

Studies Show

Risk and resilience markers in bipolar disorder. Brain responses to emotional challenges in bipolar patients and their healthy siblings. 2006 American Journal of Psychiatry; 163:2:257-64

Bipolar Disorder

What is the problem and what is known about it?

Bipolar disorder is a common mental illness that is often present at birth. People with this sickness have terrible mood swings that can't be controlled. This can get in the way of their ability to do normal day-to-day activities. Scientists have found that there is a difference in brain activity in those with bipolar disorder. This was found out by measuring the flow of blood to certain areas of the brain that control feelings.

Yet, there is still much that we do not know about this disorder. For instance, why are some people with the disease able to "bounce back" faster from emotional stress than others who stay stuck in a terrible mood swing?

Why was this study done?

Studies show that bipolar disorder can be present at birth. However, not everyone who may have it shows signs of the disease. This study was done to see if the parts of the brain that control feelings are affected the same in patients with the disease as they are in healthy siblings (brothers or sisters) that do not have signs of the disease.

Who was studied?

- 9 patients with bipolar disorder and 9 of their healthy siblings (brothers or sisters).
 - The patients had no signs of the disease while taking lithium (a common drug treatment) for at least three years.
- The authors also studied results from a past report of 9 patients with bipolar disorder who had no signs of the disease while taking valproate (another drug treatment) for six months.

How was the study done?

All those in the study were asked to remember a sad event in their life. Soon, they reached peak emotion due to the story. Then a test was given to measure the flow of blood to the parts of the brain that control feelings.

What did they find?

Brothers or sisters of bipolar patients showed no signs of the disease. However, when they were challenged with stressful thoughts, the part of their brains that reacts to stress showed similar patterns to those of the bipolar patients.

However, they also found that the healthy siblings had more activity in the area of the brain that helps us respond to stress in positive ways. This may explain why healthy brothers and sisters "bounce back" from stress better than their bipolar family members.

The results from this study regarding bipolar patients taking lithium or valproate were hard to compare as there were many differences between the patient groups in each study.

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What are the problems with the study?

There were only 9 patients with the disease studied. The disease is found equally in men and women but the study group was not split equally between men and women.

There is no way to truly study and measure feelings to decide if there is a “normal” level of emotion. It is also hard to measure if people are more or less emotional than others.

When choosing patients taking lithium for this study, the authors chose patients differently than they did when choosing patients in the valproate group for the past study. That is, the mix of men and women and the length of time in treatment were different enough between the two studies to make the information hard to compare.

We are just starting to understand the way the human brain works and its role in processing feelings. Therefore, it is possible that the results can be explained by other factors that the authors did not study.

What does the study mean?

This study clears the way for more research. Further study should help decide if differences in brain activity can tell whether someone with a bipolar sibling will end up getting the disorder as well.

Resources

- **National Institute of Mental Health:** www.nimh.nih.gov, 301-443-4513
- **National Alliance for the Mentally Ill:** www.nami.org, 800-950-6264
- **National Mental Health Association:** www.nmha.org, 800-969-6642