

## Joint Replacement with a Robot Boost

Retired elementary school principal Kurt Swearingen was spending his days on the golf course. The Normal, Illinois man had always been active, not letting nagging knee pain slow him down. However the pain intensified and swelling got worse, forcing Swearingen to take action.

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**Kurt Swearingen, Normal, IL**

“It wasn’t that I couldn’t walk, that wasn’t an issue. It was just kind of a nagging thing, and I don’t like that, I like to be active, and I couldn’t do what I wanted to do, so we did an MRI and that’s when we discovered we had osteoarthritis in the medial compartment of my knee.”

Swearingen’s diagnosis made him a good candidate for joint replacement. In his case, however, his entire knee didn’t need to be replaced – only one part of it was worn down. It made sense for Swearingen to pursue a partial knee replacement.

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**Erin Rogers, Orthopedic Service Line Leader, OSF HealthCare St. Joseph Medical Center**

“There is a portion of the population who have significant knee pain that they’ve been living with, but it’s just one part of their knee. They don’t need a total knee replacement, they just need a partial knee replacement in order to get back to doing the things that they love.” (:14)

Swearingen and his surgeon, Dr. Joseph Newcomer, decided to move forward with the surgery at OSF St. Joseph Medical Center, which provided a unique opportunity. The medical center recently invested in state-of-the-art robotic technology to assist with joint replacement procedures, including partial knee replacement.

Using a virtual 3D model, the Mako Robotic-Arm Surgical System allows surgeons to create each patient’s surgical plan pre-operatively before even entering the operating room. During the procedure, the surgeon can validate that plan and make any necessary adjustments while guiding the robotic-arm to execute that plan.

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**Dr. Joseph Newcomer, Orthopedic Surgeon**

“The things that we’re adopting are those which are improving patient outcomes, and making lives a little bit easier for the surgeon with regards to precision and efficiencies. And so St. Joes has really done a great job of kind of being on the forefront of the newer technologies and bringing them into the community.” (:19)

The Mako System gives surgeons a more predictable joint replacement surgical experience, which also provides assurance for patients. Prior to the procedure Dr. Newcomer explained to Swearingen how this would benefit him.

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**Kurt Swearingen, Normal, IL**

“He said because you’re working around ligaments that are intact, which mine were – ACL, MCL, everything was great. So we didn’t have to do anything there. He said we want to be real precise. We

don't want to have a little movement that might damage those ligaments. And he goes that's where the robot is very precise. It won't let you color outside the lines."

Joint replacement surgery is on the rise. Knee replacements in the United States are expected to increase 673 percent by 2030. Dr. Newcomer believes patients are simply tired of living with pain, and technology like the Mako allows for earlier intervention.

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**Dr. Joseph Newcomer, Orthopedic Surgeon**

"I think that they don't have to live with pain at such an early age. We're seeing the trend of earlier and earlier osteoarthritis, as lifestyles have become a lot more demanding. But 10 years ago, 15 years ago, the discussion was always centered around your age and that you need to live with this until you can't live with it any longer, and we've gotta get you older because there are no other options beyond that and what we're finding is patients actually do much better taking care of the problem at an earlier age."  
(:35)

Five surgeons have been trained to use the Mako System at OSF HealthCare St. Joseph Medical Center: Lucas Armstrong, MD; Mark Hanson, MD; Brett Keller, DO; Shaun Kink, MD and Joseph Newcomer, MD, FAAOS.