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Ice and Heat Treatment for Injuries

Ice

With any sprain, strain or bruise there is some bleeding into the underlying tissues. This may cause swelling, pain and delay healing. Ice treatment may be used in both the immediate treatment of soft tissue injuries and in later rehabilitation. During immediate treatment, the aim is to limit the body's response to injury. Ice will:

- Reduce bleeding into the tissues.
- Prevent or reduce swelling.
- Reduce muscle spasm and pain.
- Reduce pain by numbing the area and by limiting the effects of swelling which causes pain.

These effects all help to prevent the area from becoming stiff by reducing excess tissue fluid that gathers as a result of injury and inflammation.

In the later, or rehabilitation, phase of recovery the aims change to restoring normal function. At this stage the effects of ice can enhance other treatments such as exercise by reducing pain and muscle spasm. This then allows better movement. If you have to do exercises as part of your treatment it can be useful to do them with ice in place or immediately after it is removed when the area will still be a little numb. This reduces pain and makes movement around the injury more comfortable.

How do you make ice packs?

Ice packs can be made from ice cubes in a plastic bag or wet tea towel. A packet of frozen peas is also ideal. These mould nicely and can go in and out of the freezer. Purpose made cold packs can also be bought from pharmacies. Take care when using ice and cold packs from a deep freeze. These are very cold and can cause ice burns quickly if used without care and proper protection.

How are ice packs used?

- Ideally, rub a small amount of oil over the area where the ice pack is to go (any oil can be used, even cooking oil!). If the skin is broken or there are stitches in place, do not cover in oil but protect the area with a plastic bag. This will stop the wound getting wet.

- Place a cold wet flannel over the oil (do not need if using plastic bag).
- Place the ice pack over the flannel.
- Check the colour of the skin after 5 minutes. If it is bright pink/red remove the pack. If it is not pink replace the bag for a further 5-10 minutes.
- Ice can be left on for 20 to 30 minutes but there is little benefit to be gained by leaving it on for longer. You run the risk of damaging the skin if ice is left on the skin for a long time.
- The effect of the ice pack is thought to be improved if it is pressed gently onto the injured area.

Ice can burn or cause frostbite if the skin is not protected with oil and/or other protection such as a wet flannel.

How long should ice be applied?

Ideally, ice should be applied within 5-10 minutes of injury for 20-30 minutes every 2-3 hours.

After the first 48 hours when bleeding should have stopped the aim of treatment changes from restricting bleeding and swelling to getting the tissues re-mobilised with exercise and stretching. Ice helps with pain relief and relaxation of muscle tissue.

Heat

Do not use heat on a new injury (for example soaking in a hot bath, using heat lamps, hot water bottles, deep heat creams, etc). These will increase bleeding and make the problem worse.

When an injury is older than 48 hours, heat can be applied in the form of heat pads, deep heat cream, hot water bottles or heat lamps. Heat causes the blood vessels to dilate (open wide) which brings more blood into the area. It also has a direct soothing effect and helps to relieve pain and spasm. If heat is applied to the skin it should not be hot, gentle warmth will suffice. If heat is applied there is the risk of burns and scalds. The skin must be checked at regular intervals.

Ice often gives better and longer lasting effect on the circulation than heat. The pain killing properties of ice are also deeper and longer lasting than heat.

Precautions when using heat and ice

Do not use cold packs or heat:-

- over areas of skin that are in poor condition.
- over areas of skin with poor sensation to heat or cold.
- over areas of the body with known poor circulation.
- if you have diabetes.
- in the presence of infection.

Also, do not use ice packs on the left shoulder if you have a heart condition. Do not use ice packs around the front or side of the neck.