

HOT PACKS, FOMENTATIONS, COMPRESSES, AND OTHER LOCAL HEAT APPLICATIONS

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She [Catherine Parr, queen of England] would herself remain on her knees beside him [King Henry VIII] for many hours, applying fomentations and other palliatives to his ulcerated leg.

— Agnes Strickland, *Lives of the Queens of England*

Chapter Objectives

After completing this chapter, the student will be able to:

- Describe the effects of local heat treatments.
- Explain the contraindications for local heat treatments.
- Name and describe the local hydrotherapy treatments, including local applications of moist heat, mustard plasters, and castor oil packs.
- Perform local heat treatments using the procedure included with each treatment.

This chapter covers various treatments that heat one part of the body. Because they are relatively simple and inexpensive, they are more accessible to the average massage therapist than many whole-body treatments, which require installing more elaborate and expensive equipment. They are also versatile and can be used in a variety of ways (Fig. 5-1). How can applying local heat treatments improve a massage session? Here are some examples. Before working with an area that needs concentrated stretching, deep heat from a hydrocollator pack, fomentation, hot compress, moist heating pad, hot water bottle, mustard plaster, or castor oil pack makes tissues far more pliable and stretchable. Local heat relaxes both skeletal and smooth muscles. (Hot fomentations, hot sitz baths, and even electric blankets can relieve kidney stone pain, which is caused by a spasm of the smooth muscle that lines the ureter.) Local heat also makes myofascial trigger points less painful to pressure while they are treated, and reduces muscle soreness from trigger point treatment when it is applied immediately afterwards. It improves local circulation and relieves the joint stiffness and discomfort of osteoarthritis. Hot applications can be combined with cold ones to form contrast treatments to stimulate local circulation and relieve pain. Finally, the soothing and nurturing feel of local heat helps reduce nervous tension.

While many local heat treatments—such as dry heating pads, hot water bottles, and rice-filled microwaveable bags—can be administered without the use of water and have many of the same effects, water is more efficient at transmitting heat than dry materials. For example, even if heated, dry cloth packs do not warm the body as much as heated moist cloth packs. Moist applications also have a soothing “watery” quality.

The advantages of any type of hot application must always be weighed against two major disadvantages: hot applications can burn and so must be carefully monitored, and prolonged application of heat to the body surface can raise body temperature.

Because heat applications are so soothing and relaxing, they are used not only in almost every kind of medical setting but also in spas that offer creative and enjoyable ways to integrate them into massage sessions. For example, El Monte Sagrado Spa in Arizona offers a whole-body massage session called a *hot towel infusion massage*. In this massage, for each part of the body, first an essential oil is applied to the skin and then a heated towel is placed on top of that. Next, massage is performed through the hot towel. Then another dry towel is placed on the skin, and on top of that a hot **silica gel pack**, a pack made of canvas, filled with silica gel, and heated in water. As each



FIGURE 5-1 ■ Client with silica gel pack on the posterior thigh, fomentation on the entire back, and hot compress on the ankle.

new part of the body is massaged, a fresh hot silica gel pack is warming the area that has just been massaged, and the total effect is one of warmth and deep relaxation. This use of hot towels and silica gel packs is only one way local heat treatments can be used; there are many more.

Indications are similar for all heat applications:

1. Muscle spasm, including infant colic caused by muscle tightness
2. Poor local circulation
3. Musculoskeletal pain (muscle soreness, stiff joints, arthritis pain, chronic back pain)
4. Muscle tightness
5. Warming of tissue to make it more pliable and stretchable before massage, especially for athletic persons with very dense tissue or areas with sensitive scar tissue
6. Soreness after deep massage
7. Menstrual cramps
8. Active trigger points
9. When derivation (a tissue-shifting effect) is desired—moving blood toward the hot application and away from congested areas. Useful for migraine headache.
10. Nervous tension
11. Chilled local area
12. Chilled client

Local contraindications:

1. Loss of sensation (lack of feeling), which can be caused by spinal cord injury, diabetic neuropathy, other medical condition, or the use of some medications. These conditions can render the person unable to feel the pain of a too-hot application. Never put a hot application on a numb area.
2. Rash or other skin condition that could be made worse by heat
3. Inflammation
4. Swelling
5. Broken skin—burn, wound, sore, cracked skin from eczema or severe chapping
6. Malignancy
7. Implanted device such as cardiac pacemaker, stomach band, and infusion pump

8. Diabetics should not receive hot applications to the legs or feet.
9. Peripheral vascular disease, including diabetes, Buerger's disease, and arteriosclerosis of the lower extremities
10. Sensitivity to heat, especially in those with thin skin, such as the elderly and small children, who might burn more easily

Cautions:

1. Elderly (over 60 years old)
2. Children

SILICA GEL HOT PACKS

Silica gel-filled hot packs, marketed under such names as Hydrocollator and Thermollator, are one of the most popular ways for hands-on therapists to apply heat to the body. Because they are easy to heat up and to apply to the client, silica gel packs are the most commonly used hot moist application in chiropractic offices and physical therapy clinics. They provide a simple way to help clients relax, ease muscle tension before hands-on treatment, and warm cold clients. In offices with multiple practitioners, it is common to see the hot pack heater turned on throughout the day and packs being used, returned to the heater to rewarm, and used again. Usually only one pack per person is used, but on occasion multiple packs are used. Packs are available in various sizes and shapes, from large ones that cover the entire back to small ones that fit over the hand.

Silica gel packs cause the greatest temperature elevation in the skin and the subcutaneous tissue. Properly used, they can raise the temperature of the skin as much as 20°F and that of the subcutaneous tissue as much as 15°F. However, even the temperature of the muscle tissue underneath that can increase up to 6°F. The joints of the hand, foot, wrist, and ankle can also be significantly warmed with the application of these packs. As tissues warm, muscles relax, joint stiffness decreases, and collagen fibers become more stretchable. (The tissue must be stretched when it is still hot, however, to have this effect.) Combining silica gel pack applications with gentle prolonged stretching produces greater long-term

improvement in flexibility than stretching alone. Silica gel packs, however, may not always be the best choice when applying moist heat, because they don't conform to body curves as well as fomentations or hot compresses, are too heavy to be applied to very sensitive areas, and cannot be applied underneath the body. The client should not lie on the pack for three reasons: (1) They are bumpy and uncomfortable; (2) the client's body weight could squeeze water out of the pack and possibly cause a burn; and (3) the skin cannot be continuously monitored without rolling the client to one side to examine it.

The packs are made of canvas and filled with silica granules, which can absorb a great deal of water and then form a gel-like substance which holds heat very well. They are heated on racks in special metal containers with electrical heating elements. Once the metal container is filled with water and turned on, the water will reach a temperature of 160° to 166°F in 1 to 2 hours. The gel-filled packs lie in the hot water and absorb its heat. Or the container can be left on overnight, and then the packs will be hot and ready to use right away. The packs can be taken directly out of the hot water, wrapped in towels, and applied to clients. They can also be taken from the hot water, wrapped in towels, and kept hot in an ice chest for 20 minutes.

If you are going to use only one silica gel pack at a time and you are not using them more or less continuously, it may be more economical to buy individual silica gel packs and heat them for 20 minutes in simmering water on a hot plate or stovetop. Hot pack water heaters require a fair amount of energy; the heater in the smallest container, which holds four silica gel packs, uses 1000 watts (the same as ten 100-watt light bulbs). However, there are some simple strategies for reducing the amount of energy you use. If you use your hot silica gel packs for just a few hours every day, it may save both energy and money to empty the container in the morning and fill it with hot tap water rather than reheat cold water. The water will heat to the proper temperature far more quickly. For the smallest metal containers, an insulating foam wrapper may be used to reduce heat loss from the tank (NAIMCO, 425-648-7730). Tanks that hold more than four packs use more energy when turned off at night and reheated in the morning than left on overnight so the water in the tank stays hot.

