

Successful Knee Replacement Surgery All About Timing

Sports Physician Dr. Alexander Meininger Says Age, Pain Intensity Among Factors.

STEAMBOAT SPRINGS, CO, UNITED STATES, October 17, 2023 /EINPresswire.com/ -- When it comes to successful knee replacement surgery, "timing is everything," according to orthopedic

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Dr. Alexander Meininger

surgeon and sports medicine specialist <u>Alexander</u> <u>Meininger MD</u>. "The most important factors are patient based. For instance, a patient's pain, limitations, and daily function affect our decision making. Ability to pursue daily activity - whether that be at home, at work or at play - is critical in the discussion around joint replacement," says <u>Dr. Meininger</u>.

A thorough evaluation of the patient includes not only a joint specific physical exam but also dynamic radiologic assessment with plain X-rays taken in an upright posture to assess the joint under the load of weight bearing, and in

some cases advanced imaging with MRI exams. Appreciation for their general well-being and overall suitability for surgery is important as well. Is there opportunity to better control blood sugar? Blood pressure? Improve strength or lose weight? These conversations help determine whether a patient will derive optimal benefit from a knee replacement," says Dr. Meininger, a founding partner of the prestigious Steamboat Orthopaedic & Spine Institute, based in Steamboat Springs, Colorado.

He refers to a study published in the Journal of Bone and Joint Surgery. In it, Northwestern Medicine investigators contend "90 percent of patients with knee osteoarthritis who would potentially benefit from knee replacement [surgery, also known as knee arthroplasty,] are waiting too long to have it and getting less benefit. In addition, about 25 percent of patients who don't need it are having it [performed] prematurely when the benefit is minimal" (bit.ly/3sLoggo).

Dr. Meininger, who is especially noted for use of advanced techniques in the treatment, repair, and restoration of knee, hip, and shoulder joints, agrees with the authors and calls osteoarthritis one of the primary culprits in deterioration of the knee.

Osteoarthritis is a progressive, degenerative disease that causes the cartilage and tissues cushioning the ends of the joint bones to break down. Loss of these tissues affects the "gliding surface of the knee — the surface we rely on for smooth weight-bearing," Dr. Meininger says. Injuries, overuse, and age can alter the stress upon the joint and contribute to osteoarthritis, even family history and genetics all play a role.

"Osteoarthritis can advance not only to the point of severe pain, but degeneration can also contribute to derangement of the joint where the knee becomes crooked, deformed, or no longer bends or straightens as it used to. These combine to affect patients' walking, their balance, and often cases make them unable to exercise. If let go too far, surgery may be unable to restore full function to the knee."



Dr. Alexander Meininger

Similarly, some patients may pull the knee replacement surgery trigger too quickly before allowing more conservative, less invasive measures to be trialed. These measures can include arthritis-based exercises, especially low impact and aquatic activities. Physical therapy is often helpful to learn less painful ways to strengthen the knee. Diet and avoiding inflammatory, processed foods can also help reduce inflammation and joint pain. Both plant based and keto protein diets have shown positive improvements. Dr. Meininger recommends managing arthritis pain with long-acting anti-inflammatory medications (i.e., NSAIDs) in patients who are not contraindicated.

"In addition, joint injections are a helpful tool we can offer in the office to reduce arthritis pain in the knee." Steroid injections, or cortisone, are a mainstay of arthritis management and can last up to 3-4 months. However, new evidence suggests cortisone may impair cartilage healing and, in some cases, propagate degenerative changes, so they are best used sparingly.

Alternatives to cortisone include gel shots – commonly known as rooster comb injections because they used to be made in chickens! – where natural proteins in joint fluid are reproduced in the lab and injected into the knee to offer cushion and pain relief. Another option is using your own growth factors in what has become known as PRP – platelet rich plasma. A routine blood draw is performed, and the patient's blood is centrifuged in the office to concentrate the platelets and healing growth factors 5-6 times over! These injections can work as well as cortisone and last even longer in some cases, upwards of 6 months.

