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Recover®
Platelet Separation Kit

A natural treatment of
jumper's knee

Patient information

Jumper's Knee

Jumper's knee is a chronic injury of the patellar tendon of the knee. It is often called patellar tendonitis because there is inflammation of the tendon and most commonly occurs at its origin just below the kneecap. This chronic injury results in a degree of degeneration of the patellar tendon.

The patellar tendon is a thick, organized band of tissue that attaches the kneecap (patella) to the shinbone (tibia). It plays a crucial role in transmitting the forces generated by the muscles in the front on the thigh (quadriceps) to the tibia so that the leg can straighten and support weight with walking or jumping. It acts like a kind of pulley for the knee, and is essential for normal stability and function of the knee.

Anyone can get a jumper's knee, but it is a particularly common problem in athletes involved in jumping sports, such as high jump, long jump, triple jump, basketball, hurdling, badminton, volleyball and soccer.[1] With repetitive jumping often small tearing and injury of the tendon can occur.

When you suffer from a jumper's knee you usually notice the gradual onset of pain. Most often you will have pain in the front of your knee, localised below the knee, when jumping or hopping, or with lifting or bending. Quite often the pain is relieved by rest but returns with activity. There might also be some swelling present below the kneecap.

Tendons are known to have a poor blood supply and combined with the stress of day-to-day activities, they do not easily heal from damage. As a result of the slow healing of tendons, the symptoms occurring at a knee tendon injury can last for a number of weeks, months, or sometimes, they can persist for years.

Available treatments of jumper's knee

- Activity restriction
- Icing after efforts
- Physiotherapy
- Thigh muscle training
- Patellar tendon strap
- Recover L-PRP treatment
- Shockwave therapy
- Electrical stimulation
- Surgery

Recover Leukocyte-, and Platelet-Rich Plasma (L-PRP) injections

Blood consists of red blood cells, white blood cells, plasma and blood platelets. Platelets are known to be responsible for blood clotting and releasing growth factors. Growth factors, released from platelets upon activation, can influence the biological processes necessary for the repair of soft tissues, such as tendon or ligaments, following acute traumatic or overuse injuries.[2-5]

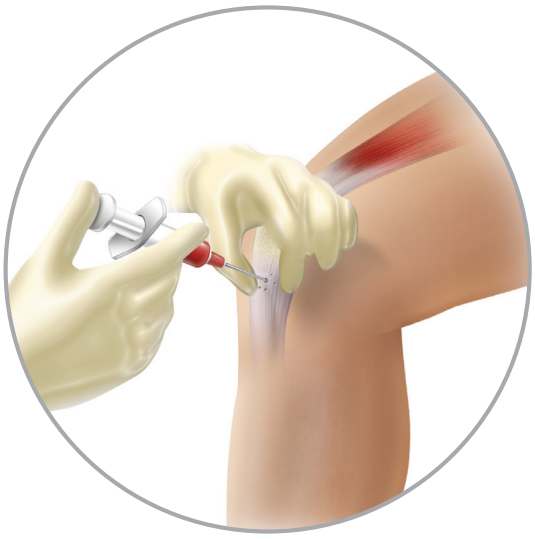
Recover Leukocyte-, and Platelet-Rich Plasma (L-PRP) offers a promising technique that may help tendon injuries. L-PRP prepared with the Recover technique results in concentrated platelets and white blood cells containing reservoirs of bioactive proteins, like growth factors. L-PRP injection therapy offers a technique that may help to relieve pain and improve function.[2-4]

Recover: A natural treatment of jumper's knee

Recover-treatment

A 52 ml sample of blood is withdrawn from your arm. The blood is then transferred in a tube that is placed in a centrifuge that spins the blood for 15 minutes. The centrifuge step separates the L-PRP from the rest of the blood components. After centrifugation the L-PRP is collected. L-PRP prepared with the Recover technique (containing platelets, growth factors and white blood cells) is ready to be injected back into the tendon at the site of the chronic injury.

Before injecting the L-PRP a local anaesthetic can be used. After just one single skin poke through the skin, the L-PRP will be injected into the tendon with multiple penetrations.



After treatment

After the injection you should not move your knee for 15 minutes enabling the L-PRP to soak into your tendon. Afterwards you can go home and you may get a prescription for a narcotic pain medication for pain control overnight. Anti-inflammatory drugs are not allowed. Icing may be a good solution. Increased pain at the site of injury may result up to two weeks after L-PRP injection.

After the patellar tendon Recover procedure, you should follow a customised rehabilitation protocol. Initially, you should be partial weight bearing with crutches. Progressive exercises should be started about 5–7 days after the procedure.

