

# Our guide to... Ice and Heat Therapy

Both cooling and warming can have a beneficial impact on injured or diseased body tissues. The specifics of cellular activities in each individual case is critical in deciding which therapy is most suitable.



## Ice (Cryotherapy):

Effective to reduce pain and limit progressive swelling, usually in acute stages after injury - up to 48 hours.

Constricts local blood vessels (vasoconstriction) to reduce fluid accumulating in injured tissues, reducing swelling and any secondary tissue injury. If cryotherapy is continued for around 20 minutes then vasoconstriction begins to alternate with dilation, which can be beneficial in stimulating clearance of swelling.

Cooling tissues to 10-15 °C also has a pain reducing effect, likely related to reduced nerve conduction velocity .



## Heat:

By heating tissues we create the opposite effect. Warmth stimulates dilation of blood vessels (vasodilation), this helps to bring fresh blood flow to the tissues, aids in clearance of tissue fluid and stimulates chronically injured tissues.

Heat can also be beneficial to reduce stiffness after a period of rest as warmth improves tissue elasticity, access to oxygenated blood supply and improves synovial fluidity in joints.



### **Ice is best....**

Acute soft tissue injuries (less than 48hours)  
post operative swelling  
conditions which are predominantly inflammatory

### **Heat is best....**

Chronic or Degenerate conditions  
Chronic sprains  
Osteoarthritis  
Muscular soreness

*Alternating heat and ice may be more appropriate from 48hrs after initial acute injury*

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- ✓ Ice is indicated immediately and up to 48 hours after acute soft tissue injury
  - ✓ Finely crushed ice surrounded by a wet towel is the most effective means of tissue cooling and is easy to mould to most body parts
  - ✓ During ice application, skin must be checked every 5 minutes for blanching (skin should remain pink) and if seen should be stopped
  - ✓ Ice is applied for 15-25 minutes and can be reapplied up to every 2 hours
  - ✓ After 48 hours post injury, alternating ice and heat every 2 minutes for a total of 15-25 minutes can be a more appropriate way of stimulating cellular activity later in the healing process
  - ✓ Heat can be applied using a warmed wheat pack or hot water bottle, wrapped in a thick towel or blanket
  - ✓ Heat can be applied for 30-40 minutes with regular checking of skin temperature every 5 minutes to avoid burning
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- X Ice and heat are not appropriate in animals that are unable to regulate their own temperature, have sensory deficits, where infection is present or if there is skin injury or cancerous tissue
  - X Heat should not be applied over areas of acute injury
  - X Ice should be avoided in animals which are cold sensitive and react with skin welts, those with vascular compromise
  - X Direct ice application should be avoided around very bony regions where nerves sit very close to the skin; such as the elbow and hock, over open wounds
  - X Ice and heat are supportive treatment approaches and cannot take the place of a full assessment and treatment plan



At Davies Therapy and Fitness Centre, our therapy team will assess your dog, provide helpful home management advice and utilise a variety of treatment techniques to alleviate the pain and discomfort they are suffering. To find out more visit

[www.vetspecialiststherapy.co.uk](http://www.vetspecialiststherapy.co.uk).

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