Dr. Meininger says unrelenting joint pain that is present day and night -- even when the patient is not using the knee -- and is not effectively relieved by anti-inflammatory medication, therapy, or minimally invasive procedures, is a key signal that knee replacement surgery may be necessary. Other signs are dependency on a cane to maintain mobility and support, difficulties performing everyday activities, and development of knee deformities.

But osteoarthritis is not the only reason total or partial knee replacement surgery might be necessary. Severe knee trauma due to sports activities like football and skiing, falls, car collisions, and other accidents can leave patients with torn cartilage, damaged ligaments, and joint fractures that are irreversible without surgery, Dr. Meininger explains.

Approximately one million knee replacement surgeries are performed in the United States annually, and this number is expected to rise as the general population continues growing older. According to U.S. census data for 2022, the median age of the population stands at nearly 40 (38.9), thanks to the continued presence of a large number of Boomers and their now-aging children – sometimes referred to as "echo Boomers."

However, new surgical techniques and advances in anesthesia have allowed patients to recover and bounce back from knee replacement much sooner. "As recent as 10 or 15 years ago patients would stay almost a week in the hospital," says Dr. Meininger. "Now our knee replacements are done as an outpatient procedures with patients going home the same night. They even walk out of the surgery center."

Dr. Meininger uses modern advancements like computerized navigation to precisely measure and position the implants. "It is a high-tech improvement in knee replacement, where we can more reliably assess the patient's anatomy and match the artificial joint to their alignment and their specific needs – helping me make sure each operation is as close to perfect as I can get with fewer outliers," adds Dr. Meininger.

Longer-lasting joint implants are more durable and stable, allowing patients to get back to the activities they prefer. "A modern knee replacement patient expects to be active. Our patients ski, play tennis & pickleball, cycle and even jog with less pain than before surgery," says Dr. Meininger. Anesthesia has become safer and more effective with better outcomes as well. "Our protocol is designed around rapid recovery with nerve blocks to deaden pain and shorter acting medicines to reduce side effects," Dr. Meininger says. All of these enhancements combine to offer patients a painless joint that affords an active lifestyle so they can get back to living.

The knee anatomy consists of two leg bones joined together by a network of ligaments, tendons, and muscles, topped by the patella or kneecap. In total knee replacement surgery, an incision is made in the area of the knee. The surgeon then removes damaged tissue and resurfaces the joint, using a metal or plastic prosthesis or implant. The artificial prosthesis is typically attached in place with bone cement.

Today's standard knee implant lasts as long as 20-25 years, Dr. Meininger says, though adding that it is a mechanical device, and it won't last forever." When it does wear out, or loosens, the patient will likely need it redone again with a second knee replacement – known as revision surgery. For that reason, we take a much more conservative approach in knee management before recommending joint replacement surgery in younger patients in their 40s or 50s.

The best course of action is to protect the natural knee joints for as long as possible. Dr. Meininger offers these prevention tips:

- First and foremost, maintain a weight appropriate to one's age and height. "The physics of the knee dictates that each pound of body weight feels more like 4 pounds on your knees," says Dr. Meininger. Losing 5 or 10 pounds will help your knees feel like you took off 20 or 40 pounds.
- Consider braces to protect the knee or relieve arthritis pain during particularly vigorous sporting activities, such as skiing, tennis, and basketball.
- Seek immediate treatment for knee injuries that go beyond the simple strain.
- Limit normal activity for more than a few days if they cause serious joint pain when standing or walking. "Damaged joints are like a leaking faucet. Ignore them, and the problems will only become worse," Dr. Meininger says.
- Always wear comfortable, correct-fitting shoes.
- · Follow a healthy, nutritious diet.

Finally, "get off the couch and exercise regularly. "Movement is medicine." Dr. Meininger adds. "Activities strengthen muscles, build bones, enhance balance, and prevent joint stiffness. If you don't use them (knee joints), you lose them," Dr. Meininger advises.

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