MEDICAL POLICY

HOT/COLD THERAPY

Established: 5/12/11
Reviewed: 6/10/13
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POLICY

- **This policy addresses the use of hot/cold therapy as applied with simple packs or compresses. It does not address the use of continuous flow heat/cold pumps.**
- Cold and heat are believed to have therapeutic benefits to modify the disease processes (e.g., cold to reduce acute inflammation and swelling, and heat to speed healing through increased blood supply).
- Typical use involves application of cold for the first few days after onset of symptoms and thereafter application of heat.

CRITERIA FOR USE:

It is medically reasonable to use hot/cold therapy for any musculoskeletal disorder, in which there may be inflammation.
(Such disorders include but are not limited to strains, sprains, tendinitis, tenosynovitis, contusions, fractures, epicondylitis, carpal tunnel syndrome, and osteoarthritis)

SUPPORTING DOCUMENTATION

Ankle

ODG:

Heat therapy (ice/heat)
Under study. Ice works better than heat to speed recovery of acute ankle sprains. (Thompson, 2003)
Range-of-motion improvement may be greater after heat and stretching than after stretching alone. (Peres, 2002)

Cold packs
Recommended. Regular local application of cold packs is appropriate following acute injury for 24 to 48 hours and with continued swelling. RICE (rest, ice, compression, elevation) is appropriate for first 24 hours for sprain/fracture. (Colorado, 2001) Ice works better than heat to speed recovery. (Thompson, 2003) There is evidence that ice plus exercise is most effective after ankle sprain and postsurgery. (Bleakley, 2004)

ACOEM: Patients may use applications of heat or cold at home before or after exercises; these are as effective as those performed by a therapist. Applying cold regularly for 36 to 48 hours following acute injury and swelling is beneficial.

Carpal Tunnel Syndrome

ODG:

Cold packs
Recommended. Recommend at-home local applications of cold packs first few days of acute complaints; thereafter, applications of heat therapy. (Hochberg, 2001) (Michlovitz, 2002) (Michlovitz, 2004)

Heat therapy
Recommended. Recommend at-home local applications of cold packs first few days of acute complaints; thereafter, applications of heat therapy. (Hochberg, 2001) (Michlovitz, 2002) (Michlovitz, 2004)

Elbow

OGD:

Heat packs
Recommended. Recommend at-home applications of cold packs during first few days; thereafter applications of either heat or cold packs to suit patient. (AHRQ, 2002)

Cold packs
Recommended. Recommend at-home applications of cold packs during first few days; thereafter applications of either heat or cold packs to suit patient. (AHRQ, 2002)

Forearm,Wrist, Hand

ODG:

Heat therapy
Recommended. Recommend at-home local applications of cold packs first few days of acute complaints; thereafter, applications of heat therapy. (Hochberg, 2001) (Michlovitz, 2002) (Michlovitz, 2004) For arthritic hands, superficial moist heat and cryotherapy can be used as a palliative therapy. These conclusions are limited by methodological considerations such as the poor quality of trials. (Robinson-Cochrane, 2002)

Cold packs
Recommended. Recommend at-home local applications of cold packs first few days of acute complaints; thereafter, applications of heat packs. (Hochberg, 2001) (Bleakley, 2004) One study showed that the

addition of pulsed electromagnetic field to ice therapy produces better overall treatment outcomes than ice alone.

Knee

ODG:

Cold/heat packs
Recommended. Ice massage compared to control had a statistically beneficial effect on ROM, function and knee strength. Cold packs decreased swelling. Hot packs had no beneficial effect on edema compared with placebo or cold application. Ice packs did not affect pain significantly compared to control in patients with knee osteoarthritis. (Brosseau-Cochrane, 2003) (Hubbard, 2004)

ACOEM:

Patient's at-home applications of heat or cold packs may be used before or after exercises and are as effective as those performed by a therapist (for treating treating acute and subacute knee pain).

