

Need New Knees? Now May Be the Time

Women may wait too long before considering knee replacement...

Women with osteoarthritis of the knee wait longer than men before pursuing knee replacement surgery, according to a study published in the November 2007 issue of *The Journal of Bone and Joint Surgery*. This delay in treatment may result in poorer post-operative outcomes for female patients.

More than 300,000 total knee replacements (also known as knee arthroplasties) are performed in the U.S. each year; about 2/3 of them are done on women. Total knee replacement is a surgical procedure in which the patient's natural knee joint is replaced with an artificial one, composed of metal and plastic; some patients might have a unicompartmental replacement, in which only a portion of the knee joint is replaced. The most common reasons for this surgery are severe pain, swelling, and/or stiffness in the knee, frequently caused by osteoarthritis (OA), a degenerative disease affecting more than 40 million Americans, which cannot be satisfactorily treated with medications or other therapies. Patients might have one or both knees replaced. The study, which was conducted at the University of Delaware and funded by the National Institutes of Health, compared the knee strength and function of healthy men and women with those who are candidates for knee replacement due to osteoarthritis. While inherent differences in strength and function were found in the group of healthy individuals, those differences were greater in the osteoarthritis patients.

"These results suggest that we might be waiting too long to suggest total knee arthroplasty as a treatment option for women with end-stage knee OA," says Stephanie Petterson, MPT, PhD, one of the study's authors and a senior lecturer at the School of Health and Bioscience at the University of East London, "or that women with knee OA are waiting too long to access the appropriate care."

In this study, 95 men and 126 women who were candidates for knee arthroplasty were compared to 44 healthy men and women who matched them in gender, age, and body-mass index. These groups were evaluated for knee range of motion, strength, walking speed, ability to climb stairs, and other measures.

Healthy men generally had better strength and function than women in most areas; the healthy women had better scores in voluntary muscle activation than men. However, in the knee arthroplasty candidates, the women scored worse than the men in all areas, and the differences were more pronounced than in the healthy group.

Greater deterioration of the joint can make recovery more difficult; therefore, the sooner an osteoarthritis patient receives treatment, the better the outcomes. "The results of this study tell us that we need to do more to educate this large population of potential patients—especially the women—about the risks and benefits of knee replacement surgery," says Leo Rasis, MD, one of the study's authors and an orthopaedic surgeon at First State Orthopaedics in Newark, DE. "We can partner with physical therapists to show patients how their condition compares to others. Better education may bring patients—especially women—in for a necessary surgery earlier so they can return to a better quality of life much sooner."