

Depression linked to reduced temporofrontolimbic coupling

June 6 2012



(HealthDay) -- Patients with remitted major depressive disorder (MDD) have reduced guilt-selective temporofrontolimbic coupling between the right superior anterior temporal lobe (ATL) and subgenual cingulate cortex and adjacent septal region (SCSR), a region of interest for biases toward guilt versus indignation, according to a study published online June 4 in the *Archives of General Psychiatry*.

Sophie Green, Ph.D., from the University of Manchester in the United Kingdom, and colleagues used [functional magnetic resonance imaging](#) to investigate whether individuals with MDD exhibit guilt-selective SCSR-ATL decoupling. Participants included 25 patients with remitted MDD and 22 controls with no personal or family history of MDD.

The researchers identified a guilt-selective decrease in ATL-SCSR

coupling in patients with MDD, compared with controls. In addition, while controlling for medication status and intensity of [negative emotions](#), there was decoupling seen with medial frontopolar, right hippocampal, and lateral hypothalamic areas. Lower levels of ATL-SCSR coupling correlated with elevated scores on the 67-item Interpersonal Guilt Questionnaire, a validated measure of overgeneralized self-blame.

"We demonstrated a guilt-selective decrease in ATL coupling in remitted MDD across a frontolimbic network of the SCSR, medial frontopolar cortex, lateral hypothalamus, and hippocampus," the authors write. "These results shed new light on the pathophysiology of vulnerability to MDD by providing a specific neural mechanism that can account for self-blaming biases long known to be a core and distinctive feature of MDD."

More information: [Abstract](#)
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