

# Depression is genetic, not a pain in the back

April 13 2015

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Credit: George Hodan/Public Domain

If you suffer from depression and back pain odds are it's down to your genes, suggests new research from the University of Sydney.

The landmark study of twins, published in the journal *Pain*, reveals [genetic factors](#) might explain the commonly found association between low back pain and depression.

Dr Paulo Ferreria from the University of Sydney's Faculty of Health

Sciences said the study indicates the association between depression and back pain is the result of the confounding effect of common genetic factors influencing both [conditions](#).

"Our case-control study reveals the association between back pain and depression vanishes when genetic and familial confounders among twins are factored in," Dr Ferreria said.

"The new research offers hope for the future management of depression and back pain as the association of the two conditions can complicate diagnosis and treatment.

"While the prevalence of patients concurrently suffering depression and [low back pain](#) is high, this new research shows it is possible there is no direct relationship between the two health conditions."

Marina de Barros Pinheiro from the Faculty of Health Sciences and an author on the study said the new research debunks the findings of previous studies that found a consistent relationship between back pain and depression.

"In our study we examined genetically identical twins for a controlled case analysis and found that a link between depression and back pain was not evident which indicates genetic factors affecting both conditions is likely responsible for the association between the two conditions," Ms Pinheiro said.

"The study suggests genes affecting factors that control both conditions, for example levels of neurotransmitters, such as serotonin and norepinephrine, might potentially be responsible for the increase in the risk of suffering both back pain and depression."

The control study used data from 2,148 Spanish twins to investigate the

association between [depression](#) and back [pain](#), accounting for genetics, familial and environmental factors.

Provided by University of Sydney

Citation: Depression is genetic, not a pain in the back (2015, April 13) retrieved 24 April 2024 from <https://medicalxpress.com/news/2015-04-depression-genetic-pain.html>

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