

## Information for patients from JNNP

# Does inflammation play a role in depression?

Inflammation in the body may trigger or prolong depression for some people, research suggests. These findings could point the way to new treatments for this illness.

## What do we know already?

Depression is a common and often debilitating condition, causing a range of symptoms, including feelings of sadness, a lack of interest and enjoyment, concentration problems, and low energy. The causes of depression aren't fully understood. Although traumatic and emotionally distressing events can play a role, complex chemical and physiological changes within the body are also involved.

More studies are suggesting that inflammation may be one of these factors. You may think of inflammation as the short-term redness and swelling that you get at the site of an injury. But you can also have long-lasting (chronic) inflammation within your body. This type of inflammation plays a central role in many illnesses, including rheumatoid arthritis and inflammatory bowel disorders, such as Crohn's disease. It may also exert a more subtle influence on many other illnesses, including depression.

In a new review, researchers took a close look at the studies on inflammation and depression to see what conclusions they might draw.

## What does the review say?

The researchers found numerous studies linking inflammation to depression. Among the most compelling findings:

- About 1 in 3 people with depression have higher-than-normal levels of substances in their blood indicating inflammation, regardless of whether they have other illnesses related to inflammation.
- People who have inflammation-related illnesses are more likely to have depression.
- People treated with certain drugs that cause inflammation (called cytokines) are more likely to develop depression.

- Some studies have found that people taking medicines to treat inflammation-related conditions often have improvements in their mood and symptoms of depression.

How inflammation might help trigger or prolong depression isn't yet clear. Some research suggests that substances that promote inflammation in the body may also contribute to depression. Inflammation might also affect how brain cells signal one another (brain signalling patterns), how we think (cognition), and the development of symptoms related to depression, including sleep problems, loss of appetite, and memory problems.

### How reliable are the findings?

This research is promising but it's still at an early stage. We need more studies to explore what role inflammation plays in depression and whether certain people are more likely to be affected than others.

### What does this mean for me?

If you've ever had depression, you know how debilitating this illness can be. Antidepressants and talking treatments can help, but they work better for some people than others.

So these findings provide good news, as they expand our understanding of what causes depression and suggest new avenues for treatment.

From: Krishnadas R, Cavanagh J. Depression: an inflammatory illness? *J Neurol Neurosurg Psychiatry* 2012;**83**:495–502. <http://jnnp.bmj.com/content/83/5/495.full>

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