The following discusses a step-by-step procedure for using a silica gel pack on the upper back, but gel packs can be adapted to treat almost any area of the body. They can also be combined with cold applications to create contrast treatments.

Temperature: Silica gel packs are heated in water that is 160° to 166°F, and they come out of the hot water at that temperature. They begin to cool off as soon as they are taken out of the water but will present a burn danger until they have cooled off considerably.

Packs cool at various rates depending upon how hot they are when they come out of the water and how thick the towels are, so it is not possible to say exactly how fast they will cool off. Assume they have the potential to burn clients throughout the treatment and monitor them at all times.

Time Needed: 15 to 20 minutes on the skin for a relaxing sedative effect.

Equipment Needed: Metal hot pack container, hot pack, tongs or gloves to remove hot pack from the container, enough towels to make four to six layers of towel between the client's skin and the hot pack. Specially made terry cloth covers may be purchased from manufacturers of the packs, but at least one layer of towel is still needed between the cover and the client's skin.

Effect: Primarily thermal

Cleanup: Return hydrocollator pack to container, dispose of used towels. Water in the tank should be changed periodically, depending upon how frequently it is being used, as the water in the tank will become contaminated with small silica particles.

Procedure

1. Check with client to make sure there are no contraindications to the use of local heat.
2. Explain the use of local heat to client and get his or her consent.
3. Check the water temperature, which is displayed on the lower part of heater.
4. Remove the silica gel pack from the hot water with tongs, or put on gloves and pick up the pack by the loops on the edges (Fig. 5-2A).
5. Wrap it in one or more towels. You may fold a large bath towel in half and wrap the hot pack in it or use several smaller towels. The layers of towel will protect the client's skin from burning and prevent the pack from cooling off too fast. Silica gel packs generally require four to six layers of towels, but keep extra towels on hand to use if needed. Specially made terry cloth covers may also be used. More towels may be needed for an elderly person or a child (Fig. 5-2B).
6. Check to make sure the pack is not too hot by feeling it with your own hand or wrist (Fig. 5-2C).
7. Warn the client the hot pack is going on, and say, "Be sure to tell me right away if this feels too hot."
8. Check the area visually before applying towel-wrapped pack (Fig. 5-2D). This allows you to see what the client's skin normally looks like.
9. Place the hot pack on the client's lower back (Fig. 5-2E).
10. Check the skin every 2 or 3 minutes at first: lift the pack and check the tissue. It will be bright pink due to increased blood flow, which is normal, but check for any signs of blistering or burning.



FIGURE 5-2 ■ Silica gel hot pack. **A.** Remove the silica gel pack from the hot water with tongs, or put on gloves and pick the pack up by the loops on the edges. **B.** Wrap it in one or more towels. **C.** Check to make sure the hot pack is not too hot by feeling it with your own hand or wrist. **D.** Check the area visually before applying towel-wrapped pack. **E.** Place the hot pack on the client's lower back. **F.** Check the skin every 2 or 3 minutes at first: lift the pack and check the tissue.

Also ask the client how it feels. Add more towels to protect the skin if needed. The hot pack will stay warm for about 20 minutes but will begin to cool off right away, so that danger of burning decreases as time goes on (Fig. 5-2F).

11. As the hot pack cools off, you may wish to remove a layer of towels to keep the area warm and continue to monitor the client's skin.
12. Remove the hot pack if there are any signs of damage to the skin or if the client tells you the area is too hot.
13. Dry the skin, apply oil or lotion, and begin massage. You will find the client's tissue warm, pink, and pliable.

FOMENTATIONS

A **fomentation**, from the Latin word *fomentum*, which means soothing application or poultice, is any warm, moist application that delivers heat to the body for healing. This book refers to fomentations as the large pads specially made for moist heat applications, composed of many layers of thick laundry flannel, toweling, or other thick material that can absorb hot water and hold heat effectively. (Box 5-1 has directions for making fomentations.) Like other moist heat applications, fomentations raise local tissue temperature, improve local circulation, relax and soften muscles and fascia, and relieve many kinds of musculoskeletal pain. Fomentations have been used in various forms by many ancient medical traditions.

BOX 5-1 *Point of Interest***HOW TO MAKE FOMENTATIONS**

Fomentations are relatively easy to make, and a miniature fomentation can be made on the spot from a few simple ingredients. Directions are included for making both a miniature and a full-size fomentation.

MINIATURE FOMENTATION

Equipment needed: Boiling water, protective gloves, kitchen sponge, hand towel, and microwave oven

Effect: Thermal

Cleanup: Wash hand towel.

Procedure

1. Lay the sponge on the hand towel.
2. Using gloves, wet the sponge with a small amount of boiling water.
3. Now fold the towel around the sponge to make a small pack, and pick it up by the dry ends of the towel.
4. Microwave it for 30 seconds.
5. Remove it from the microwave by holding the dry ends of the towel.
6. Check the temperature of the miniature fomentation against your skin before applying it to your client's skin,

and monitor the skin carefully, as with all hot applications.

STANDARD SIZE FOMENTATION WITH COVER

Once you have made the fomentation, follow the directions in this chapter for preparing and applying it.

Equipment needed: 1 yard of heavy cotton laundry flannel, terry cloth material, or a thick towel for the fomentation and 1 yard of wool or polar fleece for the cover

Procedure

1. Cut the fabric into a piece measuring 25 × 40 inches.
2. Fold it in half and then in half again, so the finished size is 10 × 25 inches.
3. Sew the pack together around the edges (a serger is good for this) or make about six quilting stitches through all the layers to hold them together.
4. Cut the wool or polar fleece material so it measures 30 × 32 inches, which is large enough to overlap the fomentation on all sides.

For purchasing information, see Appendix D.

In the twentieth century they were used extensively in water cure institutions, for rehabilitation of wounded soldiers during the World Wars I and II, and during many polio epidemics (Box 5-2).

Some practitioners prefer silica gel packs to fomentations, and each has its advantages. Silica gel packs can be wrapped only in towels, whereas fomentations necessitate a layer of wool and a layer of towels. Fomentations may initially be more intensely hot, but preparing them takes more time than for silica gel packs, and they cool off faster. Fomentations can cover larger areas and drape to fit body curves, whereas silica gel packs are smaller and are not flexible.

Because they are very hot when ready to use, fomentations are generally wrapped in wool felt, which retains heat well, and then in additional layers of towels which protect the client's skin. Once applied, fomentations may be kept warm longer if they are covered with a waterproof material (such as a sheet of heavy plastic) and then an electric heating pad. Hot fomentations can be wrapped and then put into a cooler and will stay warm for 10 to 20 minutes.

To prepare fomentations, first soak them in water to wet them all the way through, then wring them out so that they are thoroughly wet but not dripping (Fig. 5-3A). Then heat them. Here are four options for heating a fomentation:

- Wet the fomentation, then place it inside a gallon-size resealable plastic bag and heat in a microwave oven, approximately 5 minutes for a standard-wattage microwave, longer for a low-wattage one.

- Wet the fomentation, roll it up in heavy-grade aluminum foil, and heat in a 425°F oven for 25 minutes.
- Wet the fomentation. Roll it up and stand it rolled end up in the steamer basket of a spaghetti cooker. Put the steamer basket over simmering water for about 20 minutes. Use a pot that holds 2 gallons of water or more.
- To make a large homemade fomentation when none is available, you will need protective gloves and a large bath towel. Put on the gloves, then carefully twist the towel, dip it in boiling water, and twist it again to squeeze out excess water. A hot, wet towel can go directly against the client's skin rather than being wrapped in wool and dry towels if you use common sense. First check the hot, wet towel against your own skin to make sure it is not too hot and then monitor the client's skin carefully for burning. Hot towels lose heat faster than ready-made fomentations, but they can be covered with a waterproof material and then an electric heating pad to keep them warm longer.

