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Fire and/or Ice!

When it comes to recovering, healing, or simply feeling better, applying heat and/or cold to your body may be an essential intervention. But, do you know when it is best to apply heat, versus cold?

Before we unpack the general advice around ice or heat, this is an important reminder that the most appropriate advice for your specific situation will come from your health team, who have the best understanding of your condition. This article includes general information that may help you as you seek direct and personalized guidance from a trained healthcare professional.

In researching this topic, advice can sometimes conflict. I have included below the most consistent and clear direction provided by various sources.

Ice

Confirm with your physician whether cold therapy is safe if you have any chronic health conditions such as diabetes.

When you apply ice to a body part, the cold makes the blood vessels constrict, which brings less blood to that area. This reduces inflammation by reducing circulation, thereby shrinking swelling and pain in the acute period post-injury. Ice can also help reduce bleeding.

Ice is best used immediately following an injury, particularly within the first 48 hours. Heat, if used at this point, may worsen the injury.

Ice and cold packs come in many forms:

- **Commercial gel pack**
- **An ice towel:** Wet a towel with cold water and squeeze until it is just damp. Fold the towel, place it in a plastic bag, and freeze it for 15 minutes. Remove the towel from the bag and place it on the affected area.
- **An ice pack:** Put about 0.5 kg (1 lb) of ice in a plastic bag. Add water to barely cover the ice. Squeeze the air out of the bag and seal it. Wrap the bag in a wet towel and apply it to the affected area.
- **A bag of frozen vegetables:** Apply to the affected area.
- **An ice cup:** Fill a paper cup two-thirds full of water, and freeze it until it is solid ice. Before use, peel back enough paper to expose some of the ice. Rub the ice over the affected area for three to five minutes.

The suggestion is to ice the area at least three times a day. For the first day, ice for 10 minutes every hour, then every two to three hours for the next two days. After that, the suggested pattern is to ice for 10 to 15 minutes three times a day: in the morning, in the late afternoon, and about a half hour before bedtime. Also, consider icing after any prolonged activity or vigorous exercise, especially if you have a chronic condition such as an overuse injury. However, *do not* ice a chronic injury before activity.

Ensure safety by always keeping a cloth between your skin and the cold pack, and pressing firmly against all the curves of the affected area. Do not apply ice for longer than 15 to 20 minutes at a time and do not fall asleep with the ice on your skin.

Cold therapy should not be used on stiff muscles or joints or if you have poor circulation.

Fire

If you have any of the following pre-existing conditions, check with your physician before applying heat therapy:

- *diabetes*
- *dermatitis*
- *vascular diseases*
- *deep vein thrombosis*
- *multiple sclerosis (MS)*

If you have either heart disease or hypertension, ask your doctor before using heat therapy. If you are pregnant, check with your doctor before using saunas or hot tubs.

Heat has the reverse impact of ice.

When you use heat, the warmth brings more blood flow to the area. Heat assists with circulation and can even make it easier for the body to process incoming nutrients to promote healing. Because heat promotes blood flow, it can reduce stiffness and muscle spasms which are often caused by injury or overuse. The increased blood flow relaxes tight muscles and relieves aching joints. This is especially helpful to improve the range of motion on a joint that may not be moving well.

Use heat to help sore muscles after exercise. When muscles work, the chemical byproducts that are made need to be removed. When exercise is very intense, there may not be enough blood flow to remove all the chemicals. It is the buildup of chemicals (for instance, lactic acid) that causes muscle ache. The blood supply helps remove these chemicals.

Heat treatments should be used for chronic conditions to help relax and loosen tissues and stimulate blood flow to the area. Heat can be applied to help you to limber up before participating in activities.

Heat is also recommended when you are dealing with lingering injuries that are older than six weeks.

There are two forms of heat:

- **Dry heat** such as heating pads, dry heating packs, and even saunas.
- **Moist heat** which includes steamed towels, moist heating packs, or hot baths.

Use heat safely:

- Do not apply heat right after an injury.
- Protect your skin from any type of heating pad device by using a towel or some form of barrier to prevent burns. If you are using an electric heating pad, avoid falling asleep while the pad is on. If you think you might fall asleep, set an alarm clock to go off in 20 minutes. Use heating pads set on low or medium, never on high.
- Apply heat for 15 to 20 minutes at a time. Moist heat may be slightly more effective and require less application time for the same results.

Heat therapy should not be used if the area is bruised and/or swollen – cold therapy is a better option. Heat therapy should not be applied to an area with an open wound.

Different conditions

Back Pain: Some back pain, as in the case of a herniated disk or sciatica, is caused by a variety of factors, including both muscles and the spine itself. Apply cold packs when the initial pain appears, for 20 minutes several times a day for two to four days. Then apply heat at a low setting for 15 to 20 minutes. A few hours later, use ice for 10 to 15 minutes.

