

Welcome to the: Orthopaedic Opinion Online Website

The website for the answer to all your Orthopaedic Questions

- **Orthopaedic Opinion Online** is a website designed to provide information to patients who have orthopaedic and musculoskeletal problems and are undergoing treatment.
- **Patient information** is provided in the form of downloadable information sheets.
- **Orthopaedic advice** and second opinions can be provided by our expert internationally renowned Consultant Orthopaedic Surgeons.
- **Online review** of patients' X rays or MRI scans can also be provided and any proposed treatment plans reviewed.
- **Book a clinical consultation** with one of our internationally renowned consultant orthopaedic surgeons in Bristol or London.
- **Orthopaedic reports** can be provided for Injury or Accident Claims and Medical Negligence claims.

This Patient Information Sheet is provided by Orthopaedic Opinion Online

Rehabilitation Protocol for Arthroscopic Decompression for Patellar Tendonitis

David P Johnson MD
Consultant Orthopaedic Surgeon

**The Bristol Knee Clinic at the
Bristol Glen Hospital**

www.orthopaedics.co.uk
www.Bristol-Knee-Clinic.co.uk



A) **Rehabilitation Protocol for Arthroscopic Decompression for Patellar Tendonitis**

This guide is an overview of the progression through the rehabilitation following arthroscopic decompression for patellar tendonitis. It should be read in conjunction with details of the anatomy and surgical technique of the procedure and the guides for general advice and specific exercises used in the rehabilitation following arthroscopic surgery for patellar tendonitis :

- **General Rehabilitation Advice for Arthroscopic Surgery for Patellar Tendonitis**
- **Specific Rehabilitation Exercises for Arthroscopic Decompression of Patellar Tendonitis**
- **Pilates Exercises in Patellar Tendonitis Rehabilitation**

Whilst this is a guide for the rehabilitation advice and supervision from a physiotherapist should be obtained. Often formal physiotherapy can be delayed until three weeks after surgery. This delay is important because the surgical technique removes part of the patellar and weakens the patellar tendon insertion to the patella. Experience has shown that this initial three week period of gentle

range of motion exercises results in the pain and swelling to settle and the patellar tendon to heal sufficiently for normal activities of daily living and physiotherapy to be started after three weeks although impact exercises and jogging should not be started for a full three months. During the initial three week period gently straightening exercises, straight leg raising and knee flexion should be undertaken. This will ensure that the full range of knee motion is regained and that the knee does not become stiff.

It is very important that patients take responsibility for their own rehabilitation, doing home exercises several times every day. Ask for help, advice or assistance if you are not progressing as you would like to, or if you have any problems from your physiotherapist, GP or Mr. Johnson. This guide is an outline for a standard arthroscopic decompression for patellar tendonitis patient in normal circumstances. It should be used in conjunction with advice from your physiotherapist and Mr. Johnson. Patients having more complicated or revision surgery will be advised to modify the protocol accordingly.

Following surgery a visit to the physiotherapist is advised after 2-3 days. The physiotherapist will guide the patient as to the range of motion exercises to avoid knee stiffness, regular icing and control of any swelling. Physiotherapist supervised rehabilitation with gentle resistance should not be started before 3 weeks and gym work not before 6 weeks. Therefore it is often the case that after an initial post-operative physiotherapist session Mr. Johnson delays the second session for three weeks until after review.

THE PATELLAR TENDONITIS REHABILITATION PROTOCOL

Pre-habilitation or exercises prior to surgery: Episodes of knee pain or swelling should be minimised. This usually requires a restriction in sport and activities so as not to place the knee in a position of vulnerability. In patellar tendonitis the symptoms are particularly prevalent in activities of running especially down hills or stairs, jumping or lunging activities, and driving excessively. Anti-inflammatory medication which has been prescribed should be continued until 48 hours prior to surgery. A program of exercise and strengthening of the knee prior to surgery is beneficial. If these do not involve impact, running or jumping exercises then they can usually be undertaken without inducing further problems. In this respect the full program of rehabilitation exercises can be undertaken as described in the guide "Specific Rehabilitation Exercises for Arthroscopic Patellar Tendonitis Decompression". This includes gym exercises and weight training, static cycling, rowing machine, stepper, Nordic training, cross trainer, leg presses, dips, and hamstring curls.

