

Direct relationship between depression and inflammation called into question

28 October 2019



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Depression has traditionally been linked to increased inflammation. Innovative research by psychologist Eiko Fried refutes this popular assumption. He shows that specific depression symptoms such as sleeping problems explain this relationship. Publication in *Psychological Medicine*.

Over the past few decades, there have been many studies into the relationship between depression and inflammation in the body. A number of these showed that people with depression have higher inflammation levels in their [blood](#) and the conclusion was that inflammation could be a potential marker for diagnosing depression. Traditionally, inflammation is related to the flu or serious diseases such as cardiovascular disease.

Some symptoms have more impact

Fried and his colleagues have discovered that there is no direct link between depression and inflammation. Depression is a very heterogeneous

disorder with many symptoms, and unlike most previous research, Fried included 28 different symptoms of depression and a number of important lifestyle factors. "Some specific depression symptoms appear to be related to increased inflammation, such as [sleep problems](#)," says Fried.

Furthermore, obesity and unhealthy lifestyle choices such as smoking appear to be related with increased inflammation. In other words, depression is only linked to inflammation in participants who exhibit very specific features, and not generally. In addition, as is well known in the literature, inflammation is more common in women.

Network analyses

The study underlines the importance of controlling for covariates, factors that may influence the outcome. For the research, Fried used the database of the Dutch Study on Depression and Anxiety, with the data of more than 2,300 people, along the whole continuum of depression (from healthy to severely depressed). He was able to determine the relationship between individual symptoms and inflammation with the aid of network analyses. These involved large and complex static models that have only just been introduced in psychology.

Hype about biomarkers

The findings are important in the current discussion, says Fried. "There is a hype about finding biomarkers, traces of disorders that can be measured in the human body, such as the blood. Over the past 30 years, scientists have been looking for biomarkers for depression hoping to answer the question: can you also measure [depression](#) by testing someone's blood, for example? Instead of conducting extensive diagnostic interviews, psychiatrists could then test someone's blood. No clinically useful biomarkers have been found so far, and one of the remaining

hopes—[inflammation](#)—has largely been refuted as well." Fried adds that the study was in part based on the excellent master's thesis by Sophia von Stockert.

More information: E. I. Fried et al. Using network analysis to examine links between individual depressive symptoms, inflammatory markers, and covariates, *Psychological Medicine* (2019). [DOI: 10.1017/S0033291719002770](#)

Provided by Leiden University

APA citation: Direct relationship between depression and inflammation called into question (2019, October 28) retrieved 5 July 2022 from <https://medicalxpress.com/news/2019-10-relationship-depression-inflammation.html>

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