Below is a step-by-step procedure for using a hot fomentation on the anterior thigh. Fomentations can be adapted to treat almost any area of the body. They can be especially useful when the client is in a side-lying position, over the chest muscles, or if you wish to apply heat to the front and back of the body at the same time.

They can also be combined with cold applications to create contrast treatments. For an example, see the section in this chapter on the full-body treatment using three local treatments.

BOX 5-2 *Point of Interest*

FOMENTATION AND STRETCHING TREATMENT FOR POLIO



Girl with polio in hospital crib, wrapped in fomentations. San Angelo, Texas, June 1949. (Photo courtesy of March of Dimes Birth Defects Foundation.)

In the 1930s an Australian army nurse named Elizabeth Kenny developed a treatment for polio victims that began with wrapping the limbs of acutely ill polio patients with hot fomentations to reduce muscle spasms and the pain they caused. “Foments” were made of wool blankets, individually cut to fit each patient.

Wool was used because it retained heat well. The wool pieces were heated in very hot water, removed with tongs, run through a wringer twice, and then placed on the patient. During the acute phase, hot packs were applied once per hour around the clock. (In the nearby photo, the young girl in the acute phase of polio is shown receiving this treatment.) Even though the fomentations gave relief to tight, painful muscles, they were very hot, and burns sometimes occurred. As soon as the initial fever receded, nurses and physical therapists began to work with patients by applying fomentations and moving limbs passively to maintain range of motion. Later, the fomentations were again applied to relax tight spasmodic muscles prior to massage, stretching, and active exercise, which were all designed to restore muscles to their full function.

Kenny’s regimen was quite different from the standard medical treatment for polio patients, which consisted of prolonged bed rest and immobilization of the limbs with splints and casts. The standard treatment actually did more harm than good, as it caused atrophy and contractures in limbs which were already weak. The medical profession grudgingly accepted Sister Kenny’s techniques, and they had become standard treatment for polio victims by the mid-1940s. Sister Kenny became a household name, and in 1946 a movie was made about her life, with Rosalind Russell in the title role (see Recommended Resources list at the end of the chapter).

References

1. Campion M. *Hydrotherapy in Pediatrics*. Rockville, MD: Aspen Systems, 1985, p 236.
2. Wilson D. *Living with Polio: The Epidemic and Its Survivors*. Chicago: University of Chicago, 2005.

Temperature: Properly heated fomentations are very hot. Although they begin to cool off as soon as they are removed from the heat source, whether that be a microwave oven, regular oven, or steam bath, they present a burn danger until they have cooled off considerably. Fomentations cool off at varying rates depending upon how hot they are when they come out of the water and how thick the covering towels are, so it is not possible to say exactly how fast they will cool off. Assume they have the potential to burn clients throughout the treatment and monitor them at all times. When checking the client’s skin, slide your hand under the wrapped fomentation and feel the client’s skin as well as checking it for signs of blistering or burning.

Time Needed: 15 to 20 minutes for a relaxing, sedative effect

Equipment Needed: Protective gloves, fomentation, wool felt, one or two towels, and a heat source, such as a microwave oven, regular oven, or a canner with a rack has can be placed over boiling water

Effect: Primarily thermal

Cleanup: Hang the fomentation and the felt cover up to dry. Because they never touch the client’s skin, they

do not have to be laundered except occasionally. The towels must be laundered after each use, just like sheets and any other linens that touch the client’s skin.

Procedure

1. Check with client to make sure there are no contraindications for the use of local heat.
2. Explain the use of local heat to client and get his or her consent.
3. Soak fomentation and wring it out (Fig. 5-3A).
4. Place in zipper closure bag and heat in microwave (Fig. 5-3B) or roll up and stand in steam basket over boiling water.
5. Carefully remove the fomentation from its heat source (microwave oven, steamer, oven) using gloves (Fig. 5-3C).
6. Wrap the fomentation in a layer of wool felt or polar fleece (Fig. 5-3D) and then in towels (Fig. 5-3E). You may double a large bath towel and wrap the fomentation in it. The towels will protect the client’s skin from burning and prevent the fomentation from cooling off too fast. Fomentations generally require about four layers of towels, but keep extra towels on hand to use if needed. Work quickly to prevent the fomentation from losing too much heat.



FIGURE 5-3 ■ Fomentation. **A.** Soak fomentation and wring it out. **B.** Place in zipper closure bag and heat in microwave oven (shown) or roll up and stand in steam basket over boiling water (not shown) or roll up in aluminum foil and heat in oven (not shown). **C.** Remove the fomentation from its heat source (microwave oven, steamer, oven) using gloves. **D.** Wrap the hot fomentation in a layer of wool felt, or polar fleece. **E.** Wrap the hot fomentation in towels. **F.** Check to make sure the fomentation with its covers is not too hot by feeling it with your own hand or wrist. **G.** Check the area visually before applying towel-wrapped fomentation. This allows you to see what the client's skin normally looks like. **H.** Place the fomentation on the client's thigh. **I.** Check the skin every 2 or 3 minutes at first: lift the pack and check the tissue.

CASE HISTORY 5-1

A Hot Fomentation for a Painful Muscle Spasm**Background**

Rebecca was a 65-year-old retired secretary in good health. She had received a massage from the massage therapist only once before, but now called to say she had hurt her back hiking yesterday and would like a massage for that reason. She arrived in severe pain, half-carried by her husband. Any movement was excruciating for Rebecca, and getting up on the massage table or even undressing was impossible for this reason. Her mid back, where the pain was located, was also very sensitive to the touch. Her chiropractor would later diagnose the cause of her muscle spasm as a protective reaction to a torn sacral ligament, which became injured the day before, when she took a very long walk for which she was completely unconditioned.

Treatment

Rebecca was able to sit straddling a chair, and so the massage therapist draped a hot fomentation around her mid back and secured it in place with an elastic bandage while listening to her history. Although her mid back was still very painful and getting on the massage table was impossible, the fomentation reduced Rebecca's pain slightly after just a few minutes. She remained seated on the chair, however, and her husband helped her to remove her shirt. Then the therapist proceeded to massage Rebecca's back above and below the area still covered by the fomentation. Rebecca's pain gradually began to decrease, although it was still severe. After 15 minutes of massage above and below the painful area, the therapist removed the fomentation, and with her husband's assistance Rebecca was able to get on the massage table so that the therapist could give more specific massage to the painful muscles. Her mid back area was pink, pliable, and ready for treatment.

Discussion Questions

1. How did the fomentation relieve Rebecca's pain?
2. What other local heat or cold applications could have been used in this situation?

7. Check to make sure the fomentation with its covers is not too hot by feeling it with your own hand or wrist (Fig. 5-3F).
8. Warn the client the fomentation is going on, and say, "Be sure to let me know if this ever feels like it is too hot."
9. Check the area visually before applying the towel-wrapped fomentation (Fig. 5-3G). This allows you to see what the client's skin normally looks like.
10. Place the fomentation on the client's thigh (Fig. 5-3H).
11. Check the skin every 2 or 3 minutes at first. Lift the pack and check the tissue (Fig. 5-3I). It will be bright pink due to increased blood flow, and this is normal, but check for any signs of blistering or burning. Also ask the client if it feels too hot.
12. The fomentation will stay warm for about 20 minutes but will begin to cool off right away, so danger of burning decreases as time goes on. As the fomentation cools, you may wish to remove a layer of towels to keep the area warm, but then you must keep checking the skin.

13. Remove the fomentation if there is any sign of damage to the skin, if the client tells you the area is too hot, or if he or she is uncomfortably hot.
14. Dry the skin, apply oil or lotion, and begin massage. You will find the client's tissue warm, pink, and pliable.

COMPRESS

A hot **compress**—a folded cloth dipped in water—is a milder form of the intense moist heat of the silica gel pack or the hot fomentation. An advantage to using hot compresses over silica gel packs or fomentations is that hot compresses may be easily made and applied with simple items.

