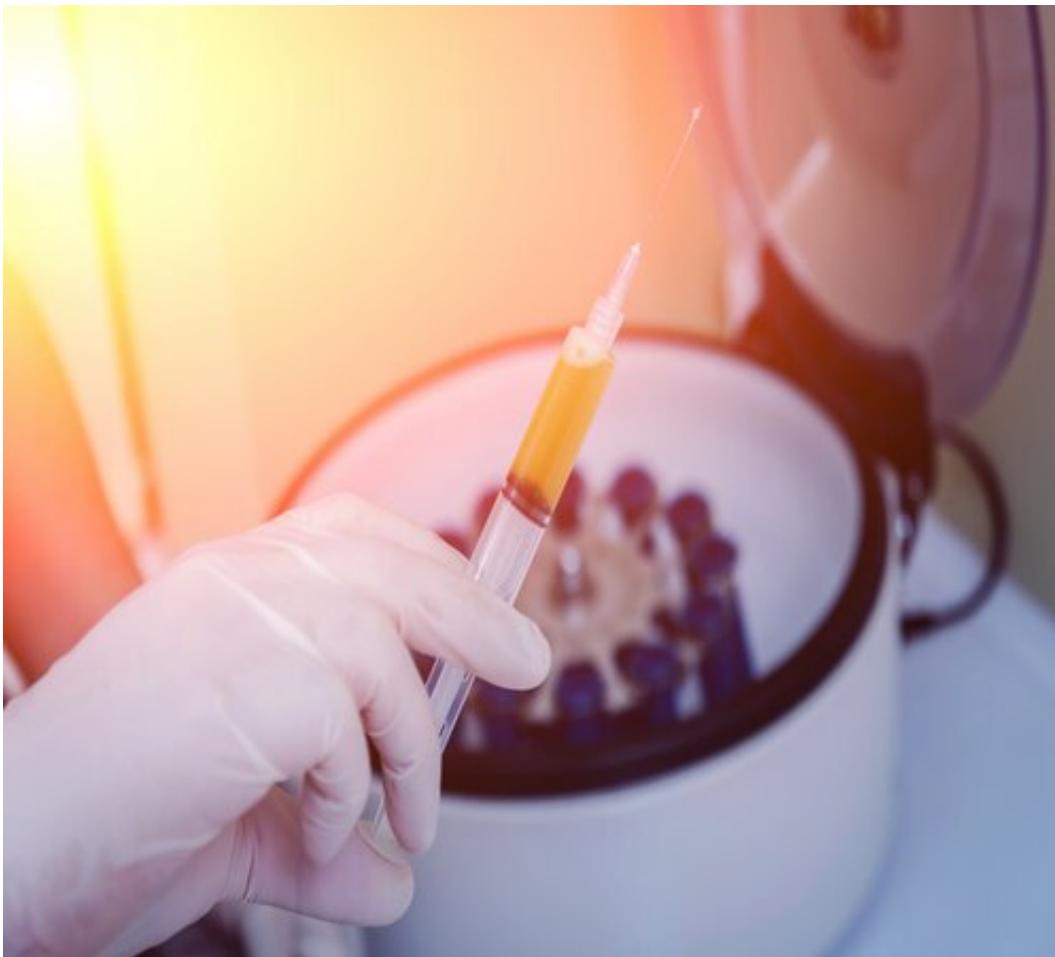


Clinical trial denounces use of platelet-rich plasma injections for knee joint osteoarthritis

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Platelet-rich plasma injections have become a popular form of treatment for painful joints in recent years but researchers have established they are no better than placebo for helping reduce knee pain. Credit: CANVA

Injections of platelet-rich plasma are no better than placebo for helping reduce knee pain in people with knee joint osteoarthritis, an Australian clinical trial led by researchers at the University of Melbourne, University of Sydney and Monash University has found.

Knee joint arthritis affects more than two million Australians with platelet-rich plasma injections becoming a popular form of treatment for painful joints in recent years. Platelet-rich plasma uses a concentration of a patient's own platelets injected directly into the joint with the aim being to aid in long-term [pain](#) relief and to improve joint cartilage.

The research, published in the *Journal of the American Medical Association*, compared a series of three-weekly injections of platelet-rich plasma to three-weekly injections of saline, which acted as a placebo for the study.

Participants and injecting doctors were not aware of whether there was platelet-rich plasma or saline in the syringe during the injections. Participants were tracked for pain levels and cartilage health over 12 months.

Researchers found that while participants who received platelet-rich plasma injections had a significant improvement in their [knee pain](#) over 12 months, the level of improvement was matched by those in the placebo group. There were no differences identified in the MRI scans across both groups.

"We conducted the study because there is currently limited high-quality evidence about whether or not platelet-rich plasma injections have benefits for people with painful knee osteoarthritis. Our results do not support the use of platelet-rich [plasma](#) for people with mild to moderate knee osteoarthritis," University of Melbourne lead researcher Professor Kim Bennell said.

Professor Bennell advises people with knee osteoarthritis to use treatments such as exercise and, if they are above a healthy weight range, weight loss to help manage their symptoms and improve their quality of life.

Contributing author Professor David Hunter, from the University of Sydney, said Osteoarthritis (OA) is a common and disabling disease. "Pain in OA is a substantial unmet need, so identifying new therapies capable of improving the symptoms and structure are urgently needed. Unfortunately, the particular treatment trialed in this study, PRP, whilst widely used and typically expensive, appears to be ineffective compared to an inert comparator."

Two hundred and eighty-eight people with mild to moderate [knee osteoarthritis](#) participated in the RESTORE study, conducted in both Melbourne and Sydney, with funding from the National Health and Medical Research Council.

More information: Kim L. Bennell et al, Effect of Intra-articular Platelet-Rich Plasma vs Placebo Injection on Pain and Medial Tibial Cartilage Volume in Patients With Knee Osteoarthritis: The RESTORE Randomized Clinical Trial, *Journal of the American Medical Association* (2021). [DOI: 10.1001/jama.2021.19415](https://doi.org/10.1001/jama.2021.19415)

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