

Hockey Injuries

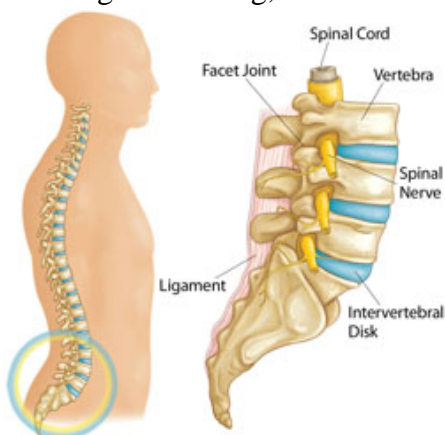
For more information on hockey related injuries visit:
<http://www.cssphysio.com.au/hockeynewsletter.html>



Low Back Pain

Unfortunately, low back pain is a common complaint among hockey players. As the game involves sustained and repetitive bending, the lumbar spine is sometimes placed under considerable stress. Running with a flexed spine requires a fair degree of strength and control, as well as adequate flexibility. On top of this, forceful twisting and lunging places great demands on the spine's supporting structures. Sometimes (due to either an accumulation of loading over time or a sudden violent movement) the imposed loads become excessive, leading to damage.

Injuries can occur in many different tissues around the lower back. Muscle strains (tears) can result from overstretching or fatigue. Ligaments, which join bone to bone, can be sprained when joints are pushed beyond their limits. The joints themselves can be traumatised, particularly by sudden twisting movements. The discs, which are the soft spacers between each vertebrae, act partly like a ligament, and partly like a shock absorber. They can be sprained due to twisting or bending, overloaded by compression, or deformed by excessive pressure placed on one side of spine. They are particularly vulnerable in hockey players, because



sustained bending & twisting loads are the actions most likely to injure the discs of the lower lumbar spine (see diagram).

Risk Factors:

There are many factors which can increase the risk of injuring the lower back. In particular:

1. Lack of strength or endurance in the supporting muscles. This is a common problem. Important muscles include the hamstrings, gluteals, back muscles, and abdominals. This is more likely to be a problem early in the season, in less experienced players, in players who spend more time over the ball, and after returning from injury.
2. Lack of flexibility. The calves, hamstrings, the hip joints and muscles, and the whole spine need to be flexible enough for the movements they will perform.
3. Poor posture. There are certain postures that make some bodies more vulnerable to injury. In particular, spines that curve either too far forward or arch too far back will be more susceptible. Posture can be affected by sport, work positions, habits, genetics, and the 'balance' of the supporting muscles.
4. A sudden increase in stress on the back. Playing multiple games close together would be a common example. Hockey tournaments played over a number of days are a regular occurrence, and may overload many parts of the body, particularly the spine.
5. Age. Generally, players who are young and players who are older will be at greater risk. ...2/



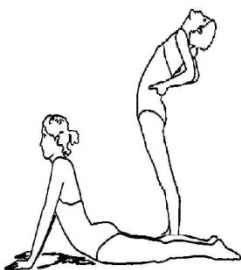
Younger players are more likely to lack the skills and muscular strength required for the game. High physical loads on a developing spine can also be a problem. Older players are at greater risk due to physiological changes which occur naturally with age. Added to this, flexibility and activity levels may deteriorate over time. A sedentary lifestyle is a significant risk factor, considering how physically demanding a game of hockey can be.

Prevention:

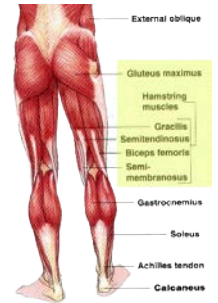
You can look after your back and help to prevent injuries by doing the following:

1. Performing an adequate warm-up before training and games. This is one of the most neglected prevention strategies for many sports. Warming-up is particularly important for our spines, which in most cases don't move a lot during the day, and get stiff when we stand or sit still for prolonged periods. For example, a common scenario would be a long drive to the game, followed by sitting and watching the end of the preceding game, doing a few quick stretches, and getting straight out on the turf to start hitting balls. The back goes from prolonged static bending to more forceful bending. This is asking for trouble. The same applies at training, which can be more risky than games. This is because repetitive movements are practiced, and there is often less running and more bending.

2. Maintaining adequate flexibility. For hockey players, flexibility is particularly important in the muscles of the calves, hamstrings, hip flexors (pictured, below right), and spine. The hip joints, & lower & mid back joints also need to be flexible. Sustained bending of the spine, either from hockey or other activities, can alter the shape of spinal soft tissues, for long periods of time or even permanently. This can be avoided by performing regular stretches in the opposite direction, by arching the back (see below).



3. Strengthening & fitness: Your muscles & joints require adequate strength, endurance, & fitness for the specific demands of hockey, not to mention any other sports or activities that you perform. The most important muscle groups include the calves, hamstrings,



gluteals, back & core muscles. Speak to your coach, trainer or physio about the best exercises to do. The preseason is the time to be working on maintaining & improving your strength & conditioning.

4. Working on 'balance': Hockey is an asymmetrical sport, with more bending than arching, & more bending to the right than the left. This causes different balance between muscles on either side of the body. There are exercises you can do to help counteract these imbalances.

Treatment:

This is too broad a topic to cover here. There are many different things that can go wrong with the lower back, and dozens of different treatments. It may include releases & stretches for tight muscles, specific strengthening exercises, mobilisation or manipulation of restricted joints, and correction of faulty biomechanics.

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