All the massage therapist needs to make a hot compress is hot water, cloths to use for the compress, and gloves to protect the hands when wringing out the cloths. A disadvantage to hot compresses is that they cool off faster than silica gel packs or fomentations. Historically, hot compresses have been used to apply countless substances to the skin by soaking the cloths in hot water

mixed with herbs, essential oils, minerals and salts, to name just a few. They have also been combined with various cold applications to create contrast treatments.

You can make compresses to suit the individual client quite easily. For example, a tiny hot compress to cover the eyes may be made by soaking a washcloth in hot water and then wringing it out. Small or medium-size hot compresses may be made with a few layers of cloth or with small towels. Large hot compresses that can cover the entire back can be made with a large bath towel. There are many ways to prepare hot compresses. Water for compresses can be heated on a stovetop, in a slow cooker or turkey roaster on a low setting, in a microwave, or even from tap water if the water heater is set quite high. You can soak cloths in a bowl of hot water and then wring them out, or you can roll them up in the shape of a sausage, place them in an ice chest, and pour boiling water over them. Wet washcloths can also be heated in a resealable plastic bag in a microwave oven for a short time. The amount of time will vary depending upon the wattage of the microwave. Commercial heating cabinets marketed under such names as Hot Towel Cabi not only heat small and medium-size cloths that you have wrung out in water, they also keep them warm until needed.

To make sure the compress does not burn the client, as always, check the compress with your own hand or wrist, monitor the client's skin, and let the client determine whether the hot compress is uncomfortably hot. Compresses must never be allowed to burn the client or feel unpleasantly hot.

An overview of treatment details and a sample procedure using the forearm follows.

Temperature: Hot (110–120°F)

Time Needed: 10 to 20 minutes, depending upon the size of the compress and whether more than one is to be used. Small compresses cool off faster than large ones.

Equipment Needed: Water thermometer, hot water, towels of appropriate size, gloves to protect hands

Effect: Primarily thermal

Cleanup: Clean and sanitize water container and launder used towels.

Procedure

1. Check with the client to make sure there are no contraindications for the use of local heat.
2. Explain the use of local heat to client and get his or her consent.
3. Check the water temperature and adjust if it is not within 110° to 120°F (Fig. 5-4A).
4. Wearing gloves, wring out the cloth in hot water (Fig. 5-4B).
5. Check to make sure the cloth is not too hot by feeling it with your own hand or wrist (Fig. 5-4C). If it is, let it cool to a safe temperature.

6. Warn the client the compress is going on, and say, "Be sure to let me know if this ever feels like it is too hot."
7. Check the area visually before putting on hot application. This allows you to see what the client's skin normally looks like.
8. Place the hot cloth on the client's skin (Fig. 5-4D). A small sheet of plastic may be put on top to help prevent heat from escaping.
9. Monitor the client's skin, and ask for feedback occasionally.
10. Replace with a new hot cloth every 2 minutes if a heating pad is not used. If a heating pad is placed over the sheet of plastic (Fig. 5-4E), the compress need not be replaced and can stay on 10 to 20 minutes.
11. When you remove the compress for the last time, gently dry the area with a dry cloth. You will find the client's tissue warm, pink, and pliable.

MOIST HEATING PAD

Electric heating pads are one of the options you may consider when you feel the client will benefit from a warm or hot application. They take no preparation time, as they are hot with the flip of a switch; they are easy to take with you; and they are very flexible and can be draped around almost any part of the body. Because they do not have to be wrapped in layers of towels, they are less bulky and easier to work around than silica gel packs or hot fomentations, for example when you wish to warm the lower back while massaging the upper back. However, heating pads lack the penetrating intense heat of silica gel packs and hot fomentations, and they cannot be used without electricity (such as at an outdoor sporting event). Also, once the pad is plugged into a nearby outlet, the therapist must work around the electrical cord. Heating pads can also be combined with various cold applications to create contrast treatments, although the client's reaction will be milder because the heat is not intense.

There are two kinds of commercial electric heating pads, moist and dry ones. Moist heating pads are electric heating pads with outer covers that draw humidity from the air and retain it. When the pad is turned on, the moisture is heated, then forced out of the cover and onto the area being treated. Any dry electric heating pad can be made into a moist heating pad by laying a wet cloth over the area to be treated, covering that with a thin sheet of plastic, and then putting a dry heating pad on top of that. Moist heat is preferred to dry because it penetrates deeper. A hazard of both wet and dry pads is falling asleep with them on; burns can then occur. Many heating pads now come equipped with an



FIGURE 5-4 ■ Hot compress. **A.** Check water temperature. **B.** Wearing gloves, wring out the cloth in hot water. **C.** Check to make sure the cloth is not too hot by feeling it with your own hand or wrist. **D.** Place the hot cloth on the client's skin. **E.** Place a heating pad over the sheet of plastic (optional).

automatic shutoff feature: after a period of minutes or hours, they turn off automatically. Not all heating pads have automatic shutoff features, so a client who is using one at home should always check whether this feature is available and should not fall asleep on the heating pad. It is dangerous for persons with reduced sensation, such as those with diabetic neuropathy or spinal cord injury, to use a heating pad, since they cannot feel when the pad might burn them.

Next is an overview of treatment details and a sample procedure using the abdomen. When the client is receiving a massage, a thin layer of cloth or a sheet of plastic is placed between the client's skin and the heating pad for hygienic reasons.

Temperature: Settings vary from low heat (78°F) to high (125°F).

Time Needed: 15 minutes or longer, depending upon the condition

Equipment Needed: Heating pad in cloth cover, small sheet of plastic or cloth

Effect: Primarily thermal

Cleanup: Anything that has touched the client's skin should be sanitized. If a layer of cloth was put between the heating pad and the skin, it should be laundered, and if a sheet of plastic was used, either wash it with hot water and soap or throw it away.

Procedure

1. Check with the client to make sure there are no contraindications to the use of local heat.
2. Explain the use of local heat to client and get his or her consent.
3. Inspect heating pad (Fig. 5-5A).
4. Plug in heating pad and turn on to desired setting (Fig. 5-5B).
5. Warn the client before applying the heating pad, and say, “Be sure to let me know if this ever feels too hot.”
6. Check the area visually before putting on the heating pad (Fig. 5-5C). This allows you to see what the client’s skin normally looks like.
7. Place the heating pad on the abdomen (Fig. 5-5D).
8. Check the skin every 5 minutes: lift the pad and check the client’s tissue (Fig. 5-5E).

HOT WATER BOTTLES

Often people take a drug which risks injury of the health for all future time, when a hot water bottle would have been more effective, more economical, and entirely safe.

—Agatha Thrash, MD, *Home Remedies*(6)

Hot water bottles are another ancient tried-and-true hydrotherapy treatment. Used by many cultures before the advent of plastic or rubber, hot water bottles were most often made of earthenware, with a cork stopper. They were used to warm cold beds before people got in them to sleep and for all manner of aches and pains. Extremities could be kept warm with them too—some ceramic water bottles were even made with indentations



FIGURE 5-5 ■ Moist heating pad. **A.** Inspect heating pad. **B.** Plug in heating pad and turn on to desired setting. **C.** Check the area visually before applying heating pad. **D.** Place the heating pad on the client’s abdomen. **E.** Check the skin every 5 minutes at first by lifting the pad and checking the tissue.

for the feet—and miniature water bottles once were put in muffs to keep the hands warm.

Today, hot water bottles are made of rubber or plastic and are a simple, cheap, and versatile way to use local heat in your massage sessions. They can be used to heat a massage table or warm a cold client. They can also be put on an aching part of the body while another part of the body is being massaged, or laid on top of fomentations or compresses to keep them warm longer. Hot water bottles are readily available, come in a variety of sizes, and can be made from any plastic bottle, such as a water bottle or a detergent bottle. A disadvantage of rubber hot water bottles is that they do not cover large areas. An advantage of hot water bottles over electric heating pads is that they cool off gradually, so if someone falls asleep on them, there is less potential for burns.

