

To Heat or To Ice: That is the Question

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Oftentimes many of us have an injury, ache, or pain which would benefit from having ice or heat applied to it. However, a decision must be made on which one, heat or ice, would be most appropriate for each given ailment we may have. Potentially either heat or ice could be used for an injury, or using one versus the other could be detrimental and lead to slower healing. So how do you determine which one is best to use? First let's look at what each one does.

When an area is cooled by ice, the temperature in that area decreases, which in turn slows the production of waste products (metabolites) and prevents further injury from occurring. Ice also has a painkilling effect on an injury. The cold slows down the nerve signals to the brain and decreases the amount of pain you feel. Cold also causes the blood vessels in the area to become smaller and limits the blood flow to the injured area, which can help limit the swelling after an injury. Cold can also prevent muscle spasms by limiting the amount of guarding (protecting) of an injury.

Heating an area also can have an effect on pain. By heating your skin, the area that is deeper and injured will have a lower temperature than the skin, which causes a decrease in the pain you feel. Heat is considered to produce relaxation in muscles and will decrease the tension your muscles may have after an injury. In addition, this relaxation can increase the flexibility of the muscles and make them easier to move. If you are having muscle spasms, heat can also help to reduce those and the pain often associated with them. Heat does the opposite of cold, in that it increases the size of blood vessels, which increases the blood flow to the injured area. This results in a greater amount of oxygen getting to the injured area, as well as important nutrients, and increases the clearing out of waste products from the area and therefore facilitates healing.

When an injury occurs, it is almost always best to use ice for at least the first 3 days, especially when swelling is present. Using heat during this initial stage could actually make swelling worse. As inflammation begins to resolve, you can switch over to heat to help healing and relax the muscles in the affected area. Heat may also feel more comfortable. If you are participating in an activity which you know will exacerbate your pain, try using ice afterwards to counteract the swelling which may occur.

If you do not have access to either an ice pack or heating pad, easy substitutes at home include using a bag of frozen vegetables or putting a damp towel in the microwave to heat it. When using ice, apply for 10-20 minutes (just until the area feels numb) several times throughout the day. Heat can be used for 15-20 minutes several times throughout the day as well. If using a heating pad, be sure not to fall asleep with it on, as it can lead to a skin burn. If you have experienced a severe injury or have symptoms which are not resolving, visit your physician or seek medical attention.