

Advances in Joint Replacement Surgery: The Uni-compartmental Knee

The Uni-compartmental Knee is a less invasive partial knee replacement procedure. For the right patient, the minimally invasive Uni-compartmental knee procedure offers many benefits, including a shorter recovery time. **Dr. David Dalury, an orthopaedic surgeon at Orthopaedic Associates who specializes in joint replacement surgery, helped refine the implant and instrumentation used for the procedure.** He says the Uni-knee technique was designed and developed to address a patient's need for less invasive surgical approaches to arthritis. "Now with the increased interest in minimally invasive surgery, there has been a huge amount of attention paid on developing less invasive arthritis surgery and the Uni-knee is a great option for patients with isolated one-compartment disease," said Dr. Dalury. "Uni-knees have been around for thirty years but fell out of favor with better total joint replacement results in the '80s and '90's. But now thanks to surgical improvements, the Uni-knee is sort of a marriage between the tried and true implant (with newer design features) and the concept of less invasive surgery." Dr. Dalury says results of the Uni-knee procedure are very favorable compared to the total knee replacement procedure at the ten-year mark.

For the right patient, the advantages of the Uni-knee are many:

- If other conservative treatments, such as pain medication, injection therapy and arthroscopic surgery have failed to provide pain relief, uni-compartmental surgery may offer medium to long-term pain relief.
- Maintains more of the healthy elements of your knee, resulting in a more natural feel during activities.
- The potential for reduced hospital stay and less pain medication after surgery.
- Improved stability during movement after surgery.
- A more aesthetic scar.

Is it right for you?

Millions of people suffer from knee arthritis, which leads to progressive deterioration of the knee joint. Until recently, almost everyone who opted for reconstructive procedure underwent total knee replacement, which replaces the entire knee joint with artificial (metal and plastic) implants. With modern implant designs and less invasive reconstructive techniques, knee arthritis patients with isolated knee pain and the presence of arthritis on a single side of the knee may be candidates for partial knee resurfacing with a uni-compartmental knee procedure.

What causes joint pain?

The knee is the largest joint in the body and one of the most complex. Over time, "wear and tear" on the joint from everyday activities causes the smooth cartilage to wear away until the underlying bone is exposed (resulting in arthritis). This becomes very painful, and many people cannot continue activities they once enjoyed. When you experience activity-limiting pain that is unresponsive to conservative treatment, surgical options may be considered.

What does my X-ray show?

X-rays identify the presence of arthritis and to what extent cartilage has worn away. Arthritis will show up as a narrowing of the space between the femur and tibia and the appearance of bone spurs. When cartilage damage is confined to a single side of the knee, "minimally invasive" uni-compartmental surgery may be an option.

For more information about the Uni-compartmental Knee, contact Orthopaedic Associates.

In Need of Knee Repair

Uni-knee Replacement Spares Healthy Parts of the Knee

James Dryden had a passion to play baseball through high school, in college and even later on an adult softball team; being catcher was his favorite position. But catchers are on their knees a lot, and the stress of catching eventually caught up with Dryden. His knees began to wear out in his 40s, requiring arthroscopic surgeries to repair them. But in his early 50s the pain became worse, and eventually it became difficult for him to walk. His wife recalls, "He could only go up stairs one step at a time."

In Dryden's case, his orthopaedic surgeon **Dr. David Dalury of Orthopaedic Associates and St. Joseph Medical Center**, recommended that both knees needed replacement. The unique thing that happened next was that Dryden received two different kinds of knee replacements. One knee was so badly injured that a total knee replacement was necessary. However, two-thirds of his other knee was still intact, so Dr. Dalury was able to spare the healthy parts of Dryden's right knee and implant a very progressive prosthetic device called a uni-compartmental knee replacement.

Nicknamed the "uni-knee," the operation has been around since the early 1970s, but only in the last several years was the technology and technique perfected to make this a very successful operation. Orthopaedic surgeons now have the proper surgical tools and directions to accurately restore the joint line and align the placement of the prosthesis.

A smaller incision, a faster recovery "The uni-knee addresses only the worn out parts of the knee," explains Dalury, who was part of an international group of orthopaedic surgeons who contributed their expertise to the development of the newest uni-knee. "It uses a smaller incision. The recovery is faster than a total knee replacement. The intensity and pain during the physical therapy process is infinitely less," he adds.

A knee naturally has three compartments, all of which can be impacted by injury and arthritis. Patients who need a knee replacement - either partial or total - "have had previous arthroscopies, medications and braces, and nothing is working anymore," says Dalury. "Their problems are mostly from an arthritic process that is either due to old injuries or wear and tear." To qualify for the uni-knee, these patients must have early stage arthritis that is confined to one compartment. They must also meet three other criteria: " An intact ACL (anterior cruciate ligament) " No significant inflammation " No damage to the other two compartments of the knee, calcification of cartilage or dislocation

Adds Dalury, "The uni-knee is for the younger active person, in his or her 50s for example, or for the older patient who is over 70." He explains, "The positive results of the uni-knee are comparable to the total knee replacement for the first ten years."

The uni-knee provides its recipients with a natural feeling knee that supports an active lifestyle. "In my case, I got the uniknee implanted on a Monday, and the total knee done on a Thursday. It was advantageous to me that the first knee was stronger during my rehab," says Dryden, who adds that after a month of rehabilitation he was walking normally again.

And, a November 2001 article in the professional publication, *Clinical Orthopaedics and Related Research*, concludes that the uni-knee, "is less invasive, often requires no blood transfusion, more closely approximates normal kinematics, and postoperatively allows rapid recovery, better range of motion and more physiologic function."