

VELYS™ Robotic Total Knee Replacement: Personalized Surgery for Every Patient



Robotic technology in the orthopedic operating room isn't a new phenomenon, but Dr. Gavin P. Hart experiences firsthand the technology's increasingly impressive benefits every time he replaces a patient's arthritic knee at Jupiter Medical Center.



"The idea of using robotics for orthopedic surgery in general is that it allows us to do a total knee replacement in a different way than we traditionally did," says Dr. Hart, a board-certified, fellowship-trained orthopedic surgeon specializing in hip and knee arthritis at The Center for Bone and Joint Surgery. He performs joint replacement surgery weekly at Jupiter Medical Center.

Dr Hart has been using the VELYS™ Robot for total knees for nearly two years now to create total knees that match as closely as possible the patient's own pre-arthritic knee. The benefit? Minimal disruption to the ligaments and soft tissues around the knee, resulting in less pain, faster recoveries, and happier patients.

A Better Knee Replacement: Kinematic Alignment

In traditional knee replacement, the bone around the patient's knee is typically cut at the same angle for every patient, regardless of their natural leg alignment, requiring doctors to manually release (cut) ligaments around the joint replacement to balance the new joint replacement.

The VELYS Robotic-Assisted Solution enables Dr. Hart to personalize each patient's knee replacement to them using a surgical philosophy called kinematic alignment.

"In essence, we customize each knee to each patient, and we preserve the soft tissues so that their new knee feels as close as possible to their old knee," he says. "That's the promise. We tell the robot each patient's anatomy and tightness of their ligaments, and the robot adjusts the cuts to maintain as much of the patient's soft tissue as possible, allowing us to tailor each knee replacement to each specific person."

What is recovery like?

"There'll be some discomfort after surgery, but that will improve and patients seem to progress faster with mobility," Dr. Hart says. "They tend to get off their walking aids and walk farther sooner. Quite often, patients tell us they forget that they've had their knee replaced if it's been done using kinematic alignment vs. traditional surgery. In my practice, it's made a big difference in how patients recover after their surgeries."

Dr. Hart has been in practice at The Center for Bone and Joint Surgery in the Jupiter area for eight years. He sees patients in his Jupiter and Wellington offices and performs hip and knee replacements weekly at Jupiter Medical Center.

For information about the Anderson Family Orthopedic and Spine Center of Excellence, contact the orthopedic navigator at Jupiter Medical Center at 561-263-3633.