

Clinical trial seeks to determine whether platelet-rich plasma can ease the pain of osteoarthritis

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For years, doctors have used platelet-rich plasma, or PRP, to promote healing after surgery. Now, Rush University Medical Center is studying whether PRP can help relieve knee pain in patients with mild to moderate osteoarthritis.

PRP contains growth factors that promote [cell proliferation](#) and is prepared from the patient's own blood tissue. It has received popular attention recently because of its use in treating sports injuries in professional athletes, but the jury is still out on whether it is effective.

"There have been few controlled clinical trials, and results are inconsistent, but data so far suggests that it could be a promising treatment for healing in a variety of tissues," said Dr. Brian Cole, [orthopedic surgeon](#) and head of the cartilage restoration center at Rush. "The therapy will not be a cure for osteoarthritis, but it could help put off the day when a patient will need to get a knee implant." Cole is professor of [orthopedic surgery](#) at Rush University and head team physician for the Chicago Bulls.

At present, the standard of care is either corticosteroid injections, which may provide relief for about three months, or synthetic lubricants containing hyaluronic acid, which can last for up to a year.

In the double-blind, randomized, controlled study, 100 patients will receive either [hyaluronic acid](#) or PRP. The PRP is prepared from 10 millimeters of the patient's own blood. The blood is spun in a centrifuge to separate the platelets from the red and [white blood cells](#). The platelets are then injected into the knee joint using [ultrasound imaging](#) to guide placement.

Patients will receive three injections over three

weeks and will be monitored for two years. In periodic clinical exams, the physician will assess pain and knee function. In addition, a teaspoon-size sample will be taken of the synovial fluid around the knee joint to test for molecular changes that may indicate a shift in the balance of anabolic factors that increase the buildup of tissue and catabolic factors that break it down. An imbalance in these factors has been implicated in the deterioration of cartilage that leads to osteoarthritis.

Provided by Rush University Medical Center

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