

# Omega-3 may help depression caused by certain types of inflammation

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Vincent van Gogh's 1890 painting

In a study published in the journal *Molecular Psychiatry*, researchers found that the omega-3 fatty acid EPA (eicosapentataenoic acid) appears to boost mood in a subgroup of patients with major depressive disorder (MDD) who have high inflammation levels.

"The diversity of both symptoms and underlying variations of the progression of major depressive disorder confounds the development of targeted treatments for the disease," says study author Mark Hyman Rapaport, MD, principal investigator, and Reunette W. Harris professor and chair of the Department of Psychiatry and Behavioral Sciences at Emory University School of Medicine. "The discovery of biomarkers that characterize subgroups of patients with MDD is critical to the understanding of its pathogenesis, and to the development of personalized therapies."

In a randomized trial, 155 participants were given either two capsules containing EPA-enriched mix or a placebo, or four capsules of a DHA (docosahexaenoic acid)-enriched mix or four placebo capsules for eight weeks. All participants were previously diagnosed with major [depressive disorder](#).

EPA was found to be effective for a group of patients who had high levels of at least one of four markers of [inflammation](#) in their blood. DHA was not effective for this group of patients.

The authors call the finding a proof-of-concept for the idea that anti-inflammatory treatments can be effective in subgroups of patients with depression.

This goes along with earlier studies showing that an anti-inflammatory drug infliximab can be effective in some patients with treatment-resistant depression, specifically those with high levels of inflammation.

According to the authors, these results support the proposition that anti-inflammatory therapy is only beneficial as a treatment of inflammation-driven [major depressive disorder](#), and is ineffective and potentially harmful for individuals whose depression is due to a different physiological disturbance.

The authors go on to say they have preliminary data suggesting that obese patients with depression are more likely to have high markers of inflammation, and might benefit from [anti-inflammatory drugs](#). In future studies, they are going to replicate their preliminary findings and extend them by investigating the influence of other important biological measures and clinical characteristics.

Provided by Emory University

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