

How does PRP work?

PRP works by stimulating the body's natural healing mechanisms. When tissue is injured, the body responds by sending specific 'super healer' cell types to the site of injury to start the repair process. These 'super healers' are platelets and once they are injected, release growth factors and bioactive proteins, which act as 'chemical controllers' for cellular repair. Researchers have observed the positive effect of PRP on tendon and ligament tissues. Three main actions have been observed – stimulation of cellular repair, increase in anti-inflammatory processes and growth of blood vessels in the damaged area. Collectively these actions lead to a reduction in symptoms and improvement in function.

How is PRP therapy done?

PRP is a simple procedure, performed as an outpatient with the whole procedure lasting 30 minutes. A blood sample is collected (similar to a regular blood test) and placed into a special, sterile PRP device. After centrifugation, over 90% of the platelets are precisely concentrated into a small volume of plasma, which is then collected for injection into the affected tendon, ligament or muscle – usually under ultrasound guidance to ensure precise placement.

What conditions are suitable for PRP?

It is always best to discuss the use of any therapy with the treating doctor, as they will be best placed to advise whether PRP may be of benefit to you. PRP is usually recommended when the condition affects daily activities and it has not responded to conservative therapies such as physiotherapy, bracing, massage, dry needling; as a first line treatment for elite athletes; or when patients are sensitive to either NSAID use or corticosteroid injections.

Conditions commonly treated with PRP injections:

- tendon - acute & chronic injuries, partial tears, tendonitis, tendinosis, tendinopathy, tenosynovitis
- ligament - acute and chronic injuries - sprains and small partial tears
- osteoarthritis
- stalled healing of muscle injuries

What to expect post injection?

The PRP's growth factors improve tissue regeneration by stimulating the body's normal healing response to an injury. However as the growth factors are highly concentrated, the healing response is amplified, which can create a temporary 'flare up' of symptoms for 2-3 days. Because the goal of the PRP procedure is to resolve pain and improve function through tissue regeneration, it takes time for the new cellular components to be formed and mature. Initial improvement may be noticed after a few weeks and the healing response should gradually increase until 6 months.

Not all PRP is equal

Alocuro's TGA approved technology collects a 'pure' type of PRP, with a high platelet concentration and reduced white blood cells, which has been shown by research studies to provide the best clinical outcomes for chronic tendon pathologies. By comparison, many PRP providers are using low platelet concentration or high white blood cell PRP that may contribute to variable patient results.



PRP is not a monotherapy - it should be used as one component of a tendon /ligament management program. Best results are gained when patients follow the treating doctor's recommendations re rest period and specific rehabilitation instructions.

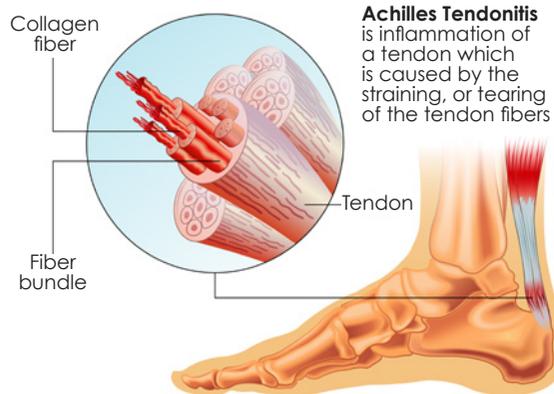
alocuroTM
regenerative cellular therapy
for tendon and ligament conditions



Tendons are flexible, inelastic cords of dense collagen tissue that link muscles to bones. Their role is to transmit muscular forces to bones and enable joint movements. As a result, tendons are in constant use and can absorb significant forces. Repetitive use or a single excessive force event can result in injury, degeneration and reduced tendon function. Chronic tendon conditions can also have an associated bursitis.

Ligaments are bands of fibrous connective tissue that connect bones to other bones. Ligaments assist the joint capsule to maintain stability by limiting excessive movement and providing a mechanical reinforcement to the joint. Ligaments can be damaged by injury, and in some joints, will not be able to self-repair without surgery (for complete tears or rupture) or assisted healing (for strains, contusion or partial tears). As they are inelastic structures, they can also become permanently lengthened when excessively stretched.