RUBBER HOT WATER BOTTLE

A rubber hot water bottle can be put over or under any part of the body. When air is expelled from it and the right amount of water is put in, it becomes flexible, so it conforms to different parts of the client's body. For example, a small hot water bottle can be placed under the chin, atop a small area of the arm, on the abdomen with the client supine, or on the back of the neck or behind a knee with the client prone. A larger one may be placed on the chest, abdomen, or legs of a supine client, or on the back or legs of the prone client. During a massage, a hot water bottle placed over the chest or abdomen gives the client a convenient place to warm his or her hands, while warming the body core at the same time.

Do not put weight or pressure on a hot water bottle. To extend its life, never fill it with boiling water, check it before using to make sure there are no splits in it, and do not fold it.

Below is an overview of treatment details and a sample procedure using an application to the lower back.

Temperature: Hot (110–120°F)

Time Needed: 10 to 30 minutes

Equipment Needed: Water thermometer, hot water bottle, thin cloth to wrap the hot water bottle in

Effect: Primarily thermal

Cleanup: Launder cloth. Empty the water bottle and hang it upside down for storage. Keep in a cool, dry place.

Procedure

1. Check with the client to make sure there are no contraindications for the use of local heat.
2. Explain the use of local heat to the client and get his or her consent.
3. Fill bottle about one-half to two-thirds full of hot water from the tap (Fig. 5-6A). Use the thermometer

to ensure the water is 110° to 120°F. Expel the air and check to make sure the top is properly seated and firmly closed so it does not leak (Fig. 5-6B).

4. Place a thin cloth on the client's back or wrap the hot water bottle in a cloth or pillowcase to protect the skin (Fig. 5-6C).
5. Warn the client the hot water bottle is going on, and say, "Be sure to let me know if this ever feels like it is too hot."
6. Check the area visually before putting on the hot water bottle. This allows you to see what the client's skin normally looks like.
7. Place hot water bottle on the lower back (Fig. 5-6D).
8. Even though burns are uncommon with rubber hot water bottles, be sure to monitor the client's skin.



FIGURE 5-6 ■ Rubber hot water bottle. **A.** Check the temperature of the water at the tap, then fill the bottle about one-half to two-thirds full with it. **B.** Expel the air and check to make sure the top is properly seated and firmly closed so it does not leak. **C.** Place a cloth or pillow case on the client's back. **D.** Place the hot water bottle on the cloth on the lower back.

FLAT PLASTIC HOT WATER BOTTLE

When filled with hot water at the appropriate temperature, a flat plastic hot water bottle is safe to lie on. (It can also be laid on the upper surface of the body.) When laid flat on a massage table before a session begins, it warms the table. During the session it can keep the client's entire body warm and can warm and soften local areas before they are massaged. It will stay warm for up to 2 hours. An advantage of this particular hydrotherapy treatment is that it is inexpensive and fairly low tech: all the therapist needs is the bottle and hot water. Once filled with hot water, it may even be used with two clients if it is put in a cooler to retain its heat after the first session. It can also be combined with various cold applications, including another bottle filled with chilled water, for contrast treatments. An important consideration with a large hot water bottle is that it may heat a large portion of the client's body, and so it has even more potential for raising the core temperature.

Temperature: Very hot (water at 108–113°F)

Time Needed: 5 to 30 minutes. The client's tissue will begin to warm after about 5 minutes.

Equipment Needed: Water thermometer, hot water bottle, thin cloth to cover or wrap the hot water bottle (a pillowcase is ideal)

Effect: Primarily thermal

Cleanup: Launder cloth. Empty the bottle and lay it flat with the lid off so the last drops of water will evaporate. Then it can be folded for storage.

Procedure

1. Check with the client to make sure there are no contraindications to the use of local heat.
2. Explain the use of local heat to the client and get his or her consent.
3. Use a thermometer to ensure the water is 108° to 113°F (Fig. 5-7A). Fill bottle about one-third full of hot water. (Fig. 5-7B). About 6 cups of water will be needed for a large 18 × 24 inch bottle.
4. Carry the open bottle carefully to the massage table, lay it flat on the table, use your hand to expel the air bubbles, and check to make sure the top is snapped on securely so it does not leak (Fig. 5-7C).
5. Cover it with a cloth or pillowcase or place it inside a pillowcase (Fig. 5-7D).
6. As the client lies on the cloth-covered hot water bottle, say, "Be sure to let me know if this ever feels like it is too hot" (Fig. 5-7E).
7. Even though burns are highly unlikely if the correct water temperature is used, be sure to monitor the client's skin and ask for feedback. The area will warm up more slowly than if a silica gel pack or fomentation is used.

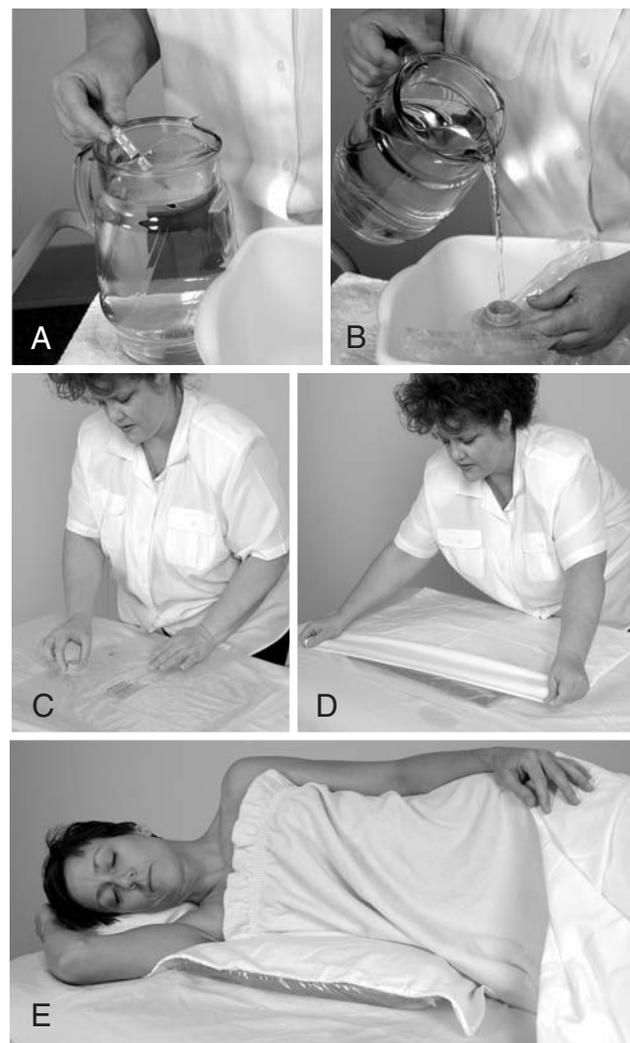


FIGURE 5-7 ■ Flat plastic hot water bottle. **A.** Check the temperature of the water. **B.** Fill the bottle about one-half to two-thirds full. **C.** Expel the air, snap the lid on, and check to make sure the lid is firmly closed and water does not leak out. **D.** Cover the hot water bottle with a pillowcase. **E.** Client lying on hot water bottle.

MUSTARD PLASTER

A **plaster** is a pastelike mixture, usually of herbs, that can be spread upon a cloth and applied to the body. Ground mustard seeds contain chemicals and enzymes that, when combined with water, liberate compounds that encourage blood flow to the surface of the skin. The plaster also functions as a **counterirritant**, a substance that stimulates nerve endings on the skin, distracting the central nervous system from deeper-seated pain and relieving it. Plasters made with ground mustard are used to warm muscle tissues, especially deeper tissues, and to treat chronic aches and pains, such as those of arthritis.

