

Platelet-Rich Plasma (PRP) and Injection Therapies



PRP concentrates platelets from your own blood and is used for some tendon and joint conditions, with mixed evidence.

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What it is

Platelet-rich plasma, or PRP, is a treatment that uses your own blood to help heal injured joints and tendons. Your doctor draws a small sample of your blood and spins it in a machine. This process separates the platelets from the rest of your blood. Platelets are the cells that help your body repair tissue. The result is a concentrated liquid rich in these healing cells.

This therapy is often considered for wear-and-tear arthritis in the knee. For this condition, at least two PRP injections are recommended. The relief you feel can last for at least 24 weeks. It is also used for tennis elbow, known as lateral epicondylitis, and inflammation of the tendon sheaths, called chronic tenosynovitis. Athletes with large joint arthritis may benefit from PRP to support their joints during competition. It is sometimes used for acute muscle injuries in sports, though this is selective.

PRP works by delivering a high dose of healing signals directly to the problem area. The amount of relief you get often depends on the concentration of platelets used. Higher doses can provide more significant symptom relief for conditions like tennis elbow. Your doctor may choose different types of PRP based on your specific issue. For example, some types reduce inflammation in early arthritis, while others promote tissue repair in advanced cases. This targeted approach helps reduce pain and improve your ability to move and function.

Does it work?

The answer depends on what condition you have. For knee wear-and-tear arthritis, at least two injections are recommended. The benefits last for at least 24 weeks. This treatment improves overall function, especially in younger patients. Combining PRP with hyaluronic acid (a lubricating gel) is safe and may relieve pain better than PRP alone. Both types of PRP—those with white blood cells and those without—work similarly for knees.

For tennis elbow (lateral epicondylitis), results are mixed. Corticosteroids help more in the short term. However, PRP shows better long-term results at 6 and 12 months. High-dose PRP provides significant symptom relief. Yet, some high-quality studies show no benefit over a placebo. You should interpret these mixed findings with caution due to study limitations.

For Achilles tendon pain, current evidence does not support using PRP. It is no more effective than a placebo. You should avoid this treatment for Achilles issues until better trials are available. For other chronic tendon inflammation, PRP can effectively improve pain and function. Its mid-term results are superior to corticosteroids.

In sports medicine, PRP may help acute muscle injuries. Your doctor might recommend it for athletes. For early bone death in the hip (osteonecrosis), adding PRP to core decompression surgery improves pain and quality of life. However, for knee ligament reconstruction (ACLR), the evidence is too weak to say if PRP helps. It does not routinely help with hip pain on the side of the thigh (greater trochanteric pain syndrome). Always discuss these specific outcomes with your doctor to see if PRP is right for you.

Is it right for you?

You are a good candidate if you have wear-and-tear arthritis in your knee or tennis elbow. For knee arthritis, you should expect at least two injections. The relief lasts for at least 24 weeks. You can choose between two types of plasma. Both work equally well for your knee. If you have tennis elbow, higher doses give you more symptom relief. This therapy also works better than a placebo for chronic wrist tendon inflammation.

Your doctor may tailor the treatment to your arthritis stage. Early arthritis responds well to a type with low platelets and high white blood cells. This helps reduce swelling. Advanced arthritis benefits more from a type with high platelets and low white blood cells. This promotes tissue repair. If you are a competitive athlete with large joint arthritis, this therapy is recommended for you. It may also help with acute muscle injuries, though protocols vary.

You probably will not see major benefits if you are having anterior cruciate ligament reconstruction. Current evidence does not show a clear improvement over standard surgery. You should also be aware that study quality varies. Some studies lack detailed information about the plasma used. This makes it hard to predict results for everyone.

Cost and availability depend on your revision risk and preparation fees. The value is not uniform for every patient. There are no major surgical risks, but you must discuss these details with your doctor. This is a shared decision based on your specific condition and goals.

The bottom line

PRP injections can help with knee pain and elbow tenderness, but results vary by condition. For knee arthritis, you need at least two injections for relief lasting at least 24 weeks. It works better than steroids long-term for

elbow issues, but not for Achilles tendons. Your doctor may tailor the mix to your disease stage. Be aware that study quality is often low, so manage your expectations carefully.