

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: BALANCE BOTS: MORE PRECISE TOTAL KNEE REPLACEMENTS
REPORT: MB #128

BACKGROUND: Knee replacement surgery — also known as knee arthroplasty — can help relieve pain and restore function in severely diseased knee joints. The procedure involves cutting away damaged bone and cartilage from your thighbone, shinbone and kneecap and replacing it with an artificial joint (prosthesis) made of metal alloys, high-grade plastics, and polymers. Knee replacement surgery is such a popular procedure that it is estimated to be performed about 800,000 times annually in the United States alone, and that figure increases every year. And about 90% of knee replacements last 10 years and 80% last 20 years.
(Sources: <https://www.mayoclinic.org/tests-procedures/knee-replacement/about/pac-20385276>
<https://www.popb.md/2021/11/19/knee-replacement-surgery-statistics-you-should-know/#:~:text=Almost%20800%2C000%20Knee%20Replacements%20Are,that%20figure%20increases%20every%20year.>.)

DIAGNOSING: Resting and icing a knee may be common remedies to relieve knee pain, but how long until you feel the aches and pains again? If you have experienced any symptoms like persistent or reoccurring pain, pain preventing you from sleeping, difficulty doing daily activities including walking or climbing stairs, stiff or swollen knees, or a knee deformity like a bowing in or out of the knee, it might be time to consider knee replacement surgery.
(Source: <https://www.resolutehealth.com/services/orthopedics/find-an-orthopedic-doctor/orthopedics-ty/corporate-content/5-signs-you-might-need-knee-replacement-surgery>)

NEW TECHNOLOGY: Minimally invasive quadriceps-sparing total knee replacement is a new surgical technique that allows surgeons to insert the same time-tested reliable knee replacement implants through a shorter incision using surgical approach that avoids trauma to the quadriceps muscle, which is the most important muscle group around the knee. This new technique which is sometimes called quadriceps-sparing knee replacement uses an incision that is typically only 3 to 4 inches in length and the recovery time is much quicker – often permitting patients to walk with a cane within a couple of weeks of surgery or even earlier. The less-traumatic nature of the surgical approach also may decrease post-operative pain and diminish the need for rehab and therapy compared to more traditional approaches.
(Source: <https://orthop.washington.edu/patient-care/articles/knee/minimally-invasive-surgery-mis-quadriceps-sparing-total-knee-replacement#:~:text=Minimally%2Dinvasive%20quadriceps%2Dsparing%20total,is%20the%20most%20important%20muscle>)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com