

How to Avoid Knee Replacement

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According to the American College of Rheumatology (ACR), about 790,000 total knee replacements and over 450,000 hip replacements are performed every year in the U.S. This number is expected to increase due to our aging population. The ACR states that total joint replacement is one of the safest and most reliable treatments in medicine.¹ But are these replacements really necessary? Maybe not.

According to a presentation delivered at the annual meeting of the Radiological Society of North America, muscle strength in the leg is a major factor in determining if a knee replacement will be necessary.

Two muscle groups - the quadriceps and hamstrings - act as counter forces that facilitate a wide range of motion while protecting the knee joint. Exercises that strengthen these muscles and maintain the balance between them can prevent the progression of osteoarthritis that results in the need for knee replacement in over 50% of patients.²

The cost of a knee replacement in the U.S. ranges from \$30,000 to \$50,000,³ and the procedure is a major revenue source for orthopedic practices and medical institutions. Diet change, exercise, and weight loss are low-cost and better interventions and can usually prevent joint replacement, but there is no economic incentive to recommend these. Instead, the diagnosis of osteoarthritis is usually the beginning of monitoring the progression of the condition until joint replacement is the only option.

There are many reasons to recommend diet and lifestyle improvement to prevent the need for knee replacement. A study including 100 older patients who were eligible for knee replacement surgery showed that over a 2-year period, all of them improved including those who only were given non-surgical interventions such as exercise, dietary advice, and pain medication. While the patients who had the surgery fared better initially, they had four times as many complications such as infections, blood clots, or knee stiffness that were severe enough that another surgery requiring anesthesia was required.⁴ Complications are more common and more serious than many people realize – one in every 100-200 patients who has a knee replacement dies within 90 days of the procedure.⁵ And as many as one third of those who undergo the procedure continue to experience pain.⁶

There are situations in which knee replacement is the right thing to do, or the only viable option. However, in many cases, other options are both safer and better. There are many causes of knee pain. Being overweight and obese is probably the most common, and lifestyle change leading to weight loss not only relieves knee pain, but addresses many other health issues too. In some cases, the knee is not tracking

properly, due to muscle imbalances or injuries. When this is the case, a replacement knee does not help because the new knee will also not track properly. Strategies such as yoga and physical therapy with a competent PT are the best options in these cases.

The bottom line: Joint replacement can be avoided in most cases by eating well, exercising, and maintaining a healthy weight.

¹ <https://rheumatology.org/patients/joint-replacement-surgery>

² Ed Sussman. Stronger Quads May Lower Risk for Knee Replacement Surgery. *MEDPAGE Today* Nov 29 2023 https://www.medpagetoday.com/meetingcoverage/rsna/107579?xid=nl_mpt_DHE_2023-11-29&eun=g1881756d0r&utm_source=Sailthru&utm_medium=email&utm_campaign=Daily%20Headlines%20Evening%202023-11-29&utm_term=NL_Daily_DHE_dual-gmail-definition

³ <https://www.healthpartners.com/blog/cost-of-a-knee-replacement-surgery/>

⁴ Skou ST, Roos EM, Laursen MB et al. "Total knee replacement and non-surgical treatment of knee osteoarthritis: 2-year outcome from two parallel randomized controlled trials." *Osteoarthritis and Cartilage* 2018 Sept;26(9):1170-1180

⁵ Katz JN, "Parachutes and Preferences – A Trial of Knee Replacement." *NEJM* 2015 Oct;373:1668-1669

⁶ Beswick AD, Wyld V, Goberman-Hill R, Blom A, Dieppe P. "What proportion of patients report long-term pain after total hip or knee replacement for osteoarthritis? A systematic review of prospective studies in unselected patients." *BMJ* 2012 Feb 22;2(1):e000435.