

When to use Heat vs Ice

Heat (thermotherapy) and ice (cryotherapy) are both very useful tools in healing and pain management. It is important to know when to use which therapy. When heat is applied to a new (acute) inflammatory injury, the vasodilation it causes can overwhelm injured blood and lymphatic vessels increasing inflammation and blood vessel damage. Here are some tips on when and how to use heat and ice.

When to use ice:

- Immediately post injury and up to 72 hrs post injury – during the acute inflammatory phase
- After surgery to help reduce pain and swelling
- To help resolve acute or chronic muscle spasm
- To help ease acute or chronic pain

When NOT to use ice:

- On an open wound
- If you have decreased cold sensitivity or hypersensitivity or cold allergy
- If you have any circulatory or sensory impairment
- If you have Raynauds or cold urticaria

How to use ice:

- Wrap a damp towel or cloth around the ice to protect skin while increasing the conduction of cold
- Use ice packs, or bags with ice cubes because they contour the body well
- Keep ice on for 20-30 minutes and allow 90 minutes in between sessions for tissue re-warming
- Watch out for skin blanching, numbness, burning or tingling

How does icing help?

Cold application decreases tissue metabolism and causes vasoconstriction, slowing blood flow. This helps inhibit the inflammatory response and helps to break the pain spasm cycle.

When to use heat:

- To help heal chronic injuries
- To reduce spasm and muscle guarding
- To increase blood flow and range of motion
- To resolve hematoma
- To facilitate healing
- To relieve joint contractures and fight infection

When NOT to use heat:

- During the acute inflammatory stage of an injury
- If you have impaired or poor circulation and sensation
- To relieve chronic pain
- If you have impaired thermoregulation

How to Use Heat:

- Do not apply heat directly to the skin – for hot packs use moist towels to protect your skin
- You should never feel more than mild to moderate heat
- Apply heat for 15- 30 minutes depending on type of heat
- Discuss with your therapist what kind of heat therapy would best suit your needs, and the duration of the application
- Check the area after 5 minutes of heat to ensure skin is in good condition

How does heat help?

Heat application causes vasodilation and therefore increases circulation which causes an influx of oxygen and nutrients to promote healing in the injured tissues. Heat application can increase extensibility of tissue and is therefore very useful before stretching.

References:

Anderson, Macia K., Susan J. Hall, Melissa Martin. Foundations of Athletic Training Prevention, Assessment, and Management. Third Edition. Pennsylvania: Lipincott Williams & Wilkins, 2005