

Hot and Cold Therapies



- Avoid heat treatment on eyes, abdomen and genitalia.

COLD THERAPY

WHAT DOES IT DO?

Cold therapy slows down the blood flow to an injury, which cuts down the swelling and pain.

WHAT ARE THE TYPES?

Cold therapy can be an ice pack, gel pack or cold water from the facet.

WHEN DO YOU USE IT?

Any cold treatment should be used right after injury. Cold therapy is good for bumps, sprains and strains that may occur with sports or lifting. Also, cold therapy is good for nosebleeds. Ice can be wrapped in a washcloth and placed over the nose while the head is kept upright. Lastly, cold is beneficial for minor burns by applying cold water from the facet immediately following the injury.

HOT THERAPY

WHAT DOES IT DO?

Hot therapy opens blood vessels, which increases blood flow, cuts down pain and relaxes muscles.

WHAT ARE THE TYPES?

Heat can be applied by an electric heating pad, hot water bottle, gel packs heated in water or microwaves, or hot water baths. If an electric heating pad is used, be sure it is OK to use with moisture before using a moist towel. The manufacturer's instructions will let you know if a moist towel can be used or not. Talk with your primary care provider to see what heat therapy is good for you.

WHEN DO YOU USE IT?

Hot therapy is good for stiffness and ongoing pain.

SAFETY TIPS

- Treatment should not last more than 30 minutes.

- During treatment, check skin every 5 minutes to make sure it is not too hot.
- Do not lie on a hot pack to avoid falling asleep and potentially burning yourself.
- Do not use heat if you have no feeling in the affected body part.
- Do not use an electric heating pad in bed because you may fall asleep and get a burn.
- Do not use heat if there is swelling.
- Do not apply heat directly to the skin.
- Do not use heat if you have poor circulation, such as if you have diabetes.
- Do not use heat if you are a hemophiliac.
- Do not use heat on open wounds or over stitches.

SAFETY TIPS

- Treatment should not last more than 20 minutes.
- During treatment, check skin every 5 minutes to make sure there is no damage, such as a freeze burn (skin would become reddened or blistered, just as when burned with heat).
- Do not place ice directly on the skin.
- Wait 1 hour between cold treatments.

NOTES:



HOT OR COLD FOR SPRAINS AND INJURIES

I've injured myself. Should I use hot or cold? This is one of the questions physiotherapists get asked most frequently.

If used correctly following an injury or when beginning a rehabilitation or exercise program, hot and cold can help to reduce pain, assist with tissue healing, control swelling, and increase flexibility. If used incorrectly, however, they can also worsen an injury or slow recovery times. Use caution when engaging in activities shortly after applying heat or cold since both may affect muscle and nerve performance as well as your ability to perceive pain or determine your normal limits.

HOW DOES COLD THERAPY WORK AND WHEN SHOULD I USE IT?

Common cooling agents include commercial cold packs, ice bath, ice cubes, crushed ice compresses, and cold cloths.

When a cooling agent is applied to the skin, blood vessels narrow and blood flow decreases, resulting in reduced swelling and inflammation. Skin temperature is also decreased, inducing an analgesic or numbing effect that plays an important role in pain management.

Cold is typically applied within the first 24-48 hours of the acute stage of an injury, to prevent tissue damage, or after the first 48 hours if inflammation persists. It may also be used after an exercise program to prevent or reduce pain and swelling or to ease muscle spasms. Follow the "**PRICE**" protocol to manage an injury in the early stages when swelling and pain are at their peak: **P**rotection, **R**est, **I**ce, **C**ompression, and **E**levation. After the initial application, cold therapy may be used periodically throughout the day for approximately 10 to 15 minutes at a time.

It is important to use a damp towel between ice and the skin to increase effectiveness and decrease the risk of nerve or skin damage which could lead to frostbite. Visually check the area of the body being treated with ice packs or other cooling agents every 5 minutes – while there may be discomfort and redness initially, treatment should be discontinued if these symptoms persist.

Cold therapy is a good treatment option for many, however, it is generally not indicated as a treatment for people with:

- Impaired circulation or ischemia
- Absence of skin sensitivity (anaesthesia)
- Vasospasm (Raynaud's disease)
- Open or infected wound
- Hypersensitivity to cold
- Acute dermatitis or eczema
- Inability to communicate

HOW DOES HEAT THERAPY WORK AND WHEN SHOULD I USE IT?

Hot packs can be **dry** such as electric pads, hot water bottles and gel packs, or **moist** such as damp clay packs used in physiotherapy clinics and hospitals.

Hot packs dilate blood vessels and increase blood flow, delivering needed nutrients and oxygen to cells in the area being heated, aiding the removal of cell waste and promoting healing.

Therapeutic heat is often used in the chronic phase of an injury. It may also be used prior to physiotherapy or exercise to decrease muscle tension and increase flexibility and range of motion. It also plays a role in pain management and reduction of muscle spasms, muscle tension and joint stiffness. Heat therapy should be avoided in the acute phase of an injury when swelling is present and the skin is hot to touch.

Moist heat is preferred over dry heat since it penetrates deeper to reach muscles, ligaments and joints. To create the effects of moist heat at home when using a non-electrical heat source, first wrap a damp towel around the hot pack then cover it with dry towelling before applying it to the treatment area. No matter the type of heating agent used, several layers of towelling should be used as a barrier between the skin and the hot pack to help prevent skin irritation or burns.

Hot packs should be applied for 15 to 20 minutes. Visually check the skin every 5 minutes and discontinue treatment if there are abnormal changes in skin colour or you experience increased discomfort. Do not lie on a hot pack or apply heat when going to sleep since it increases the likelihood of burns resulting from close or prolonged contact with the heat source.

Heat therapy is a good treatment option for many, however, it is generally not indicated for people with:

- Decreased sensation to heat
- Impaired circulation
- Areas of recent bleeding or severe bruising
- Open wounds
- Areas that are infected or ischemic
- Cancer if treating the region over the tumour site
- Tuberculosis if applying treatment over a lesion
- Swelling or acute inflammation
- Inability to communicate