Both cold therapy and heat therapy may help to relax the muscles of the back, and ice and heat applications can relieve muscle spasms and provide significant pain relief.

Personally, I struggled with significant sciatic pain from a herniated disk for two years. Heat flared my condition significantly, and ice proved to be a better option as it can temporarily reduce nerve activity, helping to reduce pain. As you can see, it may take a bit of trial and error to see what works best for you.

Muscle strain or sprain

Muscle strains and sprains usually benefit from a combination of both ice and heat. Whether you have pulled a muscle in your calf, strained your back while skiing, or sprained your ankle playing basketball, it is best to start off with ice to ease inflammation of the injury (including swelling, redness, or tenderness) and numb the pain. Once the inflammation resolves, you can switch to heat and this can help relieve any muscle stiffness at the injury site.

Arthritis

The inflammation of joints caused by worn-away cartilage can cause pain, and ice may be a solution. However, stiffness in the joints – such as elbows, knees, shoulders, and fingers – may benefit from moist heat like a soak in a tub or shower in water that is warm, but not hot.

Gout flare-ups

For this arthritis experience, ice may be best due to the sudden onset of pain and inflammation that strikes individual joints. Ice can calm the flare-ups while also helping to numb the pain.

Headaches

Ice can help soothe throbbing pain in your head when you apply a cold mask or wrap over the forehead, eyes, and temples.

For migraines, the cold can constrict blood vessels and help reduce the neurotransmission of pain to the brain. Instead of registering pain, your brain registers the cold sensation. As well, a cold pack on the neck has been shown to cool the blood flowing through the carotid artery which helps reduce the inflammation in the brain and the migraine pain that results.

While ice is usually preferred for headaches, moist heat or a heat wrap can relax neck spasms or tightness, if that is the main source of your headaches.

Tendonitis

This painful inflammation affects the tendons, the connective tissues between your muscles and bones. A common cause of tendonitis is repetitive activities, so tendons in your elbow, knee, shoulder, hip, and Achilles in the back of your lower leg are common sites. Ice is the preferred method here, as it can ease the inflammation and help numb the pain.

Tooth Pain

To reduce pain and facial swelling, put an ice or cold pack on the outside of your cheek for 10 to 20 minutes at a time. Put a thin cloth between the ice and your skin. Never use heat to reduce pain and facial swelling.

Stress and Tension

Heat exposure can lead to a relaxation response, helping release tension. Alternatively, cold exposure can activate the body's natural stress response and help the body better cope with stressors. Splashing cold water on your face or putting your hands in cold water can calm your nervous system!

What will work for you?

Hopefully, this week's ReFresh has brought some clarity regarding when to use heat or cold. We have shared some basic rules, and here is one to remember:

Use heat before stretching or doing a home exercise program. You can still use an ice or cold treatment after exercise or activities to prevent any flare of inflammation. Just remember "warm up, cool down".

As you can see, there is an element of trial and error in fire and ice, but both heat or cold are non-intrusive, non-pharmaceutical ways of helping manage our pain, stiffness, and recovery.

Sources

<https://www.healthcentral.com/pain-management/when-use-heat-versus-ice-pain>

<https://medicine.tufts.edu/news-events/news/are-you-using-heat-and-ice-properly>

<https://phoenixspinesurgeon.com/ice-or-heat-for-back-pain-which-is-better/>

<https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/ice-packs-vs-warm-compresses-for-pain>

https://www.prevention.com/health/a63186903/ice-or-heat-for-back-pain/?utm_source=google&utm_medium=cpc&utm_campaign=mgu_ga_pre_md_pmx_hybd_mix_ca_20981607599&gad_source=1&gclid=EAlaIQobChMly8nKwo77igMVT87CBB3QeB2PEAMYASAAEgK2x_D_BwE

<https://health.clevelandclinic.org/should-you-use-ice-or-heat-for-pain-infographic>

<https://www.healthline.com/health/chronic-pain/treating-pain-with-heat-and-cold#heat-therapy>

<https://www.scoi.com/patient-resources/education/articles/should-you-ice-or-heat-injury>

<https://www.mayoclinic.org/diseases-conditions/migraine-headache/in-depth/migraines/art-20047242#:~:text=Apply%20hot%20or%20cold%20compresses,may%20have%20a%20similar%20effect.>

<https://www.healthline.com/health/ice-packs-for-headache#What-s-the-best-way-to-use-an-ice-pack-to-treat-a-headache-or-a-migraine>

<https://www.medicalnewstoday.com/articles/ice-pack-and-migraines>

<https://myhealth.alberta.ca/Health/aftercareinformation/pages/conditions.aspx?hwid=uh3737>

A handwritten signature in black ink, appearing to read 'R. Morandini', with a stylized flourish at the end.

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If you would like to contribute or have ideas about what you would like to see in the ReFresh series, we would love to hear from you: contact rochelle@bcpvpa.bc.ca.