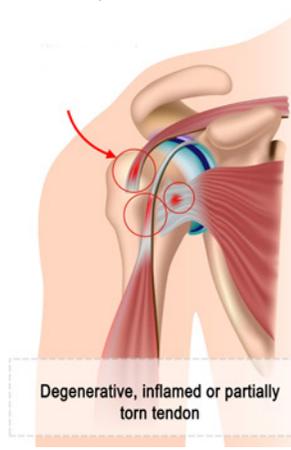
Ligament and tendon injuries affect a wide range of the population including athletes, people who perform repetitive manual tasks and ageing individuals. The most common tendon complaint is tendinopathy, which is often caused by repetitive tendon micro-injuries at sites of strain. Partial or complete tendon tears are usually the result of excessive overload or trauma. Tendon injuries may cause extreme pain and affect joint and muscle function, which can have a significant impact on a person's work and exercise activities.



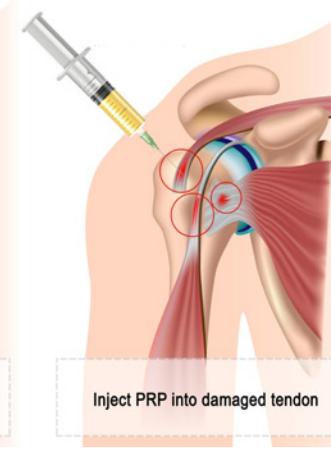
Healthy Tendons of the Shoulder



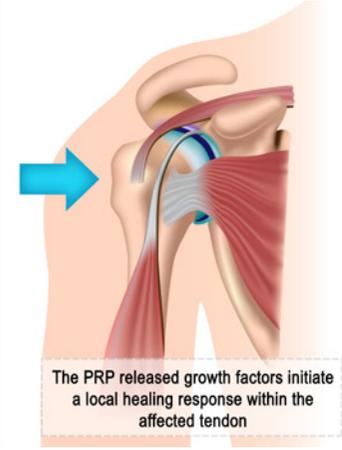
Degenerative or Injured Tendons



PRP Injection



Healing tendon after PRP



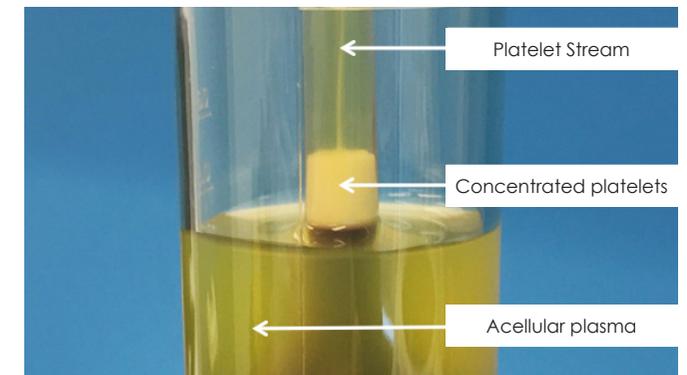
In some cases, the partial tears and degenerative changes caused by repetitive micro-injuries do not heal, even after multiple therapies have been used eg: rest, physiotherapy, and medications. Tendons and ligaments struggle to self-heal due to two main causes:

- They have limited blood supply, and once injured, the body is not able to deliver platelets, stem cells and essential healing nutrients to the damaged tissue – as these regenerative components are transported via arterial blood.
- Failed tendon healing – where the body has tried to repair the degenerative or injured structure, but the attempted healing has not been successful and the area becomes trapped in a chronic inflammatory state. The area surrounding the failed healing becomes scarred with fibrotic tissue, which can cause pain, reduced function and increased risk of re-injury.

If a damaged or injured tendon fails to heal with rest and physiotherapy, a doctor may recommend a Platelet-Rich Plasma (PRP) injection procedure.

What is PRP?

Platelet-Rich Plasma (PRP) is an extract of your own blood that contains a high concentration of platelets within the collected plasma. It is an autologous (patient's own) treatment to repair or regenerate impaired or non-functional tissue. An injection of PRP to the injured/degenerative tendon or ligament provides regenerative growth factors and essential healing nutrients directly to the target area that the body cannot deliver on its own, (due to the poor blood supply).



Alocuro PRP device is approved by the TGA for PRP therapy. It has 90-95% platelet collection efficiency, with the ability to see the concentrated platelets during the PRP collection

Muscle and tendon injuries account for a significant percentage of patient visits to physiotherapists, GPs, orthopaedic surgeons and sports medicine physicians. This number will continue to rise as our population ages and remains active.

Safe Work Australia's 2014-15 statistics demonstrate that almost 60% of serious claims were related to tendon, ligament or muscle conditions.