

Technology means improvements in hip and knee replacement

Hip and knee replacement can be a tricky and painful process, but one that ultimately will improve the quality of life for patients who receive them.

New technological advances in how these procedures are performed are making the results of hip and knee replacements even better. By using Stryker Mako robotic assisted total joint replacement, surgical incisions can be more precise, and doctors can place the implants more accurately. The results are often a "new" hip or knee that feels better and may even last longer.

Dr. Luis C. Grau, medical director, orthopaedic surgery, Riverside Medical Group, recently spoke with NJ Advance Media about the technique, which he performs at Hudson Regional Hospital.

Q: How is the Mako Robotic Arm being used?

A: I'm using it to assist with total hip replacements and partial knee replacements. The arm allows me to recreate a patient's anatomy and alignment to within one-half millimeter of accuracy. This means the replacement fits better, and that the new joint will be well balanced.

Because of the accuracy of the cuts and placement, we are able to use cementless

implants, which means the procedure has the potential for biological fixation and increased implant longevity. That means the typography of the cuts are so accurate and smooth that we don't require glue, so the body grows onto the surface of the implant. Once the body grows onto the implant, it's yours forever. You don't have to worry about it becoming loose.

Q: What makes using the robotic arm so successful?

A: What the robotic arm allows us to do is, one, recreate the patient's anatomy. It also guides us as we place the components into the hip, and that means we can put them in perfect position. This is particularly important when it comes to the socket. It's important to place it in the right spot because that helps motion, and keeps the hip from popping out. The hip replacement is in optimal position.

On the knee side, this accuracy allows us to balance the knee. You can put the best implants in, but if they're not balanced, the implant will wear down. Think of a car. It's like balancing the tires. You can use the best tires, but if they're not aligned, the tires will wear

down. This accuracy helps create a knee that feels more natural, and increases longevity and functionality.

Q: Does the robotic arm mean hip and knee replacements will last longer?

A: The robotic technique is still new, so we don't know if it will improve the longevity of the implant, but it makes sense. The improved balance and the cementless knee definitely mean there is potential, but we have no long-term data. The thing with a cemented implant is that its strongest day is the day it is put in. Every day after that it gets a little weaker, because it's not biological, but glued on. So, with biological fixation, if the implant grows in, and all literature shows that it is doing that, it shouldn't come loose. Biologic fixations have the potential for longer lasting fixation.

Q: How have patients responded to this technique?

A: They enjoy it. The whole purpose of doing this surgery is improving the quality of life. You can do this surgery and have excellent outcomes without the robot, but this helps fine-

tune the implant.

Everybody who has the procedure leaves with the optimal outcome. It more consistently assures that every patient has a good outcome and the joint is well-positioned. Patients do very well and they get back to doing the things they love without pain.

Visit www.hudsonregionalhospital.com for more.

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