



SPORTS INJURY

INJURY RISK & PREVENTION



Leading a physically active life is one of the most important ways to maintain health, but, participation in sports carries a risk of injury.

Sports injuries can happen to anyone at any time, regardless of age or athletic ability, however, if some sensible precautions are taken the risk of injury can be significantly reduced.

This month we take a closer look at some common sports injuries and injury prevention techniques.

WHAT ARE SPORTS INJURIES?

A sports injury is any injury which most commonly occurs during sports or exercise. Risk of injury is increased due to additional pressure placed on joints and muscles, while participating in sporting activities.

Injuries can happen as a result of an accident, overuse, poor training techniques, insufficient warmup and stretching or improper equipment.

TYPES OF SPORTS INJURIES

Sports injuries can generally be classified as either **acute** or **chronic**.

Acute injuries occur suddenly during sporting activity. Acute injury symptoms include:

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| Sudden pain |
| Swelling |
| Visible dislocation or break |
| Inability to bear weight |
| Range of motion restriction |

Chronic injuries usually result from overusing a certain area of the body overtime, during sporting activities. Chronic injury symptoms include:

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| Reduced strength |
| Reduced speed |
| Muscle pain |
| Swelling |
| Dull ache when resting |

The RICE principle

The acronym RICE is a good way of remembering how to treat sports injury immediately and for the next 48 hours, by limiting swelling and beginning the healing process. RICE means Rest, Ice, Compression, Elevation.

Rest - Rest will help prevent any further injury and allow the healing process to take place.

Ice - Apply ice immediately after a sports injury, and periodically for the first 48 hours after the injury. Don't use heat during this period as it encourages swelling and inflammation.

Compression – Apply compression with an elastic bandage to help reduce swelling.

Elevation — Elevating the injured area will also reduce swelling.

If pain or injury is severe or gets worse speak with a doctor immediately.



Did you know?

There is never a good reason to "work through" the pain when engaged in sporting activities or exercise.

SPRAINS AND STRAINS

Stretches or tears to ligaments (the band of connective tissue that joins bones) are called sprains, areas most at risk of sprains include ankles, knees and wrists. Acute ankle sprains are the most common athletic injury.

Symptoms of sprain:

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| Tenderness |
| Pain |
| Bruising |
| Swelling |
| Possible discolouration of injured area |

Treating sprains and strains:

Use RICE and anti-inflammatory medications, where significant swelling or pain is experienced seek medical attention. In some cases, it may be necessary to have an X-ray to rule out a fracture.

DISLOCATION AND FRACTURE

A dislocation is when a bone is pushed out of place, often as the result of a fall or direct blow. Dislocations most commonly occur in the elbow or shoulder, and are often seen in football, rugby and skiing injuries.

Symptoms of dislocation:

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| Pain |
| Deformity |
| Swelling |
| Loss of motion |

Treating dislocation:

Immediate medical attention should be sought at the nearest emergency facility, where the joint can be manipulated back into position. The joint will be immobilised for several weeks. Surgery may be required where dislocation is severe.

Tears to muscles or tendons are called strains, these generally occur as a result of overstretching or over contraction. Groin and hamstring strains are common sports injuries.

Symptoms of strain:

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| Pain |
| Muscle spasm |
| Decrease in strength |

Treating sprains and strains:

Use RICE and anti-inflammatory medications, where significant swelling or pain is experienced seek medical attention. In some cases, it may be necessary to have an X-ray to rule out a fracture.

Shin splints

A shin splint is pain in the shin while engaging in sporting activities. Shin splints are very common among people who have just started running or who are returning to running after an absence. They are caused by doing too much, too quickly, incorrect footwear, unsuitable running surface or poor running form.

Symptoms of shin splints:

- Persistent pain when running
- Pain occurring along the shin bone
- Dull or throbbing pain

Treating shin splints:

Use RICE and anti-inflammatory medications. Decrease running distance and avoid hills, cross train with cycling or swimming to reduce running impact.



Did you know?

Swelling is a normal response to sporting injuries, however, excessive swelling can reduce range of motion and hinder the healing process.

Symptoms of fracture:

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| Pain |
| Swelling |
| Inability to use body part |

Treating fractures:

Medical attention must be sought immediately. It may be necessary to undergo X-rays, MRI or CT scans to confirm the severity of a fracture.

A cast will generally be used to immobilise the bone, helping with bone alignment and preventing use.

In some instances, surgery may be required, utilising rods or pins to align and hold the bone in place.

LIGAMENT INJURIES

A ligament is connective tissue which connects two bones or cartilages or holds together a joint. The anterior cruciate ligament (ACL), the medial collateral ligament (MCL) and the posterior cruciate ligament (PCL), are most commonly injured during sporting activities.

