

# Platelet-rich plasma therapy uses your own blood to speed recovery from sports injuries

BY [Katie Charles](#)

DAILY NEWS STAFF WRITER

Wednesday, September 16th 2009, 4:00 AM

**The specialist:** [Dr. Jonathan Glashow](#) on PRP therapy

As the co-director of sports medicine at [Mount Sinai Medical Center](#), Glashow has been at the forefront of American doctors offering platelet-rich plasma (PRP) therapy, a new nonsurgical technique that improves healing from injuries.

## Who could benefit

For people with common sports injuries like sprained ligaments or strained muscles, PRP therapy can deliver remarkably faster healing. It involves injecting injured areas with a concoction of growth factors extracted from the patients' own blood. "The basic idea is that we're taking the body's natural healing elements, concentrating them, and we're putting them at the site of injury," says Glashow. "We feel like it supercharges the healing process."

Although PRP is a cutting-edge therapy just being tried out in the States, administering it is fairly simple. "First, we draw about 10 ccs of blood and put it in a centrifuge, which separates out the components," says Glashow. "We take out the stuff that makes you sore - red cells, white cells, bad stuff - and we keep a concentration of the growth factors that speed healing."

Glashow sees four sports-injury situations where PRP therapy proves especially effective: post-surgery, ligament sprains where surgery isn't called for but healing is slow, muscle tears/tendinitis and mild to moderate arthritis. In all of these scenarios, studies have found that PRP therapy can slash recovery time or even help hard-to-heal areas like the rotator cuff heal to a greater degree.

Glashow cites the example of baseball players, who are especially prone to hamstring tears. "One of the banes of baseball players is that that muscle can take months to get better," says Glashow. "But we've had great success injecting those muscles with PRP and returning players to sport quickly."

Although the therapy is still experimental, "there are a lot of people out there who have gotten this treatment," says Glashow. "The great thing about it is there's very little risk." He explains: "The body heals itself all the time. The thinking with PRP is that if we can find a way to help the body heal itself more quickly, we can help patients return to their lifestyles earlier."

## Signs and symptoms

The cardinal signs of a sports injury are pain, swelling and weakness. "These are broad symptoms, which will be localized around the site of the injury" says Glashow. "If it's a knee injury, then pain, swelling and buckling in the knee; if it's a shoulder injury, pain and weakness."

PRP therapy can cause some side effects or symptoms of its own. "Postinjection, some people feel like nothing happened," says Glashow. "They barely feel they're getting an injection, and then have no discomfort." But the majority of patients do have some soreness of the kind typical with injections: mild discomfort for an hour or two that goes away on its own.

In a small minority of cases, the pain is significant and persistent. "Rarely, there is significant soreness and discomfort for 24-48 hours," says Glashow. "In which case we give [Tylenol](#) or a mild narcotic pain reliever and ask the patient to rest." Because the concoction being injected is made from your own blood, PRP therapy does not carry risks more severe than a few days of soreness.

## Traditional treatment

Most of us are familiar with the standard first-aid response to an injury. "Typically, with someone who suffered an

injury - a pulled muscle, a knee injury or anything in between - the advice would have been rest, physical therapy and nonsteroidal drugs like [Advil](#) and [Aleve](#)," says Glashow. "With a minor injury, in a few days, people feel better."

For more serious injuries, PRP therapy can replace cortisone, which was commonly used years ago but has fallen out of favor. "Cortisone's effects are short-lived," says Glashow. "While beneficial to reduce inflammation, it actually blocks the healing process."

Cortisone was popular because it provided temporary pain relief, but doctors are finding that PRP therapy can be helpful for both the short and long terms. "We think PRP will both make you feel better and increase the healing," says Glashow.

For people operating on a tight time line or patients whose healing isn't progressing, PRP therapy can be the best option. It's an outpatient procedure that most doctors can perform in 15 to 20 minutes. Better yet, "We don't add anything that we didn't take out of the body - I don't even typically use an anticoagulant," says Glashow. "I feel not using any outside chemicals products reduces the chance of any negative side effects."

Doctors are finding that the benefits of PRP seem to be cumulative, so some patients will require between two and four injections over the course of a few weeks.

Doctors are still discovering the best ways of administering PRP therapy, and any physician you see should be candid about this. "PRP is a very new area," says Glashow. "We don't have all the answers yet. But we have a new tool in our toolbox for healing injuries."

PRP therapy isn't for everyone, but it can be highly effective for serious injuries that aren't getting better or aren't getting better fast enough. "It may be necessary for the athlete who's not coming back fast enough from the muscle strain, or that person who's an a sprained knee for months and months and it's not getting better," says Glashow.

### **Research breakthroughs**

While much research has focused on the mechanical aspects of healing, this is a potential breakthrough on the biological side. Major laboratory and clinical trials are striving both to deepen doctors' understanding of how it works and how to best administer it.

"Right now there are several lab studies going on that are showing that with PRP therapy, the healing process is being sped up at the cellular level," says Glashow. "That is the laboratory science of it - showing that this is not hokey and really does work."

Clinical trials are showing how people respond to the process that has proved so effective in animal studies. For instance, several clinical trials have shown benefits in the treatment of tennis elbow, MCL (medial collateral ligament) injuries of the knee and Achilles tendon injuries, with new cells forming more quickly thanks to the injections.

In addition, recent laboratory studies in animals are proving that PRP may have a positive effect on allograft ligament healing in the knee.

PRP is such a new therapy that there isn't easy to find a doctor with expertise in it. Glashow advises patients to ask their orthopedic surgeon or sports-medicine specialist if they offer this therapy; if these specialists don't, they can give you a referral.

### **Questions for your doctor:**

Although PRP therapy has proved highly effective for some patients, it's not an appropriate treatment for every injury or every patient. The best way to figure out if you could benefit from PRP is by talking to your doctor and getting a second opinion, if necessary.

If your doctor is recommending cortisone, ask, "Am I a candidate for PRP?" You also should raise the idea with your doctor if you're working under a tight deadline. "If you're really under the gun and trying to get back to the game earlier," says Glashow, then ask, "Could PRP help me heal faster?"

**What you can do:**

*Don't take Advil or Aleve.*

Advil and Aleve are nonsteroidal anti-inflammatory drugs that can't be combined with PRP. "That means no Advil and Aleve for two weeks before PRP is done," says Dr. Glashow, "And I don't allow my patients to take it again for four to six weeks afterward."

*Check for drug interactions.*

Make sure your doctor has a complete list of your current meds. "Other medications can interfere with the PRP process," says Glashow. "So some people aren't candidates."