Activity after the jumper's knee Recover treatment

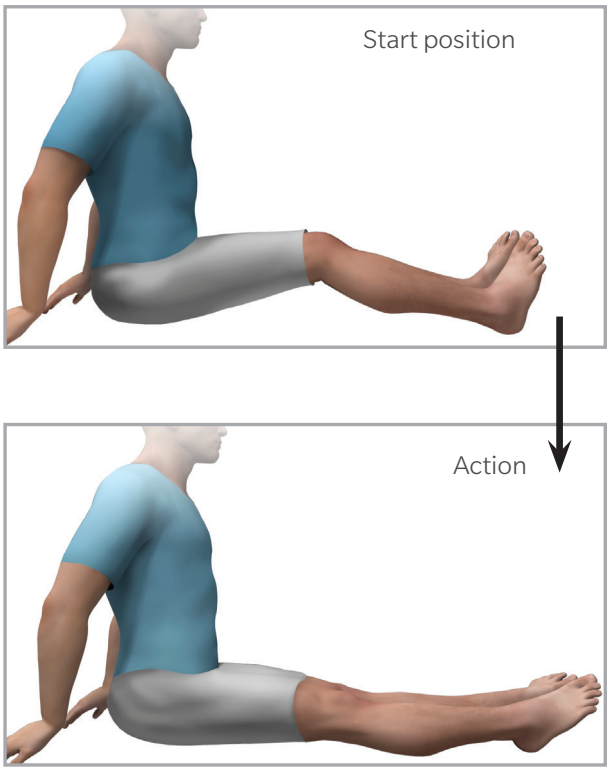
Cool your knee with icing 3–4 times per day for 20 minutes for the first 3 days according to your health care practitioner's advise.

Use crutches for 2–3 days, partial weight bearing on injected side.

The day after the injection start performing isometric quadriceps exercises according to your health care practitioner advise.

Activity after the jumper's knee Recover treatment

Isometric quadriceps exercises



Sit on the floor with your legs outstretched and your hands supporting you lightly at the side.

Push your knees down to the floor, tightening your quads as you do so. Make sure your kneecaps are tight. Maintain this position for 5 seconds. Repeat ten times.

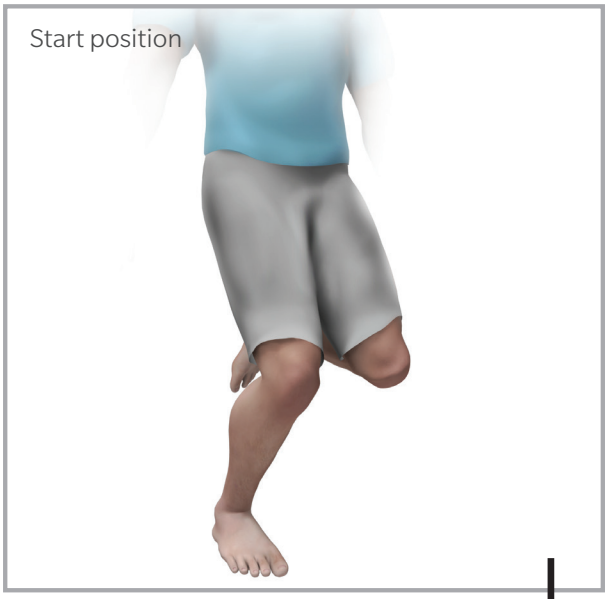
Activity after the jumper's knee Recover treatment

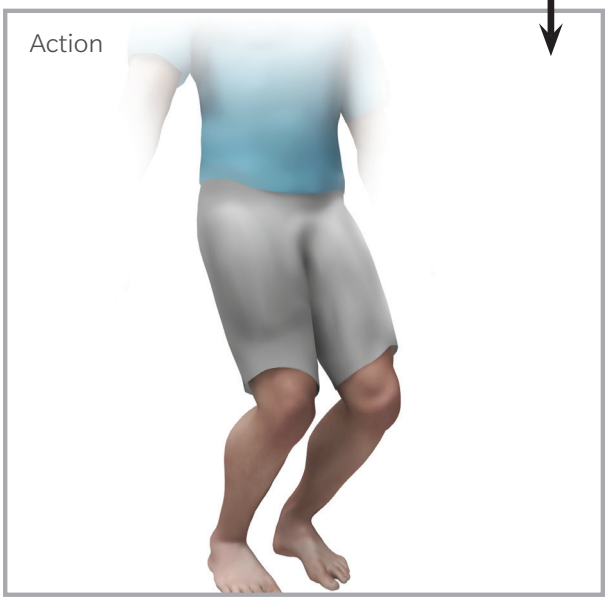
Start exercising your knee using a bike programme 1 week after treatment.

Start with an eccentric (lengthening) patellar tendon strengthening programme 4 weeks after treatment according to your health care practitioner's advise.

Activity after the jumper's knee Recover treatment

Eccentric patellar tendon strengthening programme





Slowly take your treated knee down to a bend of about 90 degrees and keep the knee bent.

Put your other foot on the ground to share your weight. Repeat ten times.

References

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This brochure describes the surgical techniques, stretching/strengthening programs and postoperative protocol used by Allan Mishra, M.D.

Results will vary due to health, weight, activity and other variables. Not all patients are candidates for this product and/or procedure. Only a medical professional can determine the treatment appropriate for your specific condition. Appropriate post-operative activities will differ from patient to patient. Talk to your surgeon about whether joint replacement is right for you and the risks of the procedure, including the risk of implant wear, loosening, or failure. For product information, including indications, contraindications, warnings, precautions, potential adverse effects and patient counselling information of Zimmer Biomet products, visit www.zimmerbiomet.com. All content herein is protected by copyright, trademarks and other intellectual property rights, as applicable, owned by or licensed to Zimmer Biomet or its affiliates unless otherwise indicated, and must not be redistributed, duplicated or disclosed, in whole or in part, without the express written consent of Zimmer Biomet.

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