

Arthroscopic knee surgery does not cure sensations of knee catching or locking

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A new Finnish study proves that a commonly used surgical treatment does not help patients who suffer from "mechanical symptoms" (sensations of knee catching or locking) associated with a degenerative knee.

"Established medical concepts should be rigorously tested from time to time to see if they can stand the scrutiny. No assumption is too obvious not to be tested in medicine", says Professor Teppo Järvinen, who led the research.

Arthroscopic surgery on degenerative knees, or [knee joints](#) afflicted with age-related deterioration, has not been shown to be more effective in alleviating symptoms than physical therapy or sham (placebo) surgery. It is nevertheless generally assumed that partial removal of a torn meniscus may help in cases where the patient is suffering from mechanical symptoms, i.e., sensations of knee joint catching or locking. It has been believed that these symptoms are caused by a piece of the joint structure lodging between the articular surfaces that glide against each other. As meniscal tearing is a commonly found feature of knee degeneration, partial meniscectomy has been common practice for practically all cases in which a patient with knee problems has reported mechanical symptoms to the surgeon.

The Finnish FIDELITY research group has now used its previous acclaimed [multicentre trial](#) to determine whether partial meniscectomy had an impact on the prevalence of the mechanical symptom and

whether the procedure results in alleviation of these symptoms. The new study has been published in the *Annals of Internal Medicine*, one of the most esteemed medical journals.

A total of 146 patients participated in the FIDELITY study, all of them suffering for more than three months from pain in the inner side of the knee which had been deemed attributable to.../resulting from... a tear of the medial meniscus through clinical examination and [magnetic resonance imaging](#) (MRI). Arthritic patients and patients whose symptoms began after an isolated significant trauma were excluded from the study. Diagnostic keyhole surgery was done on all patients, and if a torn meniscus was found, the patients were then randomised to undergo either a partial meniscectomy (70 patients) or sham surgery (76 patients).

32 patients (46%) in the partial meniscectomy group and 37 (49%) in the [placebo group](#) initially (before surgery) reported sensations of mechanical symptoms,. A follow-up survey was conducted after two, six and twelve months from the procedure. From the total of 146 patients, 34 (49%) from the partial meniscectomy group and 33 (43%) from the placebo group reported a mechanical symptom at some point during the follow-up process. Of the 69 patients who had mechanical symptoms at the outset, 23 (72%) of the partial meniscectomy group and 22 (59%) of the placebo group reported still experiencing mechanical symptoms at some point during the follow-up process. The mechanical symptoms were alleviated for the full duration of the follow-up process for 9 patients (28%) who underwent a partial meniscectomy and 15 patients (41%) who underwent sham surgery.

"Based on these results we can state that the partial removal of a degenerative torn meniscus does not reduce or alleviate mechanical symptoms when compared with sham surgery," says Teppo Järvinen, professor of orthopaedics and traumatology at the University of Helsinki

and HUCS, who ran the study.

"Orthopaedists are largely unanimous on the benefits of arthroscopic surgery on [patients](#) suffering from mechanical symptoms. However, scientific proof of the benefits is scarce, and before our study, entirely based on uncontrolled follow-up studies," says Dr Raine Sihvonen, specialist in orthopaedics at the Hatanpää Hospital in Tampere and investigator in charge of the practical execution of the study.

The researchers emphasised that degenerative and traumatic meniscal tearing are two completely different illnesses, and should also be treated differently.

"Research indicates that treatment of a torn meniscus which is obviously traumatic in origin in a patient under 35 years of age seems to alleviate mechanical symptoms. In a degenerative knee, seemingly similar symptoms may not even be caused by the meniscal tear—more likely they are a reflection of the overall deterioration of the [knee](#) and prone to increase as arthritis develops further," Järvinen explains.

More information: Raine Sihvonen, Martin Englund, Aleksandra Turkiewicz ja Teppo LN Järvinen: Polven mekaaninen oire ja degeneratiivinen kierukkarepeämä: satunnaistetun lumekontrolloidun tutkimuksen jälkianalyysi. *Ann Intern Med*, Feb. 8, 2016

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