

HEAT OR ICE?

Patients are sometimes confused about when to use heat vs. cold therapy. Basically, cold is anti-inflammatory by decreasing blood flow to an area. While increased blood flow is important for healing in general, during the inflammatory stage heat increases inflammation (swelling), which may result in increased pain hours later.

It's important to understand the inflammatory response to better understand why sometimes heat, and other times cold, is recommended. During the first 24 hours after an injury, the body responds by increasing inflammation in an area. Unfortunately, this can be associated with increased pain. The inflammation and pain level off the 2nd and 3rd day before improving over the following days to several weeks. A reinjury can "stack" additional inflammation and pain on top of the prior insult. Returning to full activity before regaining normal range of motion, flexibility, and strength increases the chance of reinjury and may lead to a chronic problem.

The amount of time needed for full recovery depends on the severity of the injury and individual rates of healing. A mild ankle sprain may require 3 to 6 weeks vs. several months with a more severe injury to return to full activities. Extra care should be taken to avoid reinjury during rehabilitation. A person who has any concerns about the seriousness of an injury should contact a physician to evaluate for more serious injuries. Depending on the diagnosis, surgery may be the first treatment of choice.

COLD: When to use

I recommend anti-inflammatory treatment [Rest, Ice, Compression, and Elevation (RICE)] to reduce swelling and pain. This is most important the **first 24 hours** and of decreasing importance the **next 2 days**. Nonsteroidal anti-inflammatory drugs (NSAIDs) like Ibuprofen (Motrin, Advil) and many other prescription and nonprescription products help relieve both pain and inflammation

If heat is used during this initial inflammation period, it may increase swelling, which may result in increased pain hours later.

COLD: How to use

Apply cold up to 20 minutes on, 10 minutes off. Try to apply cold at least 4 times the first day. Use a cloth between the ice and skin to decrease the risk of skin damage including frostbite.

HEAT: When to use

After the first 3 days, when pain and swelling start to decrease, treatment goals change from limiting inflammation and pain to improving blood flow to aid in healing and restoring function. This can generally be accomplished with heat, topical irritants (ex Icy Hot, Ben Gay), advancing activity as tolerated by pain, gentle stretch, gentle massage, and whirlpool.

In infection, the goal is to increase blood flow to deliver more white blood cells to the affected area and increase the immune response. Heat and antibiotics help treat infections.

HEAT: How to use

Moist heat can be applied with a warm wet washcloth and a hot water baggy (or bottle) to maintain the warmth. Do not burn the skin by using water that is too hot. Whirlpool, soaks, or topical irritants also can help increase blood flow.

For additional information on this and other health issues, visit: MedlinePlus.gov