Mustard was used in Europe for centuries for both medicinal and culinary purposes and was brought to this country by European settlers. Mustard seed was once

listed in the *U.S. Pharmacopeia* (list of approved medications) and was included in baths, liniments, plasters, and massage oils. Mustard preparations were widely available commercially, and mustard powder was one of the medicines used by the U.S. Army. Use of plasters became less common in the last half of the twentieth century, and they are now seen chiefly as a home remedy. Originally mustard plasters were thought to draw out “bad humors.” Practically speaking, however, the plasters were used to provide soothing heat, increase local circulation, relieve arthritis pain, and treat respiratory ailments such as chest colds and bronchitis by deeply warming the chest. Today’s massage therapist may wish to use a mustard plaster before massage to ease a painful muscle or joint and to bring heat to a deeper muscle before it is massaged.

Mustard plasters are indeed very hot and can even cause blistering, so you must monitor the skin underneath them carefully and take the plaster off at the recommended time.

Below is an overview of treatment details and a sample procedure using the anterior shoulder area.

Indications

1. Poor local circulation
2. Painful muscles that will be massaged after the plaster is removed
3. Frozen shoulder
4. Gout
5. Acute lower back pain of muscular origin
6. Chronic back pain
7. Arthritis pain

Contraindications

1. Sensitive skin
2. Allergy to mustard seed
3. Open skin (e.g., wound, rash, eczema)
4. Any area where heat is contraindicated, such as in diabetic neuropathy or spinal cord injury

Temperature: Hot (110°F)

Time Needed: 15 to 30 minutes

Equipment Needed: 1 tablespoon of mustard powder, 4 tablespoons of wheat flour, and enough tepid water to make a paste; spoons for measuring and stirring the paste; thin cotton cloth, approximately 10 × 12 inches; piece of plastic that is slightly larger; a small towel; fomentation, hot water bottle, or heating pad to keep plaster warm; small tray

Effect: Primarily chemical from the ground mustard, but also thermal due to the application of heat over the plaster

Cleanup: Dispose of plaster and plastic sheet, launder thin cloth and towel.

Procedure

1. Check with the client to make sure there are no contraindications for the use of local heat.
2. Explain the use of local heat to client and get consent.
3. Mix mustard powder, flour, and water to make a paste that can be spread on the cloth but is not so thin that it will run (Fig. 5-8A).
4. Place the cloth on a tray (Fig. 5-8B).
5. Spoon the mustard mixture onto the cloth, and spread it out, leaving enough dry cloth to fold over well on all four sides. Only one thin layer of cloth will be between the skin and the plaster (Fig. 5-8C).
6. Warn the client before applying the plaster, and say, “Be sure to let me know if this ever feels too hot.”
7. Check the area visually before applying the plaster (Fig. 5-8D). This allows you to see what the client’s skin normally looks like.
8. Place the plaster on the client’s anterior shoulder (Fig. 5-8E).
9. Cover it with the piece of plastic (Fig. 5-8F).
10. Cover the plastic with a small towel.
11. Place a source of heat on top of the plaster, plastic, and small towel (Fig. 5-8G).
12. Leave the plaster on for 20 minutes.
13. Monitor the client’s skin carefully. If the skin becomes very red before the 20 minutes is up, the reaction is finished and the plaster may be taken off. If the client feels any stinging or burning, remove the plaster immediately.
14. To clean the skin, apply a tissue or small cloth dipped in vegetable oil and wipe off the mustard (Fig. 5-8H).

CASTOR OIL PACK

Castor oil is a thick, clear oil extracted from crushed castor beans. Because the castor plant grows well in many parts of the world, the oil is easy to obtain. It has been used medicinally for centuries in both Ayurvedic medicine and European folk medicine, and today it is commonly sold in drugstores. It has a high concentration of fatty acids, especially ricinoleic acid. Castor oil packs have long been used for increasing local circulation of blood and lymph, relaxing smooth muscle, softening scar tissue, relieving muscle and joint pain, and helping relax specific areas. Vasodilation from hot applications laid over the packs increases absorption of chemicals in the oil and creates the effects of local heat.

Some practitioners of natural medicine prescribe months-long regimens of daily castor oil packs because they are believed to have strong detoxifying properties; however, no research has been done to investigate this claim. More important for the massage therapist is the



FIGURE 5-8 ■ Mustard plaster. **A.** Mix mustard powder, flour, and water to make a paste that can be spread on the cloth but is not so thin that it will run. **B.** Place the cloth on a tray. **C.** Spoon the mustard mixture onto the cloth and spread it out, leaving enough dry cloth to fold over well on all four sides. Only one thin layer of cloth should be between the skin and the plaster. **D.** Check the area visually before applying the plaster. **E.** Place the plaster on the client's anterior shoulder. **F.** Cover it with the piece of plastic. **G.** Place a source of heat on top of the plaster, plastic, and small towel. **H.** At end of treatment time, remove pack, apply a tissue or small cloth dipped in vegetable oil, and wipe off the mustard.

use of castor oil packs to soften fibrotic nodules and adhesions. Castor oil packs may be applied at the beginning of a massage session to prepare these tissues for treatment and then taken off after 30 minutes or longer.

Rather than using castor oil packs during massage sessions, an alternative is to cover the area to be treated with a thick application of castor oil, cover it with plastic wrap, and apply heat on top. Remove after 30 minutes, cleanse the area, and begin massage. Below is an overview of treatment details and a sample castor oil pack procedure using the calf, showing you how to incorporate it into a massage session.

Indications

1. Muscle pain, including menstrual cramps
2. Tight, fibrous tissue which is going to be treated with massage, including fibrotic knots, scar tissue, tight iliotibial bands, and adhesions
3. Arthritis

Contraindications

1. Any area where heat is contraindicated, such as in diabetic neuropathy, or where there is local inflammation
2. Broken skin
3. Tumors
4. Ulcers
5. Lower abdomen in pregnant women

Temperature: Warm (from heating pad)

Time Needed: 45 minutes to an hour

Equipment Needed: Flannel cloth (wool is preferred, but cotton may be used); bottle of castor oil; metal pan or tray large enough to hold the flannel; piece of plastic wrap or a thin sheet of plastic cut from a garbage bag that is slightly larger than the flannel; local heat source to keep the pack warm, such as a fomentation, hot water bottle, or heating pad; washcloth; soap or $\frac{1}{2}$ tsp of baking soda to be added to 1 cup of water to cleanse the skin after the pack is removed

Effect: Primarily chemical from the action of the castor oil itself but also thermal from the application of heat over the entire pack

Cleanup: Dispose of plastic sheet, wash metal pan with soap and water, launder washcloth. If desired, the oil-soaked flannel can be taken home in a plastic bag and reused by the client up to 10 times if it is kept in a plastic container in the refrigerator between uses; otherwise, it should be thrown away. No one else should use the flannel.

Procedure

1. Check with the client to make sure there are no contraindications for the use of local heat.

2. Explain the purpose of the castor oil pack to the client and get consent.
3. Cut or fold the flannel to the appropriate size so there will be three layers of cloth, and place it on a metal pan or tray.
4. Pour castor oil over the flannel and leave it until it is well saturated. The cloth should be wet but not dripping (Fig. 5-9A).
5. Warn the client before applying the flannel, and say, "Be sure to let me know if this ever feels too hot."
6. Check the area visually before applying the flannel. This allows you to see what the client's skin normally looks like.

