

**Re-attending ED** – re-attendance at ED is suggested you notice any of the following – worsening knee pain and swelling, inability to weight-bear, feeling unwell /fevers with worsening knee pain and swelling.

**Further Information** –<https://www.nhs.uk/conditions/knee-pain/>  
<https://www.versusarthritis.org/osteoarthritisof> the knee information booklet

## Early management of Knee Pain and Injury

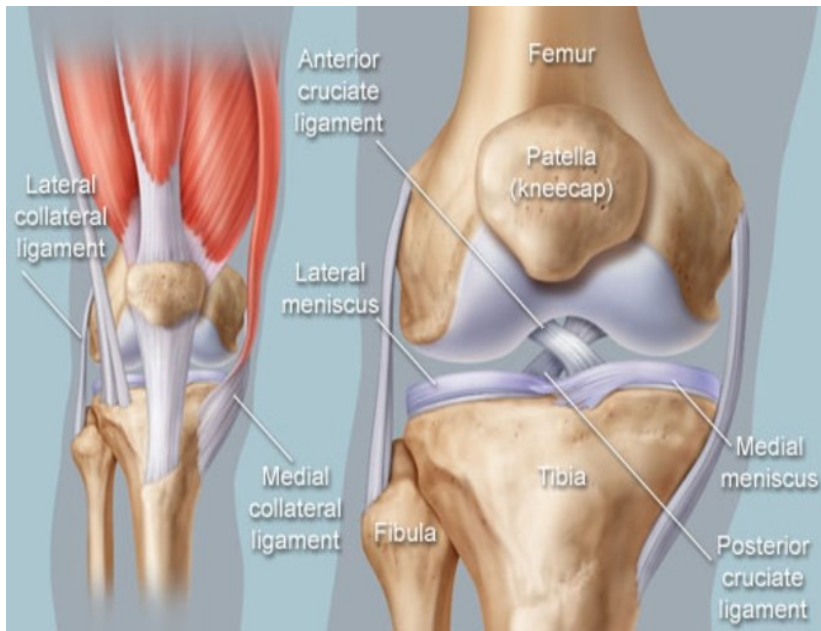


**Peter Mc Cormick ( ED Physiotherapist)**

**Altnagelvin Emergency Department**

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## The Knee Joint



The Knee Joint is a Hinge Joint. The main movements performed at the joint are bending and straightening. Some rotation can also occur at the joint.

## Other tips to assist your recovery

**Avoid HARM** – in first 72 hours after injury avoid Heat, Alcohol, Running or other vigorous exercise and massage).

**Compression/Support**- if your knee is swollen you may benefit from a compression support. If you have sustained a ligamentous injury, you may require a knee brace. **Neither of these should be worn in bed at night.**

**Circulation** – injuries anywhere in the leg can have a poor affect on our leg circulation, try to **move around regularly** and **pump your feet up and down vigorously** (10 times hourly) while in sitting/lying can help to prevent circulatory issues.

**Sport** - do not return to sport until you have no issues with walking or running and you have full confidence in your knee. Before return to sport you can progress running by adding twisting, turning, jumping and hopping drills, as well as sports specific action e.g. kicking/catching/evading/stopping suddenly and sprinting from a static position.

**Driving**- do not drive unless you can safely drive your vehicle. Things to consider when driving are the ability to carry out an emergency stop/repeated use of the clutch. Don't drive if you are wearing a knee brace.

**9-** Sit to stand (without hands). If this is too low to start from use a higher surface or place a pillow on the chair



**10-** Knee bends (on your front) bend your knee until you feel some stiffness and then control back to straightened position



**11-**Single leg stand – use a wall or chair for support, stand on affected leg, try to maintain this for 30 seconds. As you regain strength and confidence aim for 1 minute and try to reduce the support you are taking with your hands.



## Causes of Knee Pain

**Twisting type injuries** – these are often sustained during sports, but can also occur following a simple fall. The structures commonly affected as a result of these injuries are ligaments (particularly the medial collateral and anterior cruciate ligaments) which bind the bones in our knee together and the menisci (cartilage) which are the shock absorbers within the joint.

**Direct fall onto knee/blow to knee** – pain in this case is often the result of bruising .

**Patellar Dysfunction** – this is pain in the region of your knee-cap and can be a result of irritation of the cartilage behind the knee-cap and is sometimes caused by excessive movement of the patella.

**Over-use Injuries** – these are often a result of excessive demands of the knee and often are sports related. Typically tendons are involved.

**Osgood’s Schlatters** – this is knee pain often felt just below the knee-cap. This condition tends to affect the 12-18 year old age range and is a growth related condition.

