

To ice, or not to ice?

Soft tissue injuries are a common problem in sport and recreation and other physical activities. They are frequently associated with an acute inflammatory reaction which involves swelling, pain, redness and loss of function of the affected body part. It is thought that good management of the injury in the acute phase results in a faster recovery and a better long term prognosis. There is often lots of uncertainty over whether you should apply heat or ice, or rest or keep exercising. This article is designed to give some guidance on home management of acute soft tissue injuries based on a recent publication from the Association of Chartered Physiotherapists in Sports and Exercise Medicine (ACPSEM).

Protection and Rest

In the first instance, protection and rest is advocated in order to minimise tissue bleeding and prevent further injury to the affected structures. Whilst “tissue loading” is an important part of soft tissue management the timing of implementing this treatment strategy is key. Currently there is no definitive answer as to when this should be started and so a clinical evaluation ought to be made taking into account many different factors. Pain is a good guide too. Stick to the simple rule; if it hurts, don't do it!



Ice application

The basic idea of applying ice to an injury is to extract heat from the body. These benefits include; limiting the extent of the injury by reducing body metabolism, providing an analgesic effect and facilitating rehabilitation. Ice can be used to reduce pain by applying ice to the injury for between 5 and 15 minutes. Crushed ice cubes in a bag are advocated as the best form of ice application.



There is currently a gap in the research preventing us from being certain that the cooling effects of ice help to induce vasoconstriction (narrowing of blood vessels), however it is a property of ice that has long since been indicated in its use. There are some studies on animals showing this benefit occurs, however whilst still discussed as a use of ice, it is currently uncertain as to just how big an impact ice has on this.

How often should I ice? It is recommended that applying ice every 2 hours in the acute phase is beneficial. If the injury is deeper within the body then it may be pertinent to apply ice more regularly. It is important to allow sufficient time to let the body part warm up again between applications to prevent ice burns.

Compression and Elevation

Following a soft tissue injury, there are lots of cellular responses. One of the changes that occurs is the osmotic pressures between blood cells and the spaces around blood cells, called the interstitial spaces which results in more fluid moving out of the blood cells into the interstitial space causing oedema or inflammation. One of the key reasons of elevating the injured body part is to restore the pressure gradients within the cells. Applying compression to the affected area can help to reduce initial tissue bleeding. It is also proposed to reduce swelling from accumulating in one area. There is currently no consensus on level of pressure or duration of compression. It again should be reasoned based on many different factors including extent of the injury, the individual, patient tolerance and comfort.



The key things to take from this article are to remember the acronym PRICE. In the event of sustaining a soft tissue injury, you can help improve your recovery rate by applying the rules of; **P**rotection, **R**est, **I**ce, **C**ompression and **E**levation. It is always worthwhile getting an injury checked over by a medical professional to get a better idea of what the diagnosis is, as a problem becomes a lot easier to manage once you know what it is. They can also inform you of the best way to recover and give you an idea of when you can return to your sport.

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