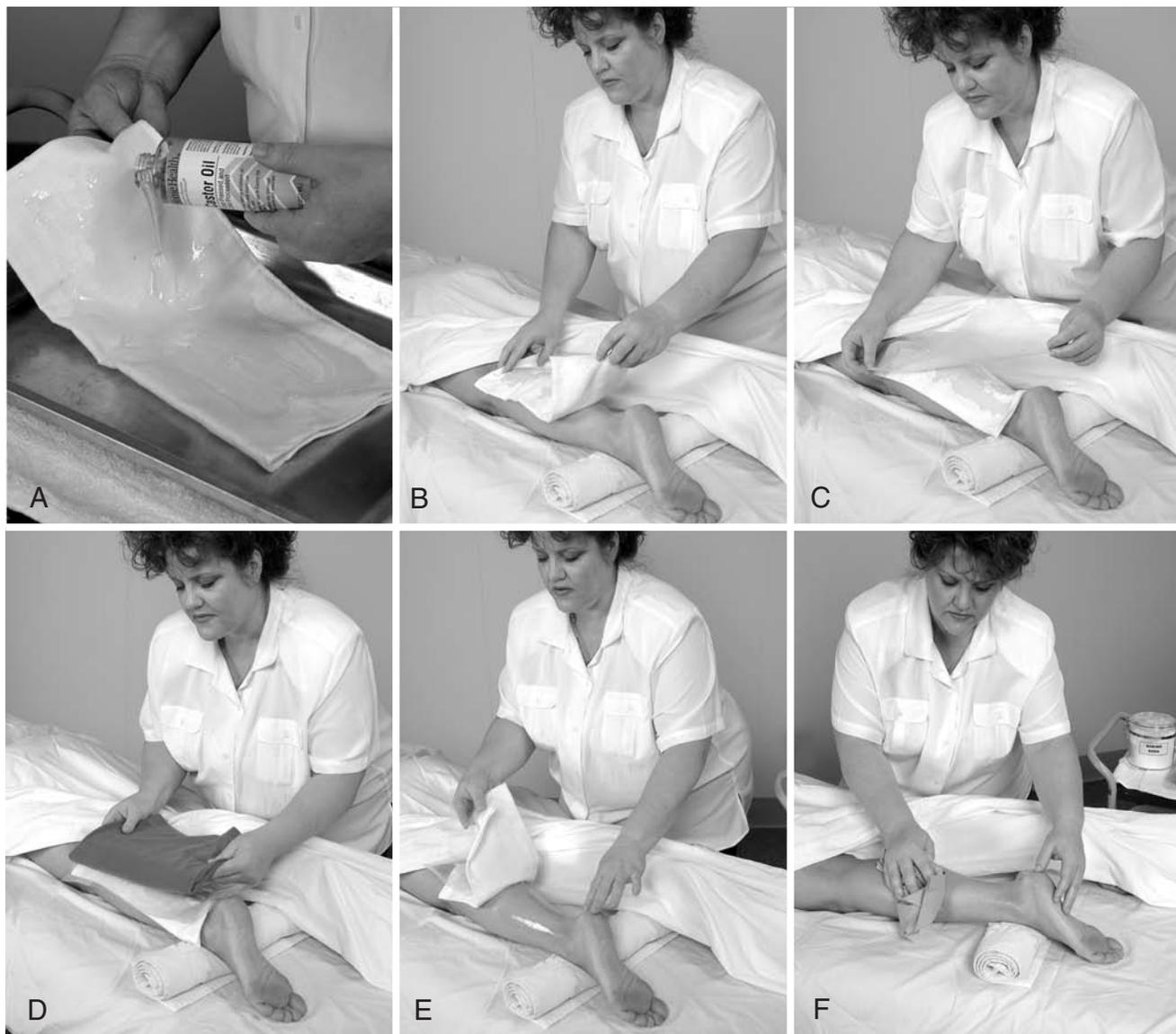


FIGURE 5-9 ■ Castor oil. **A.** Soak flannel in castor oil. **B.** Apply to skin. **C.** Cover flannel with plastic. **D.** Cover plastic with heating pad or water bottle. **E.** Remove treatment. **F.** Clean skin with 1 cup cool water mixed with $\frac{1}{2}$ tsp of baking soda.

7. Apply the flannel to the calf (Fig. 5-9B).
8. Cover it with the piece of plastic (Fig. 5-9C).
9. Apply heat on top of the plastic-covered flannel. Use a heating pad on the highest setting that can be tolerated. A high setting is preferable, but a medium setting is acceptable. Or use a hot water bottle (Fig. 5-9D).
10. Proceed with massage on other areas of the body.
11. Remove pack after 30 to 90 minutes (Fig. 5-9E).
12. Clean skin with 1 cup cool water with ½ tsp of baking soda added to it (Fig. 5-9F) or use soap and a washcloth.
13. Proceed with local massage.

COMBINATION TREATMENT

This whole-body treatment is actually a combination of three local treatments that stimulate local circulation and warm the entire body. A contrast treatment to the chest using a hot fomentation and ice rub is combined with a hot fomentation to the back and a hot footbath. Combining three heat treatments causes the core temperature to rise rather quickly. At the end of the treatment, clients generally feel soothed and stimulated and find that their breathing is more relaxed.

Because it promotes good circulation in the chest, the full combination treatment is a classic treatment for chest congestion in colds, influenza, pneumonia, and bronchitis. Heat helps liquify chest secretions so that they can be expelled, eases breathing, and pulls white blood cells into the area to help fight infection. This treatment has also been used for problems in internal organs, such as cirrhosis of the liver. It has also been used after abdominal surgery—under doctor's supervision only—with an additional hot fomentation over the organ. A direct application of heat to the chest followed by a cold application (contrast treatment) is given to increase circulation to the chest, and both the fomentation to the back and the hot footbath are given to draw congestion away from the chest and/or abdominal organs.

Massage therapists do not treat any of these problems; however, sometimes this combination of treatments is useful within our scope of practice. This treatment, especially if the fomentations are given very hot for brief periods and followed quickly by short, very cold applications, can be a tonic and stimulating treatment for the circulation. It is also excellent to relieve musculoskeletal discomfort, such as soreness in the chest muscles from prolonged coughing, deep tension in the chest muscles, or arthritic pain in the back. Fomentations that are moderately warm and are applied for a longer period provide a more sedative, relaxing treatment which can relieve nervous tension, insomnia, and muscle spasm. This treatment is well suited for a client who would benefit

from a warm bath or other full-body heat treatment but cannot get in and out of a tub, such as someone with severe arthritis or Parkinson's disease. At the end of this treatment, the massage therapist can begin a massage with a relaxed client who has enhanced circulation and warm tissue. By combining three simple treatments, the massage therapist can do the entire procedure without expensive hydrotherapy equipment.

Indications

1. Relief of musculoskeletal pain, including arthritis pain, muscular pain, and rigidity of Parkinson's disease
2. Scalene, intercostal, or pectoralis major muscles which are sore or tight after a great deal of coughing caused by allergy, pneumonia, bronchitis, asthma, or emphysema. Nervous tension or poor breathing habits can cause habitual patterns of tightness as well.
3. Muscle spasm and muscle soreness
4. Nervous tension
5. General tonic
6. Insomnia

Contraindications

1. Diabetics should not have heat applied to the feet.
2. Lack of sensation
3. Any condition that specifically contraindicates whole-body heating, such as cardiovascular problems, diabetes, hepatitis, lymphedema, multiple sclerosis, and seizure disorders, unless treatments are specifically prescribed by a doctor.
4. Great obesity
5. Pregnancy
6. Ingestion of alcohol or drugs
7. Inability to tolerate heat

Temperature: Hot, combining hot fomentations and hot footbath (110°F) with cold mitten frictions, cold compress to forehead, and cold water poured over the feet

Time Needed: 30 minutes

Equipment Needed

Water thermometer
 Kitchen timer
 Table or counter space to hold equipment
 Rubber gloves to protect your hands when handling fomentations
 Plastic bed sheet or thick towels to cover the massage table
 Cotton sheets
 A blanket
 Footbath (a rectangular plastic dishpan works well)
 Two pitchers
 A drinking glass with straw
 About six towels

Three fomentations with fabric covers
 Two washcloths for cold applications to the forehead
 Basin for ice cubes
 Hot water for the fomentation
 Cold water for the cold compress to the forehead
 Ice cubes and cold water for the cold friction
 Drinking water for the client

Effect: Primarily thermal, some mechanical

Cleanup: Clean and put away all equipment and launder used linens.

