

# Common mental health drug could be used to treat arthritis

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The research carried out at Queen Mary University of London (QMUL) in collaboration with scientists at the University of Otago in New Zealand, tested the effects of lithium chloride on cartilage and found that it slowed the degradation associated with osteoarthritis.

Osteoarthritis results in degradation of cartilage in joints leading to pain and immobility. It currently affects a third of over 45s in the UK and there are currently no treatments that can prevent it.

The study used bovine cartilage samples exposed to inflammatory molecules to mimic the effects of arthritis and then treated the tissue with [lithium chloride](#). The researchers demonstrated that this already commonly-used drug could be used to prevent the [degradation](#) and loss of mechanical integrity of cartilage in patients with arthritis.

The researchers also found that, contrary to some reports, long-term dietary use of lithium did not cause arthritis.

Professor Martin Knight, co-author of the research, said:

"Osteoarthritis has a devastating impact on the lives of many people in the UK and it's vital that we look for novel ways to prevent it.

"While we're still at an [early stage](#) in researching lithium's effects on cartilage and its suitability as a treatment, the possibility that an already widely available pharmaceutical could slow its progress is a significant

step forward."

**More information:** Thompson, C., Yasmin, H., Varone, A., Wiles, A., Poole, C. and Knight, M. (2015). Lithium chloride prevents interleukin-1 $\beta$  induced cartilage degradation and loss of mechanical properties. *J. Orthop. Res.*, p.n/a-n/a. [onlinelibrary.wiley.com/doi/10 ...  
2/jor.22913/abstract](https://onlinelibrary.wiley.com/doi/10.1002/jor.22913/abstract)

Provided by Queen Mary, University of London

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