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PTSD Linked to 'Hyperactivity' in Right Brain

Neurons overfiring even when trauma sufferers were relaxed, researchers found

WEDNESDAY, Oct. 27 (HealthDay News) The flashbacks experienced by people with post-traumatic stress disorder (PTSD) are associated with heightened activity on the right side of the brain, a new study finds.

In research that included 80 people with PTSD (many of them U.S. combat veterans), 18 PTSD patients in remission and 284 people without the condition, researchers used a technique called MEG (magnetoencephalography) to detect magnetic charges given off when neurons in the brain connect and communicate.

Participants were asked to wear a MEG helmet while concentrating on a spot 65 centimeters in front of them for 60 seconds. Compared with the healthy "controls," the PTSD patients showed "hyperactive" communication between the temporal cortex -- the part of the brain thought to be responsible for reliving past experiences -- and two other areas on the right side of the brain.

The PTSD patients in remission had similar but less pronounced brain activity as those with PTSD.

This "hyperactive" brain state occurred even though the PTSD patients, and all the other participants, were in a relaxed state while undergoing MEG.

"Remarkably, the differences we found between the PTSD and the control groups were documented in a task-free state," the researchers wrote. They added that in people with PTSD, the right hemisphere was overactive even when individuals were not reliving a traumatic experience.

The study -- conducted by the Minneapolis Veterans Affairs Medical Center and the University of Minnesota -- appears in the Oct. 28 issue of the *Journal of Neural Engineering*.

More information

The U.S. National Institute of Mental Health has more about [PTSD](#).

-- Robert Preidt

SOURCE: Institute of Physics, news release, Oct. 27, 2010.

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