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A CENTER OF EXCELLENCE FOR BONE AND JOINT CARE

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Physician Publication

Procedures for knee replacement have changed with latest advances

By Jo-Ann Lamon Reccoppa

This may seem like a tidbit from a Chilton's Guide for auto maintenance, but our mechanical parts get tweakedd and replaced not only for a longer life, but for a better quality of life.



Knee replacement surgery is one of those replacements that free us from pain and discomfort, while allowing us the mobility to enjoy our favorite daily activities into our later years.

"There are various reasons for needing knee replacement," says Dr. Michael J. Greller of Advanced Orthopedics and Sports Medicine Institute of Freehold, and vice chairman of the Department of Orthopedics at CentraState Medical Center. "We are an active population that is living longer and getting older, which can certainly take a toll on our knees. But for many patients, heredity, trauma and a physically active lifestyle can also contribute to the need for knee replacement."

New advances for knee replacement include muscle sparing and minimally invasive surgery. New navigational computer-assisted surgery makes implant alignment more precise, which lessens post-operative complications, pain management medication and recovery time. Materials used for knee replacement implants have vastly improved - and in this case, size does matter - allowing the surgeon to use the specific implant preferred for the unique anatomies of both male and female patients.

A first in the tristate area, Dr. Greller and Dr. Alan Nasar, also of Advanced Orthopedics, performed total knee replacement surgery utilizing a new navigational computer-assisted orthopedic surgery (CAOS) solution and a fully cementless Zimmer Trabecular Metal knee replacement implant.

Used on an active young male and performed in January 2008, at CentraState Medical Center in Freehold, the ORTHOsoft Knee 2.2 Universal software for Total Knee Replacement on the

Navitrack Sesamoid (ORTHOsoft's Navitrack navigation system) hardware platform, lived up to the doctors' expectations.

"This is, by far, the best navigation system that I have used to date," says Dr. Greller. "All previous systems presented multiple technical issues for the surgeon, the result of which was a need for continual adjustment and positioning throughout the case. With this system, once it was set up, it functioned flawlessly throughout the case and required no adjustment or fine tuning. The final result was excellent. The X-rays looked perfect and the alignment was exact. The knee had great motion and was well balanced. This new computer system allowed us to implant the knee more accurately than before with as few extra steps as possible."

The implant material is also remarkable technology. The highly porous cellular structure of Zimmer Trabecular Metal used for the replacement more closely resembles bone, and closely approximates its physical and mechanical properties. Bio-compatible, its bonelike properties contribute to extensive bone infiltration and tissue ingrowth. The material is incredibly strong, possessing a high strength-to-weight ratio. Though it may seem like background info for a "Bionic Woman" storyline, the prosthetic material is real, not fiction.

In the past, knee replacement was more or less a "one size fits all" proposition. Women, especially, had a difficult time with standard implants that were designed based on the average size of women's and men's knees. The new implants, Zimmer Gender Solutions Knee, are thinner, and contoured for a more precise fit that allows for natural movement. They also feel less bulky than the traditional implants, and are less prone to overhanging the bone - which limits the range of motion and may potentially, and painfully, press on or damage surrounding ligaments or tendons.

For more information about knee replacement surgery, contact Advanced Orthopedics and Sports Medicine Institute by calling (732) 720-2555 for both the Iron Bridge Road and Route 9 north offices in Freehold. Additional information can be found at the Advanced Orthopedics Web site: www.advancedorthosports.com.