Peri-operative: Anti-inflammatory tablets (Indomethacin, Voltarol, Brufen, Naprosyn etc) should be stopped 2 days before surgery. On the morning of surgery patients should fast from midnight and arrive at the hospital at 7.20 am. For afternoon surgery you will be fasted after 8 a.m. Prior to the operation any tablets or medications you take, or allergies you may have to medications, should be brought to the attention of the surgeon. Please notify your surgeon and anaesthetist in advance if you are taking any anti-coagulants (blood thinners), hormone replacement tablets, the Pill or suffer from diabetes or any other significant medical condition. Use of the contraceptive pill increases the slight risk of leg thrombosis following ACL reconstruction. Ideally you should stop taking the pill 4-6 weeks prior to your operation, and take alternative precautions. Please ask your GP Practice for further advice if required. However where this is not feasible or practical low-molecular-weight Heparin injections will be given at the time of surgery. This has the effect of preventing thrombosis to a large degree. This should be discussed with your surgeon.

The anaesthetist and Mr. Johnson will see you before surgery. The operation is performed under spinal or general anaesthesia. There will be one or two small incisions in the front of the knee

either side of the patellar tendon. These may be closed with a steri-strip or a single suture. Following the operation patients usually wake up with a bandage on the leg. A continuous passive motion machine, brace or splint is not used.

Day of surgery: Your physiotherapist on the ward will instruct you about how to progress the muscle activation and knee flexion (knee bend) and extension (knee straightening) exercises to start on while in hospital. Hamstring and quadriceps activation exercises and knee flexion and extension exercises should be started as soon as possible with active straight leg raising exercises. You will also be shown how to use your crutches, you should take as much weight through your leg as is comfortable. Full weight bearing with the leg straight is allowed as soon as comfortable and muscles strength returns. Crutches should only be necessary for one or two days following surgery. Regular analgesia (pain relief) of paracetamol and codeine and anti-inflammatory medication (diclofenac, ibuprofen etc) will be prescribed.

Patients will generally be discharged from hospital as a day case. Patients should be walking comfortably albeit usually using crutches for support.

Day one: The crepe bandage which is applied in theatre may be removed overnight if the wound is satisfactory. This should be replaced by a tubigrip type bandage, which may be removed at night. This is usually continued for a week or so until the swelling in the knee settles. Analgesics in addition are only necessary for the first couple of days until the acute pain settles. Non-steroidal Anti-inflammatory medication should usually be undertaken for between 3 and 6 weeks. This has the effect of reducing the swelling and also discomfort in the knee. If indigestion or other complications should occur during this period medical advice should be sought. Patients should continue with the exercises as advised by the physiotherapist. These should be performed for perhaps 10 minutes every two hours. Once sufficient quadriceps strength has been obtained and the pain and swelling contained to some degree the crutches may be discarded. Regular cryotherapy or ice in the form of a bag of frozen peas should be used to reduce knee swelling and discomfort. This should not be placed directly over the skin but over a tubigrip bandage or towel. The ice should be applied for 10 minutes only to prevent skin damage. cryotherapy should be used after exercise or activity perhaps every two hours initially and reducing to use after exercise after the first two weeks.

Week one: Patients should continue with anti-inflammatory medication, and use a tubigrip during the day. Additional analgesia is not usually necessary. Regular exercises followed by cryotherapy should be undertaken every two hours throughout the day. Activity should be restricted so as not to exacerbate any pain or discomfort or swelling. The patient can usually return to office type work in 3-5 days and driving soon afterwards for short distances. Care should be taken as driving is troublesome for patellar tendonitis and this should only initially be undertaken for short durations.

If steristrips have been applied then these may be removed after 5 days. If the wounds are dry and healed bathing and showering may be started. If the wounds have been closed with sutures these should be removed by the practice nurse after 7-10 days.

Week two and three: During the second week use of a tubigrip bandage, anti-inflammatory medication and cryotherapy should be continued. For the first 3 weeks very little formal physiotherapy is necessary. Patients should gently move the knee so as not to get stiff but should otherwise rest as far as possible.

Week three to six: After the 3-week period a clinical out-patient review is undertaken by Mr. Johnson. After three weeks active flexion and extension exercises and static quadriceps exercises can be started. However resisted through range extension exercises are to be avoided at

this stage. Light work and more manual activity can be undertaken at this time. Patients can return to hydrotherapy and pool exercises.

