

Advice on managing stiffness after total knee replacement

(Trust-wide services)

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- 01392 402093 (for Mid Devon, East Devon and Exeter services)
- 01271 314090 (for North Devon services)
- rduh.pals@nhs.net

What is post-operative knee stiffness?

Post-operative knee stiffness is when your knee isn't bending or straightening as much as we'd expect it to. If your knee is very stiff and you're not achieving a 90-degree bend (right angle), or not able to fully straighten your knee, your physiotherapist will focus treatment towards improving this.

How much should my knee move?

If the knee joint was very stiff before the operation, it may take longer to progress after surgery, and may not achieve full movement. 'Full movement' will vary from person to person. If your knee had good movement before the operation, it should go straight (extend) and bend (flex) to at least 90 degrees within the first days and weeks after your operation. The knee should start to bend further as the weeks go on, allowing increased movement for functional activities such as managing the stairs and pedalling a bike. These activities require 100-110 degrees of flexion. Don't panic if it is taking longer, lots can be done to help, and gradual improvements can be made up to 2 years after the operation.

Post-operative knee stiffness can be due to a number of factors

- Some people have a very stiff knee joint *before* the operation. Sometimes this is due to the bone and joint changes caused by arthritis or previous injury, and sometimes is due to the soft tissues (muscles, ligaments, tendons and connective tissues) becoming tight and contracted.

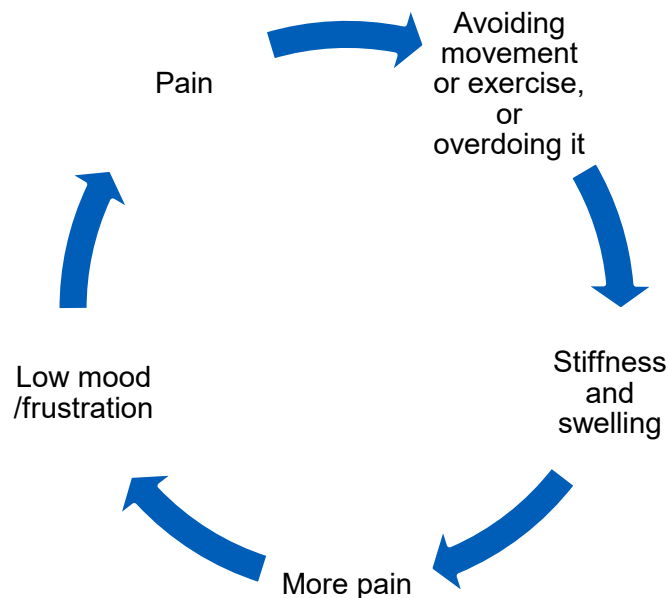
- Some people struggle to manage their pain and swelling after the operation, or may be afraid to move the joint.
- A small proportion of people develop extra scar tissue after surgery.

Remember

Total Knee Replacement is a big operation. Most people have a combination of pain, stiffness, and swelling before the operation. Your strength and activity may have also decreased over a period of time. It will therefore take time to get back to normal following surgery. The first weeks and months can be challenging, and some people find it more difficult to manage their pain, stiffness and swelling. Try not to compare your recovery to someone else's.

Stiffness and pain: The vicious cycle

- It is quite normal to have some pain, stiffness and swelling after your operation.
- It is quite normal to feel tired and emotional during the early recovery period.
- Sometimes we can end up in a vicious cycle of pain, swelling, stiffness, tiredness and emotion.
- Do take your pain medications regularly, as prescribed, to enable you to carry out daily activities and exercises. Don't be afraid of 'masking the pain' in the early recovery period.



If your post-operative pain is not manageable, speak to your Physiotherapist or GP for advice. There is a separate booklet titled 'Advice on managing PAIN after Total Knee Replacement' with additional advice on pain management.

Stiffness and swelling: what can help?

Post-operative swelling is normal, but this increased fluid can increase pain and pressure in the joint. Swelling and pain can also contribute to stiffness. Below are some tips to help manage swelling, and pain;

Pace yourself

It is important you do your physiotherapy exercises little and often, and gradually increase your walking. **If your swelling and pain aren't well managed, you might be overdoing it.** It is impossible to advise exactly how much you should be doing, as everyone is at a very different mobility level before the operation, and will have different short- and long-term goals.

Using ice packs can be very helpful

A bag of ice or frozen peas (wrapped in a tea towel to avoid ice burn), a cold gel pack, or even ice/compression systems can be purchased/hired. We recommend using these for 20-30 minutes, 2-3 times a day or as needed. It can be helpful to do this before and/or after physiotherapy exercises.

Elevation is important

Fluid will always move downwards with gravity. A big operation, poor circulation, and prolonged time with the legs down (even if you're sitting with them 'up' on a footstool), can make swelling worse. To combat this, lie on the bed and elevate your legs on 3-4 pillows (so that they are higher than your heart) for around 30 minutes, once or twice a day. Don't forget the simple circulation exercises such as brisk ankle movements. This is especially useful if your legs are swollen after a long period of time on your feet.

What are the best exercises for stiffness?

There are lots of different exercises to help improve knee range of motion. See your Total Knee Replacement booklet for the routine post-operative exercises.

Knee extension:

The 'passive knee extension (straightening)' exercise is recommended if you're struggling to get your knee straight. This is one of the exercises in the original Total Knee Replacement booklet. Try to relax and sustain the stretch for 5-20 minutes.



Knee flexion:

There are many ways to help bend (flex) the knee. Some people find that bending the knee when in a seated position is most effective;



You can use the unoperated leg to assist the stretch, or ease the stretch by having a sliding surface (eg tray), ball, or small skateboard under the foot to reduce friction. Some people find it more comfortable and effective to hold a low level, sustained stretch, rather than bounce or force it.

Using an exercise bike or floor pedalst knee can be helpful. Even if you can't turn the pedals all the way over, it helps to move them forwards and back, assisting with the other leg. Don't be afraid to push and stretch the knee, it is all very strong and stable! There are lots of ways the physiotherapist can help with knee stiffness, and the orthopaedic team can review you if you are not progressing as expected..

Stretching devices can be used in cases that are not responding to physiotherapy – your physiotherapist can liaise with the orthopaedic team physiotherapist if this might be an option for you.

If your knee is too stiff to use an exercise or push bike, and this is one of your goals, there are companies that can make adjustable cranks for your pedal. Ask your physiotherapist if you need further advice on this.

In very rare cases, if the knee is very stiff and not responding to physiotherapy, the orthopaedic team may suggest further intervention, such as a manipulation under anaesthetic.

Remember to balance exercise with rest, pain relief and elevation, to avoid flaring your pain and swelling.

Your notes

PALS

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