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The New Study Says Depression isn't A Serotonin Imbalance

Sharma Kumar

The medical community has been bombarded with information suggesting depression is caused by a "chemical imbalance" in the brain - specifically, an imbalance of serotonin. Despite this, a recent research review shows that the evidence is not in favour of it.

According to a new umbrella review -- an overview of existing meta-analyses and systematic reviews -- published in Molecular Psychiatry, depression is not likely caused by chemical imbalances, and antidepressants do not work as expected.

However, this does not mean that serotonin-based treatments do not work on other mechanisms. Patients must consult their doctors before discontinuing medications. It's important to determine what's happening since such a large number of people are relying on these drugs.

Moncrieff and her team searched prominent research archives like PubMed and PsycINFO using keywords relevant to meta-analyses on depression and serotonin to investigate the hypothesis that depression is caused by lowered serotonin activity or concentrations. They excluded studies that were associated with conditions such as bipolar disorder. The level of certainty of each study is calculated by independent reviewers using widely accepted research standards. Only 17 studies were selected, including an association study and another umbrella review.

Overall, serotonin's role in depression appears weak. There was no difference between those with and without depression when it came to levels of serotonin (and its breakdown products). Serotonin's genetics and its supporting proteins have not been studied extensively.

What are the implications of that?

A study like this serves as a good reminder that our bodies' functions cannot always be reduced to simple deficits. As individuals, we are only able to control some of the contributing factors to depression. However, some critics point out that many of the included studies did not measure serotonin activity directly in the brain, something we've only been able to do recently in technology. The amount of placebo effect vs. other weird neurochemical interactions needs to be determined through further research.

Furthermore, our ability to deal with chronic depression is also hindered by our blindness to its nature, along with the uncertainty over antidepressant costs and benefits.

KEYWORDS

Depression, Diagnostic markers, Depression, Mental Health, Neurology, Neuroscience, Psychology, Psychiatry, serotonin, review, latest