**Degenerative Knee Pain (“wear and tear”)-** this type of knee pain commonly affects the 50+ age group. Often people with these type of symptoms are beginning to note some stiffness

at their joint as well as difficulties during prolonged walking, bending and rising from sitting. These symptoms are usually related to the knee joint and cartilage.

**How long will it take for my knee to improve?** Most soft tissue injuries tend to improve within 6 weeks. Significant ligamentous or cartilage type injuries can take much longer than this to resolve.

**Will my knee pain return?** If you have had symptoms with your knee previously then it is possible you will have symptoms in the future. Rehabilitation may help to reduce the risk of future knee symptoms.

**Will I require crutches?** – If your mobility is severely affected i.e. your knee feels unstable and you feel at risk of falling, then crutches may help to reduce the stress on your knee and assist recovery. Progression off crutches should begin as pain reduces and knee function and confidence improves.

**Will I require an X ray or scan?** – The need for an X ray will be determined by your mechanism of injury and how your knee reacts during assessment. X rays are often carried out as part of the assessment process in ED. Scans are normally reserved for more severe injuries or conditions which are not improving.

**Can I drive?** – If you are not in a position to carry out an emergency manoeuvre safely e.g. emergency stop you should not be driving. You should not drive if your knee has been placed in a brace.

## Phase 2 Rehabilitation

**6- Wall Slide** – stand with your back against a wall and let your knees gently bend, hold (5-10seconds) and return to stand position. Take care not to bend knee too far.



**7- Step-ups** – Using a step or stair, practice stepping up, leading with affected leg upwards and downwards. Side step ups can also be attempted.



**8- Bridging** - Lie on back with knees bent, with ball or pillow between knees, squeeze ball and lift bottom (hold x 5-10 seconds) and lower and stop squeeze.



**3** – Straight leg raise – tighten thigh and lift straight leg 3-4 inches off bed (hold for 5 seconds) and lower.



**4**- Holding onto a wall/chair in standing move affected leg out to side and return, also try moving your leg backwards and return.



**5**-Knee Stretch – while sitting on a bed allow your knee to fully straighten ( hold x 10 seconds)



**Will I need further treatment e.g. Physiotherapy?** – if your knee pain and function is not improving by 2-3 weeks after injury, liaise with your G.P. or a Chartered Physiotherapist.

**Can I do anything to help my recovery?** The answer to this is yes and the ways in which this can be done are outlined below.

**Ice** – This can be useful form of pain relief in the immediate stages after injury. Most benefit will be gained in the first day after injury. If applying ice e.g. bag of frozen peas, wrap it in a damp towel and apply for 10 minutes and repeat this regularly through the day.

**Heat** –is not useful in the first 3 days after injury. After this it can be helpful for the more degenerative or stiff knee to help with movement in advance of exercises. This can be applied by simply directing the shower head towards the knee or having a warm bath.

**Elevation** – elevating your leg i.e. raising the ankle above the knee for instance with 2-3 pillows placed at the end of a bed/sofa, can help to reduce swelling at the knee. This can help reduce pain and stiffness. Repeat x 30minutes x 3 daily.

**Medication**- The use of painkillers may be indicated after injury. Anti-inflammatory medication may also have a role. It is suggested that if required anti-inflammatory medication should be commenced from 3 days after injury. Always liaise with a medical practitioner/pharmacist before commencing these medications.

**Loading** – it is recommended to increase the weight you take through the injured leg as pain allows. Avoiding weight-bearing by hopping can slow your recovery.

**Walking** – try not to hold the knee stiff, allow the knee to bend and straighten with each stride. This will get easier with time.

**Optimism** –try to remain positive this will help your recovery. Fear of movement/walking and anxiety about recovery tends to add to pain levels and slows recovery.

**Work-** It is likely that you will require some time off if your job requires you to be on your feet for long periods, kneeling, carrying heavy loads or working on uneven ground. Liaise with your employer who may be able to modify your duties as your knee recovers. If your work is sedentary an early return is likely, however you should aim to regularly move your knee while sitting and walk around office regularly.

**Knee Exercises** – try to begin these from the day after your injury. Start with the Phase 1 exercises, 3 times daily x 5 repetitions of each. As you feel progress try adding an extra repetition each day. Phase 2 exercises should begin after 1 week or as pain allows. –

### Phase 1 Rehabilitation

1- Allow knee to bend and straighten in lying and sitting



2- Tighten muscle (Quadriceps) at front of thigh by bracing back of knee into bed hold for 5 seconds (pull foot towards you also). Progress to straightening knee from bent position (use a pillow) again hold for 5 seconds each time.

