Cycling as a form of rehabilitation has both physical and psychological benefits. Cycling is one of the best activities for being easy on the knee and can help improve your knee joint stability and mobility. It strengthens muscles at the front of your thighs which can help protect your knees. Stronger muscles often mean you can absorb shock better which can reduce load on the joint line and pain. Cycling can be a great way to instigate physical activity. A flat surface or stationary bike with no resistance offer great ways to avoid extra shock.

Knee rehabilitation goals normally consist of decreasing, alleviating or eliminating pain, preventing the current injury returning, improving and restoring range of movement in the knee joint, an increase or return to stability of the knee joint and increasing or re-establishing muscle strength around the knee.

Some of the main advantages of cycling are:
• Offers an effective closed kinetic chain exercise
• Resistance can start at a minimal level and can progress higher
• Low impact
• Non-weight-bearing
• The movement is safe and controlled
• Efficient cardiovascular exercise
• Ideal for remaining in a stable position
• Recurring movement assists in nurturing joint cartilage
• Utilises a range of motion that is required for most daily activities
When cycling, all of the major muscles in the leg are being used at one point. Whilst pedalling the quadriceps works most as you push the pedal down and straighten your leg, whilst the hamstrings are at the back of your thigh which allows your knee to bend. Anterior cruciate ligament (ACL) and hamstrings are common injuries seen and cycling is a great rehabilitation option due to the low amount of strain applied.

Cycling with one leg at a time can also give you a very good indication as to how your muscles interact. If you manage to push the pedal down but struggle to bring your heel back up, this highlights that your hamstrings are potentially not working correctly. You should be able to push and pull equally. This is both a great assessment tool but also a great rehabilitation technique but only at the correct stage of healing.

**Psychological benefits**

Exercise can reduce stress levels and anxiety by stimulating the release of endorphins, the ‘feel good hormones’ leading you to feel more relaxed and at ease. Cycling promotes mindfulness, removing background distractions allowing you to focus on the present moments sensations. This offers us a break from overthinking!

Exercise that you enjoy boosts your mood and makes you feel better about yourself as well as seeing yourself getting fitter. You prove to yourself that you are up to a challenge which can give you a sense of self-control and satisfaction that will help you deal with stress better.

**How to set up a bike correctly**

Although cycling can relieve knee pain, it can cause more injury if done incorrectly.

The height of the saddle will determine the amount of bend in your knee. This needs to be set up differently for every person depending on their height/leg length. The main sign your saddle is too high is if you find your hips rock from side to side when you pedal. This will put too much stress on your hip joint and you won’t be as stable on the bike compared to if it was the correct height for you. If the saddle is too high, your knee will either be too straight or lock when the pedal is at the bottom. This can irritate the iliotibial band (ITB) after a lot of repetition. Make sure any bike you use has foot straps as this will help distribute the work between your quadriceps and hamstrings. If not, you may find the pressure is mostly around the front of the knee.