

Depression is more than a mental disorder—it affects the whole body

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An international team of researchers lead by the University of Granada (UGR) has scientifically proven for the first time that depression is more than a mental disorder—it causes important alterations of the oxidative stress, so it should be considered a systemic disease, since it affects the whole organism.

The results of this work, published in the renowned *Journal of Clinical Psychiatry* magazine, could explain the significant association that [depression](#) has with cardiovascular diseases and cancer, and why people suffering from depression die younger. At the same time, this research may help finding new therapeutic targets for the prevention and treatment of depression.

The lead author of this work is Sara Jiménez Fernández, Ph.D. student at the UGR and psychiatrist at the Child and Adolescent Mental Health Unit at Jaén Medical Center (Jaén, Spain). The co-authors are the UGR Psychiatry professors Manuel Gurpegui Fernández de Legaria and Francisco Díaz Atienza, in collaboration, among others, with Christoph Correll from the Zucker Hillside Hospital (New York, USA).

A study with 3961 people

This research is a meta-analysis of 29 previous studies involving 3961 people, and it's the first detailed work of its kind about what happens in the bodies of people suffering from depression. It studies the imbalance

between the individual increase of various [oxidative stress](#) parameters (especially malondialdehyde, a biomarker to measure the oxidative deterioration of the cell membrane) and the decrease in antioxidant substances (such as uric acid, zinc, and the superoxide dismutase enzyme).

The researchers have proven that after receiving the usual treatment against depression, the patients' malondialdehyde levels are significantly reduced, to the point that they are indistinguishable from healthy individuals. At the same time, zinc and [uric acid](#) levels increase until reaching normal levels (something that does not occur in the case of the superoxide dismutase enzyme).

More information: Sara Jiménez-Fernández et al. Oxidative Stress and Antioxidant Parameters in Patients With Major Depressive Disorder Compared to Healthy Controls Before and After Antidepressant Treatment, *The Journal of Clinical Psychiatry* (2015). [DOI: 10.4088/JCP.14r09179](#)

Provided by University of Granada

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