

PATH-2 Study: Plain English Summary

Achilles tendon rupture (ATR) is a common injury and leads to months of difficulty walking. The tendon attaches calf muscle to the heel. Most ATRs in the UK are treated by immobilising the lower leg in a plaster cast or boot, followed by months of exercises to restore calf muscle strength. Absence from work is often for 2-3 months.

Platelets are the smallest blood cells and contain proteins that promote healing. Platelet rich plasma (PRP) is a concentrate of a patient's own blood. Laboratory experiments suggest it could improve tendon healing. We investigated the effects of PRP on ATR healing in adults and measured recovery using patient-reported measures.

Using a computer, we randomly allocated 230 patients from 19 hospitals to either PRP injection or an imitation injection (placebo). We did not include patients having surgical repair of the tendon. We assessed participants before and at 4, 7, 13 and 24 weeks after treatment. We collected information on calf muscle strength, quality of life, pain, and whether participants recovered the ability to do activities important to them. We also monitored any problems with their recovery. We tested participants' blood for proteins known to help healing. In 16 participants we took tiny samples of tendon tissue to assess the healing.

There were no differences between participants injected with PRP and placebo in calf muscle strength, or in the patient-reported measurements. This meant that PRP did not improve tendon healing during the 24 weeks. Complications were similar with 1 in 20 in each group having a further tear of the tendon. The number of platelets in PRP did not influence the outcome. The biopsy showed similar healing between PRP and placebo groups.

We conclude that PRP does not improve recovery from ATR over 24 weeks. We will reassess participants at 2 years. PRP is used widely in other musculoskeletal problems and should be tested just as rigorously there.