

An alternative for pain control after knee replacement surgery

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It's estimated that more than half of adults in the United States diagnosed with knee osteoarthritis will undergo knee replacement surgery. While improvements in implantable devices and surgical technique has made the procedure highly effective, pain control after surgery remains a common but persistent side effect for patients.

A Henry Ford Hospital study, presented recently at the American Association of Hip and Knee Surgeons meeting in Dallas, found that injecting a newer long-acting numbing medicine called liposomal bupivacaine into the tissue surrounding the [knee](#) during surgery may provide a faster recovery and higher patient satisfaction.

"The [pain scores](#) for this injection technique averaged about 3/10, which is similar to the pain scores seen with our traditional method," says Jason Davis, M.D., a Henry Ford West Bloomfield Hospital joint replacement surgeon and the study's senior author. "Patients had pain relief for up to two days after surgery and better knee function compared with the traditional method."

It is estimated that the number of total [knee replacement](#) surgeries has more than tripled from 1993 to 2009. Arthritis is the most common cause of chronic knee pain and disability. However, a June 2014 study found that 95 percent of knee surgeries are attributed to the epidemic of overweight and obesity in the United States.

During the two-hour knee replacement procedure, the orthopedic

surgeon removes the damaged cartilage and bone, and inserts a [knee implant](#) to restore the alignment and function of the knee. More than 90 percent of knee replacements are functioning 15 years after surgery, according to the American Academy of Orthopaedic Surgeons.

In the Henry Ford study, 216 patients were evaluated for pain control the first two days after surgery from October 2012 to September 2013. Half of the patients received the traditional pain control method with continuous femoral nerve blockade, in which common numbing medicine is injected into the groin area, blunting the main nerve down the front of the knee. This method uses a pain pump to extend pain control for two days but causes some leg weakness. "Pain control came at the price of weakness and made patients somewhat tentative when walking during their hospital stay," Dr. Davis says.

The other half of patients received the liposomal bupivacaine injection at the site of the surgery.

Dr. Davis says many patients were able to walk comfortably within hours after surgery.

Dr. Davis says the injection around the knee itself "optimizes pain control early on" without the side effects of the traditional technique. "Function-wise, it was a lot easier for patients to move around more confidently," he says. "In the past decade, we've made major advancements in pain control for [knee replacement surgery](#). This option is a promising, viable one for our [patients](#)."

Provided by Henry Ford Health System

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