

# New Trends in Joint Replacement

## Advantages of Unispacer may be overstated.

Much attention recently has been given to an innovative orthopaedic device, called the Unispacer, intended to restore joint stability and relieve early-stage arthritic pain in the inside half of the knee.

But, some orthopaedic surgeons are skeptical of the Unispacer's function, largely due to lack of scientific data and the fact that it contradicts accepted principles of joint replacement.

Designed to move with the knee, the metal kidney-shaped Unispacer is inserted between the natural bone structure of the knee without cutting bone and using bone cement or screws. The procedure takes about one hour and patient recovery is generally eight to 12 weeks.

"The procedure is being publicized with very little, if any, scientific data to support its use," said orthopaedic surgeon David Silber, M.D. "Conventional principles suggest that, when an implant is put into someone's knee, it is meant to stay there tightly and securely to keep it from coming loose. Devices that move inside the knee historically tend to be painful."

The tried-and-true approach for partial knee replacement surgery is still unicompartmental arthroplasty, said Silber. During the procedure, a small incision is made over the knee and slivers of bone are removed from the end of the femur and top of the tibia. The bone structures are then resurfaced with metal and plastic implants and often provide greater



*The unicompartmental consists of a metal and plastic implant.*

mobility than a total knee replacement.

"The unicompartmental procedure involves two fixed pieces as opposed to one sliding disk. It can be a less invasive procedure with a shorter hospital stay and recovery than a typical total knee replacement," Silber said. "Whereas the Unispacer is being touted as a temporary solution, the unicompartmental is not meant to be temporary, but conservative and definitive."

Like the Unispacer, the unicompartmental implant is not intended for everyone. Silber said a patient's weight, age and activity level are important factors in determining whether unicompartmental arthroplasty is appropriate. Durability of the unicompartmental

prosthesis is generally 10-20 years and enough bone is left to convert to a total knee replacement at a later date.

## Longer life for hip joints

Speaking of durability, an all metal implant for hip replacement surgery appears to offer a better option for younger, more active patients in reducing wear. The new implant, made of cobalt and chromium, has been successfully used in Europe for more than 20 years, but has only been FDA approved in the U.S. since 1999.

In a traditional replacement, a metal-on-plastic implant is used as the bearing surfaces, but concerns about wear of the plastic lining has spurred interest in a metal-on-metal device that is intended to last longer.

"The short-term results have shown that the new concept works and there is optimism for long-term durability, perhaps even 30 years or more," said Silber, medical director of the Joint Replacement Center at Carroll County General Hospital. "In a metal-on-metal hip, we can use a larger head for the ball, which translates into potentially better range of motion and lower risk of dislocation."

Early studies have reported that wear rates of the all metal implant are 25 to 100 times less than the standard metal-on-plastic. The benefit is that patients with a metal-on-metal implant may not have to undergo a second hip replacement during their lifetime. ▣