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DUCHENNE DASH



Duchenne
UK

12th Edition

Building muscle strength to prevent injury



The Duchenne Dash is an endurance challenge, so it is important to stay safe and well along the way. Dr Adam Hazell's private medical practice, The Tyburn, will be providing medical and healthcare support on this year's Dash and he has offered the following expert advice to help our cyclists avoid injuries during the ride.

It is important to work on all the muscles involved in sitting on the bike, by keeping the body mobile, robust and well balanced, this document outlines a selection of simple exercises that can be done at home and can easily be built into a training programme.

A method known as cross-training is often suggested, that utilises exercises and training methods outside of cycling to help maintain muscle balance.

Many cycling injuries stem from having to maintain the same body position for a prolonged period of time, whilst continuing a repetitive motion with the legs. The most commonly seen injuries involve the hips, lower back, along with other issues in the legs and neck.

Back and hip pain

When cycling, the spine is bent forward towards the hips, which can cause issues with the muscles around these regions as well as those that link the two. To prevent this, it is useful to continue a programme of strengthening and stretching these muscles. Strength training should focus on the core, glutes, quadriceps, and the deep stabilising muscles in the back. Stretching is useful in the posterior chain (calves/hamstrings) and the muscles that link the hip and lower back that can often tighten up with cycling.

Exercises can include:

- Something basic like a front plank or a side plank
- Once this feels comfortable, some dynamic core exercises can be included, such as a *rotational plank* or a *rotational bird-dog*.
- Strengthening the glutes is also important. Good starting exercises are side lying leg lifts. This can be followed by fire hydrants, clams and resistant band side walks.
- Stretching the back and hip flexors is also very important. The cobra pose is a nice catch-all for stretching hip flexors and encouraging spinal extension.
- The cat-cow pose is another that helps mobilise the spine.
- Finally, stretching the iliotibial band is important to prevent both hip and knee problems.

A way of incorporating many of the above strengthening and stretching exercises is to undertake a regular Pilates or yoga class. This is a sure-fire way to help ease and prevent back and hip pain.

Knee pain

Knee pain is one of the most common cycling injuries, but more often than not it can point to a problem elsewhere in the body. Therefore, many of the exercises listed above are also helpful.





Patella-Femoral Syndrome

This causes a pain or aching around the kneecap, which can also feel stiff when getting up after being seated for long periods. It is caused by an imbalance in the muscles, resulting in the way the knee cap tracks up and down over a groove in the thigh bone. It can often develop when training intensity is increased.

This can be prevented by increasing training load at a slower pace (it is often suggested not to increase by more than 10% a week). Secondly, working on strengthening the muscles on the front of the thigh (quadriceps) through squat-based exercises, and stretching the posterior muscles (calves and hamstrings) can be beneficial. Many swear by a stretch board for performing this and can be bought for around £40.

Taping the knee with kinesiology tape can also be helpful to aid recovery from this injury.

ITB Syndrome

This causes pain around the outside of the kneecap, often accompanied with a tightness in the hip on the same side. The Ilio-tibial band is a fibrous tissue which runs the full length from the hip to the outside of the knee. Repetitive movements and muscle imbalances (usually weak glute muscles and tight hip rotators) can cause tension on the outside of the knee.

Therefore, working on glute strength and stretching the ITP is important, as described earlier. Another useful exercise here are single leg bridges.

Patella Tendinopathy

This causes tenderness and pain just beneath the kneecap on the front of the leg. It can be worse after cycling, and initially during the first few minutes of cycling. It is caused by a tendinopathy of the tendon that connects the kneecap to the shinbone.

As this is an overuse injury, it is best to reduce training to remove load on the tendon and then to build this up slowly. This may need advice from a physiotherapist or doctor if it develops.

We recommend that the above exercises are combined into a 15-minute daily routine and should be considered alongside the usual endurance cycling training.

Prevention is always better than cure, as training injuries can be troublesome to treat, particularly if it occurs close to the event.

If anyone is having any specific musculoskeletal issues or would like further advice on any of the exercises or stretches that are mentioned above, please feel free to contact dr.hazell@thetyburn.com