Anti-inflammatory medication can usually be stopped. However if the knee reacts to the exercises then intermittent anti-inflammatory medication may be taken.

Following surgery a visit to the physiotherapist is advised after 2-3 days. The physiotherapist will guide the patient as to the range of motion exercises to avoid knee stiffness, regular icing and control of any swelling. Physiotherapist supervised rehabilitation with gentle resistance should not be started before 3 weeks and gym work not before 6 weeks. Therefore it is often the case that after an initial post-operative physiotherapist session the second session is delayed for three weeks until after review by Mr. Johnson.

Week six to nine: After 6 weeks it is usual to return to gentle static cycling with a high saddle, gentle swimming and non-impact gym exercises. Resisted knee extension exercises should be avoided until 6 weeks following surgery. Analgesics and anti-inflammatory medication are usually necessary for between 3 and 6 weeks following surgery but are sometimes helpful when returning to exercise or sports.

Week nine to twelve: Patients can resume all normal exercises including normal gym, swimming and cycling with the following provisos: Cycling should avoid a low saddle, high resistance and hills. Lunging exercises should be avoided. Resisted through range quadriceps extension exercises should use low weights and a high repetition program.

Week twelve: Jogging should be started gently and only on the flat soft surfaces such as grass or a treadmill. Jogging should be for very short periods with a slow and gradual increase over time. Jumping should be started gradually with skipping, trampet work, lunging, hopping and then gentle jumping.

Post-operative problems following arthroscopic decompression of patellar tendonitis

Success following patellar tendonitis surgery depends upon many factors of which rehabilitation is of utmost importance. The most perfectly performed surgery can be quickly undone by too rapid or progressive rehabilitation

Complications following patellar tendonitis surgery can occasionally occur. Some of the more common occurrences include significant swelling in the knee. In the early days this may be due to bleeding within the knee. If the swelling persists for several weeks the cause is often fluid in the knee or an effusion. This occurs perhaps in 10% of knees to some degree. The swelling usually settles over the course of time. Rest, regular icing or the use of anti-inflammatory medication, may help the swelling. A wound infection usually presents 3-7 days following surgery as a hot, red and swollen wound with pain, stiffness and a fever. The wound may leak serous fluid or frank pus. Should this occur urgent medical assessment should be undertaken and treatment with antibiotics or surgical drainage may be necessary. Bruising may occur around the knee and may cause muscular tenderness or discolouration but this usually settles. Occasionally there may be a small area of skin numbness adjacent to the surgical scar. Numbness just next to your scar is usually temporary.

Success of arthroscopic decompression for patellar tendonitis

The failure rate of recurrent symptoms of anterior knee pain has been generally reported to be 4-8% following arthroscopic surgery. However not all patients are able to return to their previous level of sporting activity. The reasons for this may affect perhaps 15% of patients and include a change in lifestyle or work. Perhaps 8% of patients may not return to the previous level of sport because of weakness, stiffness or discomfort of the knee.

Questions and further information

If you have questions about your rehabilitation, please contact your physiotherapist. If there are any wound problems including skin redness, persistent wound discharge, excessive swelling, increasing or severe pain, fever, infection, pain and swelling in the calf muscle or chest pain please seek urgent medical advice. This may be from your GP or practice nurse for wound dressings, the hospital ward for suture problems or infections or Mr. Johnson's secretary Andrea directly. If you have questions about your surgery, please contact Mr. Johnson's secretary Andrea on 01179 706655. Follow up appointments with Mr. Johnson should be booked through Andrea and are usually after 3, 6 and 12 weeks.

More detailed information:

More information can be found in other information leaflets available from the Bristol Knee Clinic. This information leaflet and the others in this series are available from the web sites :

- www.orthopaedics.co.uk
- www.Bristol-Knee-Clinic.co.uk

Issue Date July 2011
Review Date July 2012

Disclaimer: The views expressed in this article are not necessarily those of Orthopaedic Opinion Online or the author. The information is provided for general background reading only and should not be relied upon for treatment. Advice should always be taken from a registered medical practitioner for individual circumstances and for treatment of any patient in any circumstances. No liability is accepted by Orthopaedic Opinion Online, or the author in respect to the information provided in respect of the content or omission or for any reason or as a result of treatment in individual circumstances. This information is not for use in the USA.