.

Being shown pictures of others being loved and cared for reduces the brain's response to threat, new research from the University of Exeter has found.

The study discovered that when [individuals](#) are briefly presented pictures

of others receiving emotional support and affection, the [brain's](#) threat monitor, the amygdala, subsequently does not respond to images showing threatening facial expressions or words. This occurred even if the person was not paying attention to the content of the first pictures.

Forty-two healthy individuals participated in the study, in which researchers used functional magnetic resonance imaging (fMRI) to study the brain response.

The study, published this week in the journal *Social, Cognitive and Affective Neuroscience*, suggests that being reminded of being loved and cared for dampens the threat response and may allow more effective functioning during, and activation of soothing resources after, stressful situations. This was particularly true for more anxious individuals.

Previously, research has shown that [brain responses](#) to pain are reduced by similar reminders of being loved and cared for, but this is the first time the same has been shown for brain responses to threat.

Dr Anke Karl of Psychology at the University of Exeter, senior researcher of the study, said: "A number of [mental health conditions](#) such as posttraumatic stress disorder (PTSD) are characterized by hypervigilance to threatening information, which is associated with excessive negative emotional responses, amygdala activation and a restricted ability to regulate these emotions and self-sooth. These new research findings may help to explain why, for example, successful recovery from [psychological trauma](#) is highly associated with levels of perceived social support individuals receive. We are now building on these findings to refine existing treatments for PTSD to boost feelings of being safe and supported in order to improve coping with traumatic memories."

Following these results, researchers at the University of Exeter are also

running research studies measuring body (heart rate, sweat response) and brain (electrical brain waves measured by EEG) responses to understand related mechanisms in different populations such as highly self-critical individuals, individuals with depression and survivors of psychological trauma such as severe car accidents, assaults and natural disasters.

Provided by University of Exeter

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