

# Silver bullet for arthritis

**EXCLUSIVE**  
**SUE DUNLEVY**

IT'S the nation's most common cause of chronic pain, leaving millions of sufferers in constant and debilitating discomfort and putting a massive strain on our health system.

But a breakthrough medication discovered by Australian scientists looks set to stop osteoarthritis in its tracks.

In what is being billed as the first blockbuster drug since anti-cholesterol pills, the new treatment has the potential to delay or completely eliminate the need for hip and knee replacements.

Patients who have trialled the drug Pentosan polysulfate sodium (PPS) have reported a huge reduction in pain and a new lease on life. Although researchers have cautioned that more testing is needed, the drug could have conquered the "last frontier of big diseases with no treatment".

At the moment there is no effective medication for the condition, which is caused by the thinning of cartilage in

joints that results in bones rubbing together, creating stiffness, pain, and difficulty moving. More than three million Australians, including top sports stars, are affected and it is the leading cause of costly joint replacements.

Australian scientist Professor Peter Ghosh and Melbourne company Paradigm Biopharma are behind the breakthrough, discovering that

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**Flavia Cicuttin**

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PPS, which has been used for 70 years to treat blood clots and urinary tract infections in women, can reduce and even eliminate osteoarthritis pain.

A peer-reviewed case study of an Australian patient, to be published in the journal *BMC Musculoskeletal Disorders*,

showed her pain went from eight out of 10 to zero after just six injections of the treatment over three weeks.

If a secondary clinical trial due to start within months confirms these early results, the drug has the potential to delay or eliminate the need for 75,000 hip and knee replacements a year, saving tens of billions of dollars.

The discovery was made by rethinking the cause of osteoarthritis, considering that it actually starts in the bone. Dr Jegan Krishnan, who is trialling the medicine, said it was not yet clear why it worked. "It may have anti-inflammatory activities, it seems addressing the bone marrow lesions gives symptomatic relief," he said.

Monash University arthritis expert Flavia Cicuttini said the results were fantastic but further testing was needed.

"Osteoarthritis is the last frontier of big diseases with no treatment, if this drug works, even if it just slows the progress, you don't need to cure it, you could change the pattern of the disease," she said.