



Overuse Injuries in Sport & Exercise

What is an Overuse Injury?

Overuse injuries tend to develop slowly and are the result of repetitive trauma, otherwise known as micro-trauma. They are different to acute injuries, where a single traumatic event can be recalled when the symptoms started also described as macro-trauma.

Overuse injuries start as a small, nagging ache or pain, and can grow into a debilitating injury if they aren't treated early. They are the result of repetitive use, creating stress in the tissues of the body (muscles, tendons, bones and joints). Among the most common injuries presented to Physiotherapists, they can be challenging to diagnose and treat; the earlier you seek treatment the easier they are to resolve.

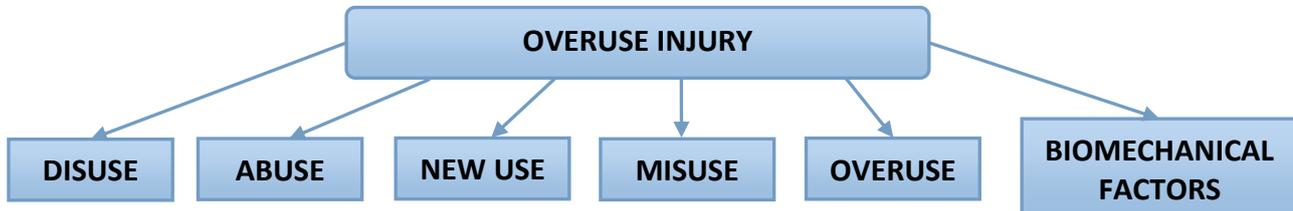
Examples overuse injuries include:

- Achilles Tendonitis
- Tennis elbow
- Shin splints
- Stress fractures

What Causes Overuse Injuries?

Overuse is caused by overload - essentially if the soft tissue or bone is overloaded and breaks down quicker than it can repair itself an injury will occur.

What are the Risk Factors for Overuse Injuries?



DISUSE - Overuse injuries can happen in people who are returning to a sport or activity after injury or a break from exercise and try to do too much, too quickly. An example of this would be somebody who has not weight trained for a while lifting the same weight they were prior to the break.

ABUSE - Training errors are the most common cause of overuse injuries. These errors involve increasing frequency, intensity or duration of your activity too rapidly. An example may be a runner who increases their frequency, distance and speed over a short period. It is important to pace yourself, and only increase one factor at a time.

NEW USE - A change of running shoes or different terrain could be enough to change stresses through the lower limb and create injury. It could be a new tennis racquet with a different grip that causes a wrist or elbow tendon overuse injury such as tennis elbow.

MISUSE - Using equipment badly with repetition can cause injury, good technique is essential. As an example - having the saddle too low or too high on a bike could create patella femoral inflammation or a poor bench-pressing technique with repetition that causes neck or elbow pain.

OVERUSE - It's good to exercise, but don't overdo it - doing too much is as detrimental as doing too little. It's the week when you do five runs as opposed to the usual that you could get that niggle in your knee or Achilles tendon.

BIOMECHANICAL FACTORS

A good balance of strength and flexibility in all joints is also essential in avoiding overuse injuries. A biomechanical assessment with a Physiotherapist will identify areas of the body that could be vulnerable. Factors taken into consideration would include: posture, symmetry, body alignment, movement patterns and technique. A previous injury that has not been fully rehabilitated could create faulty movement patterns that cause other parts of the body to compensate, resulting in an injury in a different part of the body.

How to Treat Overuse Injuries

The treatment will depend upon what is found by the Physiotherapist after taking a detailed history and thorough examination of the body.

If a muscle is tight it can be released and stretched, if weak it can be strengthened. It may be that a review of the individual's training pattern is required - be it weight training or marathon training. It could be that the cool down or post exercise stretching routine is not effective and needs to be modified.

Relative rest may be required to let an injury recover whilst maintaining fitness with an activity that does not aggravate symptoms. You may not be able to run, however alternatives such as cycling or using a cross trainer might be recommended by your Physiotherapist.

If symptoms are not responding to treatment, or if it is deemed necessary at the initial assessment, a referral to a physician or surgeon for further investigations such as MRI or X-ray may be initiated.

How to Prevent Sport & Exercise Related Overuse Injuries

- Listen to your body – if you are getting niggles or pain seek professional advice and get treatment. Long term or chronic injuries are much harder for a Physiotherapist to resolve quickly.
- Cross train - alternating your activities to achieve the same fitness goal, can help keep you injury free. For example, instead of running every day add in some cycling on the odd day.
- Supplement your exercise routine with Yoga, which aids flexibility, and Pilates, which also enhances flexibility and strengthens the deep stabilizing muscles.
- Pace yourself and do not pick up the intensity, duration or frequency of your activity too quickly - follow a balanced training programme with incremental goals that allows your body time to recover.
- Changing the pace and muscle groups worked can be invaluable in avoiding injuries. For example, in Marathon training programmes it is always recommended that you alternate running and walking in the early stages and in weight training you should vary the muscle groups you are training at each session, making sure not to work the same muscle group more than once in 24 hours.
- Make sure you allow time to stretch all the muscle groups used effectively when finishing any exercise or sporting activity. Using equipment such as a foam roller or a spiky ball may be useful in helping you to relieve muscle tension in addition to stretching.
- Regular sports or deep tissue massage can help to release muscle tension enabling you to stretch effectively.
- If in doubt seek the advice of a Physiotherapist before embarking on a training schedule - particularly if you know you have an old injury that is not fully resolved.

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