Low Back

ODG:

Heat therapy
Recommended as an option. A number of studies show continuous low-level heat wrap therapy to be effective for treating low back pain. (Nadler-*Spine*, 2002) (Nadler, 2003) (Lurie-Luke, 2003) (Berliner, 2004) (Lloyd, 2004) One study compared the effectiveness of the Johnson & Johnson Back Plaster, the ABC Warme-Pflaster, and the Procter & Gamble ThermaCare HeatWrap, and concluded that the ThermaCare HeatWrap is more effective than the other two. (Trowbridge, 2004) Active warming reduces acute low back pain during rescue transport. (Nuhr-*Spine*, 2004) Combining continuous low-level heat wrap therapy with exercise during the treatment of acute low back pain significantly improves functional outcomes compared with either intervention alone or control. (Mayer-*Spine*, 2005) There is moderate evidence that heat wrap therapy provides a small short-term reduction in pain and disability in acute and sub-acute low-back pain, and that the addition of exercise further reduces pain and improves function. (French-*Cochrane*, 2006) Heat therapy has been found to be helpful for pain reduction and return to normal function. (Kinkade, 2007)

Cold/heat packs
Recommended as an option for acute pain. At-home local applications of cold packs in first few days of acute complaint; thereafter, applications of heat packs or cold packs. (Bigos, 1999) (Airaksinen, 2003) (Bleakley, 2004) (Hubbard, 2004) Continuous low-level heat wrap therapy is superior to both acetaminophen and ibuprofen for treating low back pain. (Nadler 2003) The evidence for the application of cold treatment to low-back pain is more limited than heat therapy, with only three poor quality studies located that support its use, but studies confirm that it may be a low risk low cost option. (French-*Cochrane*, 2006) There is minimal evidence supporting the use of cold therapy, but heat therapy has been found to be helpful for pain reduction and return to normal function. (Kinkade, 2007)

ACOEM:

Recommendation: Heat Therapy for Acute, Subacute, and Chronic Low Back Pain
Heat therapy, including a heat wrap, is recommended for treatment of acute, subacute, and chronic LBP. However, use in chronic LBP is suggested to be minimized to flare-ups with the primary emphasis in chronic LBP patients being placed on functional restoration elements including aerobic and strengthening
exercises. Self-application of heat is recommended. Application of moist heat by a health care provider

in conjunction with an exercise program may have some short-term value in the treatment of acute LBP for a single treatment primarily for demonstrative and educational purposes. However, education regarding home application should be part of the treatment and as such; application by a health care provider is not recommended as the patient can perform this treatment independently.
Indications – Self-applications may be periodic or continuous. These applications should be home-based as there is no evidence for particular efficacy of provider based heat treatments.
Frequency/Duration – Self-applications may be periodic and include different regimens – e.g., 15 to 20 minutes, 3 to 5 times a day.
Indications for Discontinuation – Intolerance, increased pain, or development of a burn or other adverse event.
Strength of Evidence – Recommended, Evidence (C)
Recommendation: Cryotherapies for Management of Acute Low Back Pain
Self applications of low-tech cryotherapies are recommended for management of acute LBP. Cryotherapies may be tried for other forms of LBP, though they may be less beneficial.
Indications – Moderate to severe acute LBP patients with sufficient symptoms that an NSAID/ acetaminophen and progressive graded activity are believed to be insufficient. May be tried as well for subacute or chronic pain, but suggested threshold for discontinuation is lower, particularly as active modalities are generally far preferable to passive modalities for rehabilitation of non-acute LBP.
Indications for Discontinuation – Non-tolerance, including exacerbation of LBP.
Strength of Evidence – Recommended, Insufficient Evidence (I)

Neck

ODG:

Heat/cold applications
Recommended. Insufficient testing exists to determine the effectiveness (if any) of heat/cold applications in treating mechanical neck disorders, though due to the relative ease and lack of adverse affects, local applications of cold packs may be applied during first few days of symptoms followed by applications of heat packs to suit patient. (Gross-Cochrane, 2002) (Aker, 1999) (Bigos, 1999)

Shoulder

ODG:

Cold packs
Recommended.

REFERENCES

OFFICIAL DISABILITY GUIDELINES / 2013
ACOEM, 3rd EDITION