

# Increasing rate of knee replacements linked to obesity among young, researchers say

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Contrary to popular myth, it is not the aging Baby Boomer or weekend warrior that is causing the unprecedented increase in knee replacement surgeries. Data gathered by more than 125 orthopedic surgeons from 22 states across the U.S. show a more mundane culprit: rising rates of obesity among those under the age of 65.

A first-of-its-kind database for knee and hip replacements and patient reported outcomes – FORCE-TJR – is beginning to yield information that may have significance for one of the most expensive, most used surgical procedures in the U.S. – total [joint replacement](#).

"What was once thought of as a procedure for older people or those with sporting injuries is changing," said David Ayers, MD, Chair of the Department of Orthopedics and Physical Rehabilitation and director of the Musculoskeletal Center of Excellence at the University of Massachusetts Medical School. "Our study shows that younger [patients](#) are more obese and experience the same amount of pain and functional disability as older patients and in some cases even more."

In the first 9,000 patients whose outcomes were tracked in FORCE-TJR, the national research program led by researchers at the University of Massachusetts Medical School, 55 percent of patients under [age](#) 65 were considered technically obese compared to 43 percent age 65 and older. Even more striking was that twice as many younger patients were in the morbidly obese category (body mass index greater than 40) – 11 percent of those under age 65 versus 5 percent age 65 and older. The younger

patients also had higher rates of smoking and lower mental health scores.

"What we're seeing is that the rise in obesity rates in younger people is having a dramatic influence on the number of total joint replacement surgeries," Ayers said. "These are not premature or unnecessary procedures."

Knee replacement surgeries are already one of the most common procedures in the U.S. Approximately 600,000 are performed each year at a cost of \$9.9 billion, and the demand is expected to grow to 3.48 million procedures a year by 2030.

"Unless we see a significant reduction in [obesity](#), we will continue to see the necessity for more and more of these procedures," Ayers said. "This is an example of the type of information this database will yield that could directly influence clinical best practices, health care policy and the overall health and quality of life for people with arthritis."

Obesity is not only a major predictor of [knee replacement](#) surgery, it also puts patients at a post-operative disadvantage compared to healthier patients. For example, regardless of age, those who are obese don't experience the same level of functional gain after joint replacement as other patients. Obese patients are also more likely to get an infection or other complications that require readmission or revision surgery.

These factors drive up costs. Researchers also say that post-operative support programs should target improved physical activity and diet with the overall goal being a healthier lifestyle. Currently there are no standards for physical therapy or [health](#) management after joint [replacement surgery](#).

"Figuring out the best practices for rehabilitation and how to lose weight should be a priority," said Patricia Franklin, MD, principal investigator

of FORCE-TJR. "There needs to be a wellness incentive. Health insurers have done that around other diseases like diabetes and heart disease, but not joint replacement. We can't just say we fixed the knee or the hip and then walk away."

Franklin will present findings from the FORCE-TJR study at the annual meeting of the American College of Rheumatology and the Association of Rheumatology Health Professionals in San Diego, Oct. 25-30.

Provided by University of Massachusetts Medical School

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