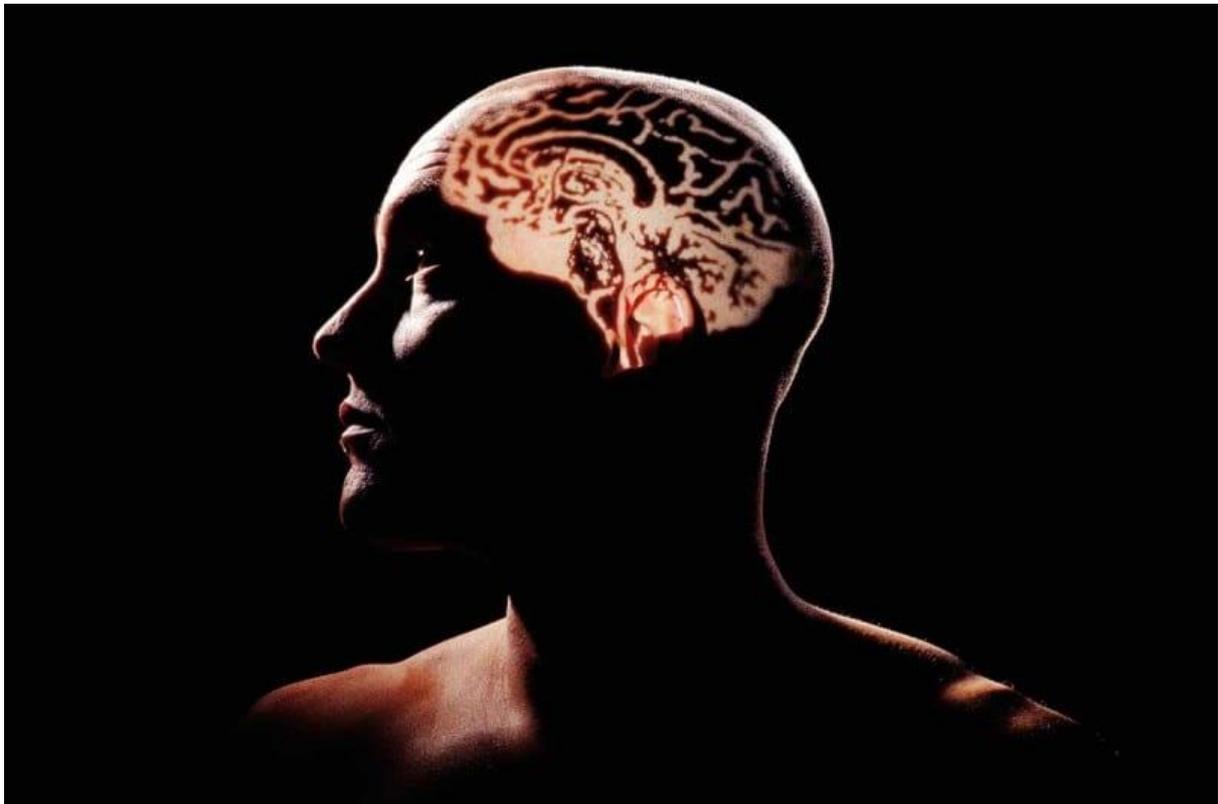


## The Inflamed Mind: Big claims over depression need big evidence

A controversial new book makes a strong case that inflammation causes depression. While this could mean the end to misery for millions, can it be that simple?

By Clare Wilson



Mental stress causes inflammation. Can this lead to depression?

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WHEN a powerful new arthritis medicine called Remicade was first given to patients at a London hospital, the nurses noticed an unexpected side effect. The infusion made people so cheerful, all the staff wanted to be the one to set up the drip. They called it the “Remicade high”.

The medicine works by blocking a signalling molecule in the blood called TNF. It was designed to calm the inflammation behind arthritis, so why should it affect people's mood?

This puzzling observation is just one clue that the state of enhanced immune activity we call inflammation could also explain depression, argues Edward Bullmore in *The Inflamed Mind*. Depression is the most common mental illness, but our existing antidepressant treatments are inadequate. A new understanding would be Nobel-worthy.

Bullmore's take on depression is fascinating and provocative, but it didn't leave me feeling that the case is closed. The standard explanation is that depression is caused by some sort of imbalance of the chemicals used by brain cells, such as serotonin. Antidepressants like Prozac boost serotonin levels. But these medicines aren't very effective – indeed, for many, they don't work at all – so it looks as if we are missing something.

Most of us know inflammation as something affecting a small part of the body. For instance, if we cut our foot it becomes red, swollen and painful. This is when immune cells rush to the area and release compounds to fight off invading bacteria. It also encourages us to rest our injured limb.

There is also a whole-body state of slightly raised immune activity called systemic inflammation. This was first identified in clearly inflammatory diseases such as rheumatoid arthritis, but it occurs more widely because it has been linked to obesity and ageing – as well as psychological stress.

The intriguing idea at the heart of this book is that mental adversity causes inflammation, which then causes depression. This mechanism might even be helpful – provided it doesn't persist for too long – because it makes us want to crawl away and rest our whole body, removing us from the stress.

“Even if inflammation isn't the grand theory of everything, understanding it would be a real advance”

Bullmore takes us on a tour of the growing evidence supporting this idea, such as studies showing that people under stress have higher levels of inflammatory molecules in their blood, as do people with depression. A psychiatrist at the University of Cambridge, Bullmore skilfully interleaves tales of his patients with the science.

But for me, it rings false when he implies that objections to the idea stem from the outdated Cartesian view that the mind exists outside the physical realm, so its maladies could not have physical causes. Today's psychiatrists are happy enough to treat depression with the very physical remedy of Prozac.

And while Bullmore makes a good case that inflammation causes depression, if anything, his advocacy is too strong. I would have preferred a more impartial account of the evidence, both for and against. According to some studies, only a third of people with depression have raised levels of inflammation – so where does that leave everyone else?

Still, even if inflammation isn't the grand theory of everything that Bullmore would like it to be, understanding the role it does play would be a real advance. Bullmore hopes for a future when blood tests can indicate whether people have "inflamed depression" and, if they do, they will receive anti-inflammatories, perhaps including some of today's arthritis medicines, rather than Prozac.

Despite my caveats, anyone interested in how the mind works will enjoy this book. With concerns growing over the risks and benefits of existing antidepressants, this is one area that desperately needs an infusion of new ideas.