

# **Cold and Heat Treatment**

Treating an injury properly will lessen your discomfort and help with the healing process. This booklet will explain why cold and heat are recommended, how they work, and how to properly use them.

## **How Ice Works**

When you hit muscles, there is damage to the blood vessels in the muscles and the cells that make up the muscle. When blood vessels are injured, they become leaky. The blood seeps out into the surrounding muscle, causing swelling, discoloration, and pain. The injured cells also leak fluid.

Ice causes the blood vessels to narrow down. When this happens, the blood vessels become less leaky and there is less swelling, discoloration, and pain.

Applying cold to an injured area can also produce numbness, lessening the discomfort.

## **What about Heat?**

The blood vessels begin to heal and the leakiness lessens during the first 24-48 hours after the injury.

Applying heat to the injured area causes the blood vessels to open up, bringing more blood to the injured tissues. This helps with the healing and removing the fluids that leaked out of the injured blood vessels.

Heat also helps to relax injured muscles. That's why a hot shower feels so good.

## **When to Use Which**

It's generally recommended to use ice for the first 24-48 hours after an injury or as long as there is inflammation and swelling. Then you should switch to heat.

HOWEVER, this is what works best for most people. Some people find ice makes things feel worse. Others find that switching to heat makes things feel worse.

There are no absolute rules. Use whatever seems to work best for you.

## **How Often to Use Cold or Heat**

Apply the ice or heat for 15-20 minutes every two to three hours while awake. There is no need to wake your self up to do this. Allow at least one hour between using either cold or heat.

## **A Few Tips**

- A bag of frozen corn or peas makes a great ice pack. It's moldable to fit your injured area, and it's re-freezable.
- You can make a "slush pack" by mixing 1 part rubbing alcohol with 2 parts water in a zip-lock bag. Adjust the water or alcohol to get a thick slush. (If too watery, add water; if too solid, add more alcohol.) The bags should be stored in the freezer.
- Moist heat works better than dry heat. A hot water bottle isn't moist heat, however wrapping a moist towel around a hot water bottle works well. To be "moist heat" you must feel dampness against your skin.
- You can make a reusable hot pack by putting uncooked rice in a cloth bag or a sock and tie closed the end. Heat it in a microwave.
- A quick way to heat a wet towel is to put it in a microwave oven. Be careful – the towel may be very hot!

## **A Few Words of Warning**

- Never put ice directly on bare skin and leave it there. Wrap the ice in a thin towel or piece of cloth.
- Never wrap a wet towel around a heating pad unless the heating pad is specifically designed to be wet.
- Don't use heat for more than 20-30 minutes at a stretch. Using it longer than that doesn't help and may cause muscle to tighten up.
- Don't use cold or heat if your skin is broken (scrapes, cuts, etc.), blistered, or if there's a rash without the ok from your doctor or physical therapist.

## **Additional Questions**

Your doctor or physical therapist can answer any of your questions about your treatment. Don't hesitate to call.