

Greenville Orthopedic Surgeon “Navigates” Knee Replacement Surgery With Newest Technology Available

Greenville Orthopedic surgeon Jack Thomas, M.D., recently performed two knee replacement surgeries using the newest technology in joint replacement surgery, the Navigator computer system.

During joint replacement surgery, the damaged area of a joint is replaced with a specially shaped metal or plastic surface that helps restore normal, pain-free movement to the area. A surgeon uses years of operating room experience and specialized cutting blocks to determine where it would be best to remove bone for the implant. Once the cut is made, the natural bone cannot be replaced.

“When performing surgery, it’s essential for a surgeon to have every advantage possible, with the best equipment available”, said Dr. Thomas “Currently, the Navigator computer system is one of the best pieces of equipment for use in joint replacement”.

The Navigator computer system is a state-of-the-art, computer guided technology designed to improve the surgical performance and the clinical outcomes of total knee replacement surgery, total hip replacement surgery, and other procedures.

The system is unique because it provides the surgeon with preoperative, intra-operative and post operative assessments of the patient’s joint movements.

The Navigator system has three components: an infrared camera; a computer; and instruments with Infrared Light Emitting Diodes (LED’s). The LED’s are inserted through the surgical incision. The infrared camera senses the LED’s and relays the pertinent mathematical equations back to the computer. Fixed reference markers are then placed on each bone, to provide relative positioning. Information is then stored in a mini-computer inside of the instrument. Once all correct information is available, the orthopedic surgeon can make bone cuts more precisely.

“The success of these procedures was extremely significant because precision and accuracy are two of the main components that make the difference in recovery time and joint replacement longevity. The Navigator allows me to do total joint replacement surgery through smaller incisions, resulting in less pain and faster rehabilitation”, said Dr. Thomas “And that’s what’s important to me for my patients; better functioning, longer lasting joint replacements, and pain-free movement”.