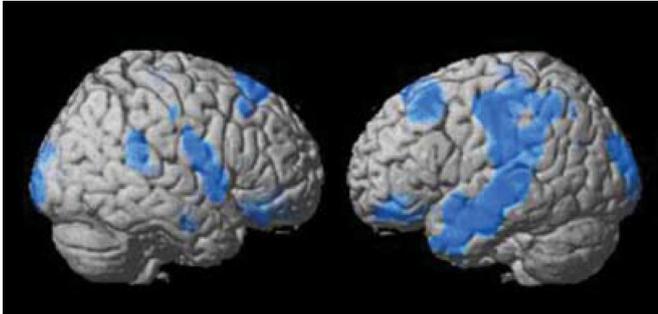


# Brain SPECT imaging predicts outcomes in depressed patients

20 March 2018



A statistical parametric map demonstrated brain regions that are abnormally lower in regional cerebral blood flow in treatment resistant depression (blue shaded areas) compared to persons who do respond to treatment. These include the frontal, temporal, and parietal lobes. Credit: IOS Press

New research from the Amen Clinics shows that brain SPECT (single photon emission computed tomography) imaging, a study that measures blood flow and activity patterns, identifies who is likely to get better from depression and who is not. The study is published in the *Journal of Alzheimer's Disease*, because depression is a highly treatable risk for cognitive decline and Alzheimer's disease.

The researchers compared the SPECT scans of 507 depressed patients who responded to treatment to the scans of 106 patients who were considered non-responders. The study found that patients who did not respond to treatment had lower overall cerebral [blood flow](#), especially in the frontal, temporal, and [parietal lobes](#) and in brain regions known to be affected by Alzheimer's, including the right hippocampus and left precuneus.

Lead author psychiatrist Daniel G. Amen, MD says, "This is a critically important study. Knowing who is likely to get better from depression and who is not,

will help treating physicians be sensitive to which patients are likely to need more help and need to be monitored more closely." Treatment resistant depression is a major risk factor for suicide, divorce, and job loss.

Dr. Amen also says, "This finding will also lead to more personalized treatment. For [patients](#) with low brain activity, stimulating the brain will be more important, than standard serotonin enhancing drugs that tend to lower [brain](#) activity."

Provided by IOS Press

APA citation: Brain SPECT imaging predicts outcomes in depressed patients (2018, March 20) retrieved 8 September 2022 from <https://medicalxpress.com/news/2018-03-brain-spect-imaging-outcomes-depressed.html>

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