Procedure

1. Wet the fomentations by soaking them in a container of warm water and wringing them out (Fig. 5-10A).
2. Heat the fomentations in the microwave in a resealable plastic bag for 5 minutes or over boiling water on the rack of a canner for 15 minutes (Fig. 5-10B).
3. While the fomentations are heating, prepare a place for the client to lie during the treatment. Cover the surface of a massage table with a blanket,

4. Using rubber gloves, wrap the first hot fomentation in its cover. Lay it down on the sheet where the client's back will be, and cover it with one or two towels (Fig. 5-10D).
5. Have the client quickly get on the table and lie supine, and make sure that the pack is warming the entire back from sacrum to shoulders (Fig. 5-10E). (A flat plastic hot water bottle filled with water at 110°F may also be used.) Should it feel like it is going to burn the client's skin at any time, add another towel or two over it. Be sure to ask the client for feedback, especially in the first 10 minutes, before the fomentation cools at all, and if it feels too hot, add another layer of towel.
6. Fill the dishpan with hot water (110°F) and place the client's feet in it. The client's knees should be bent and feet flat on the surface. Check with the client to make sure the water temperature is tolerable (Fig. 5-10F).



FIGURE 5-10 ■ Combination treatment. **A.** Wet the fomentations by soaking them in a container of warm water and wringing them out. **B.** Heat the fomentations in the microwave in a resealable plastic bag for 5 minutes or over boiling water on the rack of a canner for 15 minutes. **C.** While the fomentations are heating, prepare a place for the client to lie during the treatment. Cover the surface of a massage table with a blanket, then the plastic sheet, then a large bath towel, and finally a cotton sheet. **D.** Using rubber gloves, wrap the first hot fomentation in its cover. Lay it on the sheet where the client's back will be and cover it with one or two towels. **E.** Have the client quickly get on the table and make sure that the pack is warming the entire back from sacrum to shoulders. **F.** Fill the dishpan with hot water (110°F) and place the client's feet in the bath. (*continued*)



FIGURE 5-10 ■ (Continued) **G.** Place one or two towels on the client's chest, lay the second fomentation on top, then lay one more towel on top. **H.** Cover the client with a sheet and then a blanket. **I.** When the timer rings, rub the entire chest briskly for 30 seconds with a washcloth or terry cloth mitt wrung from ice water. **J.** Place another hot fomentation on the chest. Set the timer for 5 minutes. **K.** Add hot water to the footbath if needed. **L.** Provide water to drink as needed, and place a washcloth wrung out in ice water on the forehead. **M.** Remove the fomentation on the chest and rub the chest with ice water as before. Dry the chest thoroughly. **N.** Remove the fomentation and rub the entire back briefly with ice water. Dry the back. **O.** Take the client's feet out of the hot water, pour ice water (left from the cold application to the chest) over them, and dry them off.

7. Place one or two towels on the client's chest, place the second fomentation on top, then place one more towel on top. Again check with the client to make sure it is not going to burn the skin (Fig. 5-10G).

8. Cover the client with a sheet and then a blanket. Set a timer for 5 minutes. During this time you may perform a brief facial massage (Fig. 5-10H).
9. When the timer rings, rub the entire chest briskly for 30 seconds with a washcloth or terry cloth mitt

wrung from iced water (Fig. 5-10I). Do not apply this friction over a woman's breasts. Alternatively, a small towel may be wrung out of ice water, laid over the entire chest, and rubbed for 30 seconds. This may be more appropriate for a woman, as then the breasts will not be exposed. To minimize exposure, slide the ice-cold towel onto the chest from above just as you pull the fomentation down off of the chest. Be sure to warn your client that the cold is coming, and encourage him or her to take a deep breath just as you lay on the cloth. Although the contrast will be dramatic, the client's chest will be very warm, and most clients find the cold refreshing.

10. Place another hot fomentation on the chest. Set the timer for 5 minutes (Fig. 5-10J).
11. Add more hot water to the footbath if needed so that the water remains at 105° to 110°F (Fig. 5-10K). Scoop some of the cooler water out, then remove the client's feet for a moment while you add more hot water and stir. Replace the client's feet.
12. By now, the client is usually becoming getting quite warm; provide water to drink as needed, and place a washcloth wrung out in ice water on the forehead (Fig. 5-10L).
13. When the timer rings, repeat steps 9 to 12.
14. After 5 more minutes, remove the fomentation on the chest and rub the chest with ice water as in step 9 (Fig. 5-10M). Dry the chest thoroughly.
15. Immediately have the client sit up. Remove the fomentation on the table and rub the entire back briefly with ice water (Fig. 5-10N). Dry the back. Do not let the client become chilled.
16. Take the client's feet out of the hot water, pour ice water (left from the cold application to the chest) over them, and dry them off (Fig. 5-10O).
17. Make sure the client is dry.
18. The towel under the client will be damp, and it should be removed and the client covered with a dry sheet. The massage session may begin.

CHAPTER SUMMARY

In this chapter you have learned about a variety of treatments that heat only one part of the body without immersion in liquid water and their effects and benefits. During massage sessions, therapeutic heat can help relieve musculoskeletal pain and promote mental relaxation and increased local circulation, as well as helping to warm and soften stiff muscles before exercise and stretching. Your therapy "toolbox" has just begun to expand, however; each of the chapters ahead discusses more new treatments, and you will learn even more about how to fine-tune them for yourself and for your clients. Soon you will be able to combine treatments, if desired, for particular clients.

REVIEW QUESTIONS

Short Answer

1. What is the primary hazard of heat applications?

2. Name five conditions for which local heat is contraindicated.

3. Name three conditions for which local heat may be indicated.

4. Discuss the difference between the heat provided by a hot water bottle or dry heating pad versus that of a silica gel pack or fomentation.

5. Describe the effect of local heat on myofascial trigger points.

Multiple Choice

6. Local application of heat
 - a. Relaxes connective tissue
 - b. Improves healing
 - c. Causes local vasodilation
 - d. Relieves pain
 - e. All of the above
7. Which of these treatments has a heating effect?
 - a. Local salt glow
 - b. Cold footbath
 - c. Tepid footbath
 - d. Cold compress
 - e. Castor oil pack
8. Local application of heat is indicated for all but one:
 - a. Chronic arthritis
 - b. Increased circulation
 - c. Acute sprain
 - d. Prior to exercise

9. The combination treatment is indicated for all but one of these conditions:
- a. soreness in the chest muscles from prolonged coughing
 - b. deep tension in the chest muscles
 - c. kidney failure
 - d. arthritic back pain
 - e. muscle spasm
10. The desired effects of a mustard plaster include all but one:
- a. provide soothing heat
 - b. prepare muscles for massage
 - c. increase local circulation
 - d. cause a blister
 - e. relieve arthritis or muscular pain

True/False

- ___ 11. Moist heat has the same effect as dry heat.
- ___ 12. A hot pack application prior to massage aids in muscle relaxation.
- ___ 13. Mustard plasters must be carefully monitored because they can burn the skin.
- ___ 14. Castor oil packs are used to soften adhesions.
- ___ 15. The combination treatment, when administered correctly, causes a drop in core temperature.

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6. Thrash A. Thrash C. *Home Remedies: Hydrotherapy, Charcoal, and Other Simple Treatments*. Seale, AL: Thrash, 1981, p 75.

RECOMMENDED RESOURCES

- Sister Kenny*. 1946. Movie starring Rosalind Russell.
- Ice Therapy*. 1993. Video by massage therapist Harold Packman.

