

Knee bracing can significantly reduce pain of kneecap osteoarthritis, research finds

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(Medical Xpress)—Wearing a knee brace has been shown to "significantly improve the pain and symptoms" of a type of osteoarthritis affecting the kneecap, according to a new study.

Arthritis Research UK-funded researchers at The University of Manchester claim their findings, presented at the [Osteoarthritis](#) Research Society International meeting in Philadelphia tomorrow (Friday April 19) have enormous potential for treating this common joint condition effectively – as well as providing a simple and cheap alternative to painkillers.

Osteoarthritis of the knee affects around six million people in the UK and is increasing as the population ages and becomes more obese. Current treatments are limited to [pain](#) relief and joint replacement.

Osteoarthritis of the knee affecting the kneecap (patellofemoral osteoarthritis) accounts for about 20% of patients with knee pain. They typically experience pain that is made worse by going up and down stairs, kneeling, squatting and prolonged sitting.

"There's a pressing need for non-[surgical interventions](#) for [knee osteoarthritis](#), and little attention has been paid to treatments particularly aimed at the kneecap (the patellofemoral joint), a major source of knee pain," explained Dr Michael Callaghan, research associate in [rehabilitation science](#) at the University of Manchester.

"We've shown that something as simple as a lightweight knee brace can dramatically improve the symptoms and function for people with this particular type of knee osteoarthritis."

The research team conducted a [randomised controlled trial](#) of a lightweight lycra flexible knee brace fitted around the knee with a support strap for the kneecap. One hundred and 26 patients between the ages of 40 and 70 were treated over a 12-week period. All had suffered from arthritic knee pain for the previous three months.

They were randomly allocated to either immediate brace treatment or delayed treatment (i.e. after six weeks.) Both groups of patients eventually wore the brace for a period of 12 weeks and averaged roughly seven hours a day.

After six weeks of brace wearing there were significant improvements between the brace wearing group and the no treatment group in scores for pain, symptoms, knee stiffness, muscle strength and function. After 12 weeks there were significant improvements in these scores for all patients compared to when they started.

"Patients repeatedly told us that wearing the brace made their knee feel more secure, stable, and supported," Dr Callaghan added. "Our theory is that these sensations gave the patient confidence to move the knee more normally and this helped in improving muscle strength, knee function and symptoms."

Professor Alan Silman, medical director of Arthritis Research UK, which funded the trial, said: "[Osteoarthritis of the knee](#) is a painful disorder that affects millions of people in the UK, causing pain and reducing activities. We know that in patients with arthritis, the [knee](#) joint is frequently out of normal alignment, which might be an underlying cause of the problem, as well as making it worse.

"By using a simple brace, the researchers have been able not only to correct the alignment but achieve a very worthwhile benefit in terms of reducing pain and function. This approach is a real advance over relying on pain killers and has the potential to reduce the need for joint surgery and replacement, procedures often employed when the symptoms become uncontrollable."

Provided by University of Manchester

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