Decoding Depression

(HealthDay is the new name for HealthScoutNews.)

THURSDAY, June 19 (HealthDayNews) -- Using brain-imaging technology, American researchers have identified certain areas of the brain associated with symptoms of depression.

Previous studies using positron emission tomography (PET) to measure brain metabolism found people taking selective serotonin reuptake inhibitors (SSRIs) who have a return of depressive symptoms caused by a depletion of a brain chemical called tryptophan experience an acute decrease in metabolism in a number of brain areas.

The brain regions affected include the orbitofrontal cortex, dorsolateral prefrontal cortex and thalamus.

Previous research also found many people with depression in remission while taking the norepinephrine reuptake inhibitors (NRIs), but not SSRIs, experience a brief return of depressive symptoms with depletion of the hormone norepinephrine and the brain chemical dopamine from the drug alpha-methylparatyrosine (AMPT).

This new study, published in the June 18 issue of the Journal of the American Medical Association, was done to assess changes in the brain associated with AMPT-induced return of depressive symptoms in people with depression in remission while taking NRIs.

The study included 18 people who had depression in remission while taking NRIs.

The researchers found that 11 of the 18 people experienced AMPT-induced return of depressive symptoms, which caused decreased metabolism in a number of brain regions. The areas most affected were the orbitofrontal and dorsolateral prefrontal cortex and thalamus.

People with increased resting metabolism in the prefrontal and limbic areas of the brain were more likely to experience the return of depressive symptoms, the study found.

The study authors write that the disruption of either the serotonin or the norepinephrine neurochemical systems can lead to depression, probably by affecting the common brain regions to which these neurochemical systems have input.

More information

Here's where you can learn more about [depression].

SOURCE: Journal of the American Medical Association, news release, June 18, 2003

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