

## It's Your Health

### The Age-old Injury Question: Ice or Heat?

Many patients come into our Clinic with a variety of injuries, aches and pains, and ask if what they can do at home to decrease their discomfort. The application of heat, ice or both is a usual response. Many people avoid using heat or ice at home because they are unsure of which one is the best for their particular situation. Even some health professionals may be confused as to whether and when cold or heat should be used. Making the right choice, however, is extremely important, as both heat and cold can be beneficial when used properly.

Cryotherapy or cold therapy should almost always be the first "line of defense" immediately following an injury. The application of cold can reduce many of the adverse conditions related to the inflammatory phase of an acute injury. Cold application can include ice packs, cold water, ice massage, or coolant sprays. Most people will use ice packs as they are easy to store and convenient to use.

Cold application should be used exclusively in the first 72 hours after an injury. This is because cold will constrict or narrow the blood vessels in the injured area, thereby limiting the amount of swelling in the area. The immediate use of ice following injury will also decrease the extent of hypoxic injury to the cells around the injured area. The net result is less damage to the tissues, thus decreasing rehabilitation time.

Cooling tissues can also directly decrease muscle spasm and act as an analgesic by slowing metabolism in the area and decreasing the sensitivity of local nerves. Cold should always be applied for 15-20 minutes every hour following injury. Leaving the ice on for a longer time can actually increase local inflammation (not to mention give you frostbite), which may increase pain. Also, remember that cold does not reduce swelling that is already present.

Thermotherapy or heat therapy should not be used immediately after an injury or when there are signs of acute inflammation present. Heat therapy can include heat packs, whirlpool baths, and other modalities. Heat can be used safely following the acute phase of an injury (usually 3-4 days post-injury).

The benefits of heat include decreasing muscle spasm and joint stiffness, as well as increasing blood flow to the injured area, which can help flush out swelling or inflammation. Heat, like ice, should be applied for no more than 15-20 minutes at a time. Heat should also never be applied on an area where there is loss of sensation or decreased arterial circulation (as you won't be able to feel if you are burning yourself).

The bottom line is that ice should be used for the first 72 hours following injury. After this acute phase, it should be beneficial to use ice, heat or both modalities on an alternate basis. It is my experience that following the acute phase, ice tends to be better for

decreasing pain while heat is more beneficial when stiffness or tightness is the primary complaint. Following these rules should help make taking care of your injury as "painless" as possible.

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