



## Ice and Heat Therapy

***Ice therapy (cryotherapy) is the use of ice in the treatment of acute (new) and chronic (older) injuries.***

- The application of ice is an important step in the **RICER** (Rest, Ice, Compression, Elevation, Referral) protocol following acute injuries. Ice is the recommended treatment modality immediately after an injury for its ability to reduce inflammation and swelling in the affected area and for its pain relieving properties.
- Ice is effective because it causes a reaction in the body which inhibits the release of inflammatory chemicals. The lower levels of inflammatory chemicals allow muscles to relax and reduces the amount of muscle spasm which eases pain.
- Swelling is reduced because ice causes the blood vessels to constrict. The reduced blood flow prevents and helps ease swelling and bruising.
- Ice also numbs the area affected by decreasing the rate at which nerves conduct. The resulting sensory loss (numbness) is a welcome relief from the acute injury pain.
- The recommended dosage in the acute phase is to apply ice to the injured part for 10-15 minutes every hour for the first 24 hours, reducing the dosage after the first day depending on how well the injury is healing.

There are various ways to apply ice. Most commonly, reusable cold packs or crushed ice in bags ***with a damp layer of towel applied between the skin and the ice to prevent ice burn.*** Ice massage is also a popular treatment over small areas. Here water is frozen in a polystyrene cup and rubbed in a circular massage motion for 5-10 minutes directly onto the skin.



***Superficial heat therapy is commonly used in the non-acute injury phase (usually after the first 3-4 days) as a pain relieving and muscle relaxing treatment modality.***

- Superficial heat is effective in pain relief because it increases blood flow which warms the underlying muscles. The muscle warmth reduces muscle spasm, thus decreasing pain levels.
- The increased blood supply brought on with the application of heat helps in the re-circulation of inflammation and pain-causing chemicals which will also assist in pain reduction.
- The most common method for applying superficial heat is the use of heat packs. Usually microwavable heat packs or a hot water bottle could be used. Either way, a layer of towel should be applied between the skin and the heat pack to prevent burns.

***If you have circulatory problems or hot and cold hypersensitivity seek professional advice before using ice or heat applications. An advantage of ice and heat application is that both of these are inexpensive and effective treatments that you can use at home for greater pain relief and improved rate of healing.***

**Please note: this information should serve as a guide only. When in doubt always seek advice from Southside Physiotherapy & Sports Injury Centre or your GP.**