Knee Surgery Success

by Catherine Winters

Going in for a knee replacement? Check out our before-and-after guide to getting the best knee surgery results.

In the market for a new knee? Welcome to the crowd. From 2005 through 2030, the demand for new knees will skyrocket an estimated 673 percent—adding up to some 3.48 million knee replacement surgeries per year. Revision surgeries—to fix or replace a previous knee replacement—are expected to soar 601 percent.

If you're hobbled by knee osteoarthritis, knee replacement surgery—officially known as knee arthroplasty—can transform your life. Make no mistake about it: Knee surgery is tough. But the actions you take and the decisions you make before and after the procedure will influence how quickly you can be out and about. Here an owner's guide to successful knee replacement surgery.

Before

Watch the pre-op pain meds. Relying on prescription opioids to control pre-op knee pain may mean more trouble recovering from surgery. According to a study in the Journal of Bone and Joint Surgery, people who used opioids for six weeks or longer before being operated on were more likely to need additional surgical procedures for persistent stiffness and/or pain. They also spent more time in the hospital; on average they were discharged 4.3 days after surgery compared with 3.4 days for people who didn't use painkillers. A possible reason: Opioids may increase sensitivity to pain so it's harder to control post-op discomfort.

Stop smoking. Not only is it bad for your lungs, but also it slows tissue healing and lowers bone density. Oxygen helps to heal soft tissue and smoking reduces the amount that reaches tissue, reports an article in the Journal of the American Academy of Orthopaedic Surgeons. The carbon monoxide in tobacco decreases blood flow to tissues, also slowing healing. One analysis reported that smokers are six times more likely than nonsmokers to develop post-surgical infections. Finally, because of its effects on tissue and bone, smoking may increase the chances of a knee implant loosening.

Choose a high-volume surgeon. One study reported that people age 65 and over who had knee surgery at low-volume hospitals (those doing fewer than 200 knee replacements each year) were more likely to develop blood clots in the lungs within 30 days of surgery and to die within the year than were people operated on in a hospital where more knee replacements were performed. "Successful surgeons have the same team and use the same prosthesis," says Dr. David Cooper, a spokesperson for the American Academy of Orthopaedic Surgeons, who has performed an estimated 600 knee replacements. "When you have 'replicability', your results are better."
Ask about the implant. Getting the latest high-tech knee implant isn't necessarily a good idea, especially if you're among the first to receive it. Finnish researchers found that a hospital's first 15 recipients of a new knee prosthesis are 48 percent more likely to need surgery within two years to repair or replace it. "There is always a learning curve with any new prosthesis or procedure," says Cooper, founder of The Knee Center in Wilkes-Barre, Pennsylvania. "You would never want to be among the first to try something new." If your surgeon recommends a brand-new model, ask him how many he has implanted. "Make sure you're not being experimented on," advises Cooper. Another issue to consider: The typical artificial knee lasts 15 to 20 years. So the older you are when you receive the implant, the less likely you are to benefit from any tweaks in durability.

Get thee to a dentist. When your knee hurts, your teeth are probably the last things on your mind. But they could affect your recovery. Have your teeth cleaned and any cavities—which are caused by bacteria—filled before surgery. "Transient bacteria on the teeth can travel through the bloodstream to the knee," explains Cooper. That can up your odds of developing a post-op infection. Wash down your legs. Cooper has patients scrub their legs with an antibacterial cleanser for a week prior to surgery. "It reduces the amount of bacteria on skin, which is where most infections start," he explains. Ask your surgeon to recommend a soap. Stop the aspirin. To minimize blood loss post-surgery, stop using aspirin, which keeps blood from clotting, at least a week before. (Your surgeon will give you specific guidelines.) If you take prescription medication to thin your blood, tell your surgeon and ask your prescribing physician if and when you can safely stop the medication.

Get in shape. University of Kentucky researchers had one group of knee replacement candidates stretch, strengthen leg muscles using light resistance bands, and do step exercises and easy walking three times per week for four to eight weeks before surgery. A "usual care" group continued with normal activities. By the end of the study, the exercisers had increased the strength of the leg to be operated on by 10 percent. The non-exercisers had a 10 percent decrease in strength. Since the ability to walk, climb stairs and do other activities may predict how you fare after surgery, improving leg strength before going under the knife may speed your recovery, say the researchers.

After

Be pro-active about clots. Because you're not as active after a knee replacement, your blood flow slows down, increasing clot risk. The American Academy of Orthopaedic Surgeons recommends that patients take an anticoagulant and/or use calf compression stockings for up to a month after surgery to prevent clots.

Move ASAP. The sooner you start using that new knee, the better. Spanish researchers found that gentle rehabilitation started within 24 hours post-surgery reduced the number of days a patient spent in the hospital and the number of physical therapy sessions needed to walk and be independent. What's more, people who started rehab early had less post-op pain, better range of motion and more strength in the thigh muscles than people who started rehab 48 to 72 hours after the new knee was implanted. Therapy consisted of easy moves such as contracting and flexing the ankle, tightening the muscles around the knee, gently bending the knee, standing and walking a short distance.

Rehab your quads. Weak quadriceps muscles are common after knee replacement, explains Dr. Lynn Snyder-Mackler, a professor in the department of physical therapy at the University of Delaware in Newark. And that can affect your ability to resume normal activities. In a recent study published in the journal Arthritis & Rheumatism, she and her colleagues found that people who strengthened their quads—the ones in front of the thighs that stabilize and move the knee—after knee surgery ended up functioning about as well as healthy people of the same age. What it takes: Starting four weeks after surgery, people did six weeks of progressive strength-training two to three times per week, for a minimum of 12 physical therapy sessions. In addition to strengthening the quads, patients worked on their hamstrings (the muscles in the back of the thighs), their calf muscles, and their hip abductors and flexors, which help you rise from a chair and walk, One group of exercisers also received neuromuscular electric stimulation. At both the three and 12 month follow-ups, people who did the strength-training—with or without the stimulation—out-performed those who received usual care on measures of function such as getting out of a chair, walking for six minutes and going down six steps.