

Most patients gain weight after getting a new knee, study finds

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Patients need to get out of the house to gain the benefit from knee replacement surgery and avoid weight gain, according to a University of Delaware study. Paul Baumbach, a patient at UD's Physical Therapy Clinic, plays tennis as part of his exercise program for his new right knee. Credit: Duane Perry/University of Delaware

You'd think folks who've had knee replacement surgery -- finally able to walk and exercise without pain -- would lose weight instead of put on pounds, but surprisingly that's not the case, according to a University of Delaware study.

Researchers Joseph Zeni and Lynn Snyder-Mackler in the Department of Physical Therapy in UD's College of Health Sciences found that

patients typically drop weight in the first few weeks after total [knee arthroplasty](#) (TKA), but then the number on the scale starts creeping upward, with an average weight gain of 14 pounds in two years.

The study, which was sponsored by the National Institutes of Health, is reported in the Jan. 15 online edition of *Osteoarthritis and Cartilage*, the official journal of the Osteoarthritis Research Society International.

The research involved 106 individuals with end-stage osteoarthritis who had knee replacement surgery, and an age-matched, healthy control group of 31 subjects who did not have surgery. Height, weight, quadriceps strength, and self-perceived functional ability were measured during an initial visit to UD's Physical Therapy Clinic, and at a follow-up visit two years later.

"We saw a significant increase in [body mass index](#) (BMI) over two years for the surgical group, but not the control group," says Zeni, a research assistant professor at UD. "Sixty-six percent of the people in the surgical group gained weight over the two years -- the average weight gain was 14 pounds."

Those who had the knee replacement surgery started out heavier and ended heavier than the control group. The weaker the surgery patients were, as measured by the strength of the quadriceps, the more weight they gained, Zeni notes.

"These findings are making us re-think the component after total [knee surgery](#) and of patients not being in a routine of moving around," says Snyder-Mackler, Alumni Distinguished Professor of Physical Therapy at UD.

She notes that it's critical that people not wait too long to have a knee replaced because their functional level going into surgery typically

dictates their functional level after surgery.

Gaining weight after one knee replacement is worrisome because it could jeopardize the patient's other knee. Between 35-50 percent will have surgery on the other side within 10 years, Snyder-Mackler says.

The researchers note that [weight gain](#) after a knee replacement needs to be treated as a separate concern and integrated into post-operative care through a combination of approaches, including nutritional counseling to help patients with portion control, and more emphasis on retraining patients with new knees to walk normally.

"For physical therapists and surgeons, the common thinking is that after a patient's knee has been replaced, that patient will be more active," says Snyder-Mackler. "But the practices and habits these patients developed to get around in the years prior to surgery are hard to break, and often they don't take advantage of the functional gain once they get a new knee," she notes.

"We need to re-train patients with new knees to walk more normally and more systematically. And we need to encourage more community participation," Snyder-Mackler adds. "If you're not getting out of the house, you won't gain the benefit. We need people with new knees to get out there -- with the help of their family, their friends, and the community at large."

Provided by University of Delaware

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