

Robotic-Assisted Hip and Knee Replacement



Robotic-assisted partial knee, total knee and total hip surgery is for those suffering from painful arthritis of the hip or knee. This advanced surgical platform combines technologic precision with surgeons' expertise, which can benefit patients.

Mako SmartRobotics™ is a state-of-the-art solution for many suffering from painful arthritis of the hip or knee. Mako uses 3D CT-based planning software so your surgeon can know more about your anatomy to create a personalized surgical plan. This 3D model is used to plan and assist your surgeon in performing your joint replacement.



During the procedure, your surgeon has a 360-degree view of your musculoskeletal system, and the technology connects your surgeon's hands to the computer to simulate touch and minimize damage to bone and soft tissue.

Benefits of robotic-assisted surgery:

- Helps preserve healthy bone and soft tissue
- May result in less post-operative pain than manual techniques
- Produces minimal blood loss and a smaller scar
- May provide a quicker recovery and shorter hospital stay

How SmartRobotics™ Works

In the operating room, your surgeon follows your personalized surgical plan while preparing the bone for the implant. The surgeon guides Mako's robotic arm within the predefined area, and the technology helps the surgeon stay within the planned boundaries that were defined when the personalized preoperative plan was created. By guiding your doctor during surgery, robotic

technology allows him or her to cut less by cutting precisely what's planned, to help protect your healthy bone.

Partial and Total Knee Replacement

Partial knee replacement is a treatment option for adults living with early- to mid-stage osteoarthritis that has not yet progressed to all three compartments of the knee.

In comparison, total knee replacement is a treatment option for adults living with mid- to late-stage osteoarthritis of the knee. With a Mako Total Knee replacement, the entire knee joint is replaced, and the surgeon inserts a total knee implant. These implants are different than traditional knee replacements because they are designed to work with the body to promote natural-like circular motion.

Total Hip Replacement

SmartRobotics™ for total hip replacement is a surgical procedure intended for patients who suffer from noninflammatory or inflammatory degenerative joint disease (DJD). Some forms of DJD include osteoarthritis, post-traumatic arthritis, rheumatoid arthritis, avascular necrosis and hip dysplasia.

Learn More

It's important to understand that the surgery is performed by an orthopedic surgeon, who guides Mako's robotic arm during the surgery to position the implant in the hip or knee joint. Mako SmartRobotics™ does not perform surgery, makes decisions on its own or moves without the surgeon guiding it. Mako SmartRobotics™ also allows your surgeon to adjust your plan during surgery as needed.

Foothill Regional Medical Center is conveniently located in Tustin between the 5 and 55 freeways.