The ACL connects the femur to the shin bone and prevents the knee joint from rotating abnormally. Generally, ACL tears are non-contact injuries, often occurring due to sudden changes in direction or hyperextension of the knee.

The MCL connects the femur to the tibia along the inner part of the knee, stabilising the knee joint and stopping it from bending sideways. Injuries to the MCL commonly occur as a result of a strong force hitting the outside of the knee.

The PCL connects the femur to the tibia along the back of the knee, it is stronger than the ACL and less prone to injury.

Symptoms of ligament injury:

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| Pain | Knee pain |
| Difficulty walking | Swelling |
| Stiffness | |

Treating ligament injury:

Each case of ligament injury is unique and treatment will depend on the position and severity of the tear.

Seek medical attention immediately if an ACL injury is suspected. A completely torn ACL will usually require surgery.

PLANTAR FASCIITIS

Plantar fasciitis is inflammation or tearing of the plantar fascia, the tissue that stretches along the bottom of the foot connecting the heel and toes. The condition is often caused as a result of inadequate footwear, tight calf muscles and poor training technique.

Symptoms of plantar fasciitis:

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| Pain in the base of the foot | Pain increases after periods of standing or rising from sitting |
| Pain is often acute in the mornings | Pain is worse after exercise |

Treating plantar fasciitis:

Use RICE and anti-inflammatory medications, and regularly stretch the calf muscles. If the pain persists or increases, seek medical attention. In some cases, a cortisone injection may be necessary.

Tennis elbow

Tennis elbow is generally caused by overuse of the wrist extensors, resulting in pain at the elbow, affecting the dominant or non-dominant arm, or both. Tennis elbow is not caused exclusively by playing tennis, it can also result from golf, bowling or any sport where the elbow is used for repetitive tasks.

Symptoms of shin splints:

- Lateral elbow pain
- Increased pain when squeezing
- Increased pain when lifting

Treating shin splints:

Use RICE and anti-inflammatory medications. If the pain persists or increases, seek medical attention. In some cases, surgery may be required to repair damaged tendon.



Did you know?

Many sports injuries can be prevented by practising safe exercise habits.

Recovery days reduce injury rates by giving muscles and connective tissues an opportunity to repair between training sessions.



Did you know?

An adequate warm up increases blood flow to the muscles and can prevent sports injury.

INJURY PREVENTION

Warm up – A proper warm up and cool down is crucial for injury prevention. Before partaking in any sporting activity complete a similar activity with less intensity. Warm muscles are less susceptible to injuries.

Rest – Allow the body time to recover by taking regular days off from activity. Rest is a critical component of proper training, increasing strength and preventing overuse injuries and fatigue.

Clothing and equipment – Wearing the correct footwear and protective gear reduces the chances of injury significantly. Correctly fitted protective equipment can protect the knees, hands, teeth, eyes, and head.

Nutrition – Diets that include fruits, vegetables and protein-rich foods can help to prevent sports injuries, and also aid recovery if injury does occur. Levels of carbohydrate, protein and fat should be adjusted depending on intensity and frequency of activity.

Sleep – Fatigue is a major cause of sports injury. Ensuring our bodies get adequate sleep can help prevent fatigue and aid recovery from injury.

Stretching – Stretching prepares the body for the force that will be placed on it during sporting activity. After warming up, stretch the upper and lower body to work core muscle groups. Hold each stretch for 25 seconds, repeating three times.

Strengthen muscles – Improvements in muscle strength and power from resistance training programs can help reduce injury risk, decrease the severity of an injury and help prevent re-injury.

Technique – Ensuring that the correct technique is always adopted, reduces the chance of injury.

Hydration – Hydration is an essential part of any sports and exercise regime and is vital for injury prevention. In general, water will provide adequate hydration; however, sports drinks are also good for replacing lost fluids, carbohydrates, and electrolytes. Athletes should consume at least 500 mls of fluid two hours prior to exercise, and 150 to 300 mls during exercise, taken every 15 to 20 minutes.



Did you know?

Overuse injuries are often the result of doing too much too soon.



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Many sports injuries will not require the attention of a medical practitioner and can be treated adequately using the RICE principle and anti-inflammatories. However, always consult a doctor immediately if pain is severe, persistent or becomes worse.

As sports injuries can take considerable time to heal, patience is key, do not prolong an injury or risk making it worse by resuming a sport too quickly. Whether you are new to a sport or recovering from injury, gradual progression into an exercise programme is advised.

Remember overuse injuries are typically the result of doing too much too soon. Start slow and increase intensity incrementally, giving yourself the best opportunity to enjoy your chosen sport while remaining injury free.

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