

Method of postoperative pain relief may influence recovery from total knee replacement surgery

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A new study published today in *The Journal of the American Osteopathic Association* compared outcomes from two types of postoperative pain control methods in a group of patients who had both of their knees replaced.

The retrospective study reviewed records of 16 patients who underwent bilateral total knee arthroplasty (TKA) in which a femoral nerve block was administered at the first operation and a periarticular injection of extended-release bupivacaine liposome mixture was used after the second operation. The same surgeon performed both TKAs in all patients studied. An average of 2.3 years separated the two procedures.

The study found patients recovered quicker when they received periarticular injections of analgesic medication, according to the orthopedic surgeon, Brandon Horn, DO, of the McLaren Greater Lansing Medical Center in Michigan. Postoperative pain control is essential to recovery from [total knee arthroplasty](#) because patients must bear weight on the new joint within 12 to 24 hours after surgery and begin physical therapy, the researchers noted.

"Periarticular injections, unlike femoral nerve blocks, allow patients to maintain control of the quadriceps muscles. The tenants of osteopathic medicine tell us that function follows form, so enabling the quadriceps to fully engage helps patients to get up and begin walking independently

faster," Dr. Horn explained. "There's also a preventative component at work, since femoral nerve blocks are also associated with a high incidence of postoperative falls."

Patients receiving a periarticular injection averaged 2.3 inpatient physical therapy sessions, compared to 3.5 inpatient physical therapy sessions for those receiving the femoral nerve block. The investigators also reported a half-day decrease in hospital stay. Those factors resulted in notable cost savings.

"To treat knee replacement [patients](#) with a nerve block, you're looking at about \$400 in additional costs for the procedure alone compared to that of the analgesic injection," said Dr. Horn. "Adding in the cost of additional [physical therapy](#) needed and extended hospital stay, the injection can save around \$1,615 per patient."

Provided by American Osteopathic Association

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