# Giving the Waters™

give, receive, renew, the waters...

# Hydro-Kinetic Vichy Shower Guidelines and Usage Instructions



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# Giving the Waters™

Your touch is making a difference in the world. Promoting the healing and rejuvenating power of touch through your work is something we cherish. Through these instructions, we hope to help you move your business forward into an even more healthy, enjoyable and profitable way of life.

TouchAmerica's commitment is to facilitate transformation by returning to the roots of spa knowledge, and integrating it with today's most advanced information concerning health and wellness.

# On your honor:

According to copyright laws, please do not copy or distribute without permission. Thank you.

# **THE 10 DOMAINS OF SPA**

- 1. The Waters
- 2. Foods: Diet and nutrition
- 3. The Body: Exercise, fitness and movement
- 4. Massage and Touch
- 5. Mind Body Environment
- 6. Natural Agents, aesthetics and skincare
- 7. Climatology and Global Ecology
- 8. Social/ Cultural: Community
- 9. Management: Bringing it all together
- 10.Time, Rhythms and Cycles

# **Creating Your Wet Room Suite**

| Wet F | Room Check List:   |
|-------|--|
|       | Room Size: 8 X 12 feet minimum size  |
|       | _ Tiled room - tile reaching four to six feet high                           |
|       | _ Sloped floor   |
|       | Drain under the wet table for attachment of outlet hose                      |
|       | Infrared Lamps in ceiling  |
|       | Adequate water pressure: 45 psi  |
|       | Gas Water Heater   |
| Hydro | o-Kinetic Vichy Shower Water Requirements:                                   |
|       | Mixing valve water usage: 17 gpm @ 45 psi                                    |
|       | Supply lines: 3/4"   |
|       | Hot Water recovery: High recovery  |
|       | (Allows for 19 minutes of continuous use of all 8 showerheads per hour; more |
|       | frequent use may require more hot water)                                     |
|       | _ Water pressure: 45 psi   |
| Wet F | Room Equipment Should Include:   |
|       | Wet Spa Table (pedestal option ideal)  |
|       | _ Hydro-Kinetic Vichy Shower   |
|       | Wet mat in front of table where client and therapist walk, ideally           |
|       | surrounding table  |
|       | _ Massage Top Converter Mat and FaceSpace for optimal booking flexibility    |
|       | _ Infrared Lamp (optional): must be on a ground-fault circuit                |
|       | _ TouchAmerica's Timbale Cart or product tray                                |
|       | _ Waste receptacle   |
| Wet F | Room Accessories Should Include:   |
|       | _ Thermal plastic wrap or Mylar®   |
|       | _ Wrap system including wrapping blanket, thermal space blanket              |
|       | _ Wet Bolster  |
|       | _ Spatula  |
|       | _ Whisk  |
|       | _ Spa Mixing Bowls   |
|       | _ Table Sanitation Products  |
|       | Towels, hand and bath  |

# Potential Benefits of Hydro-Kinetic Vichy Treatments

- 1. Cleansing: Aids the client in preparing for renewal and regeneration
- 2. General relaxation and enjoyment
- 3. De-stressing the body and mind with water
- 4. Toning of the skin
- 5. Improves circulation
- 6. Enhances other services, including the removal of product

# Use in conjunction with the following treatments:

- Body Polishes and Scrubs
- Salt Glows
- Full Body Masques and Wraps
- Water massage
- Contrast Therapies

#### General temperature adjustments as a tool for treatment variations:

#### Sedating and Relaxing:

Neutral Temperature: 97 to 102 F degrees

# Cleansing and Detoxifying Treatments

Hot Temperature:

100 to 110 degrees: meet client's tolerance.

#### Toning and Stimulating

Use alternating hot and cold water. Begin at suitable hot temperature, then quickly decrease to 90 degrees.

Remain constantly sensitive to client's temperature tolerances. Water temperature change is repeated three to four times. Start at 100 degrees and gradually increase over 2-3 minutes to 110 degrees. Stay at that temperature for about a minute, and then lower to 90 degrees. Stay at the lower temperature for about a minute, or until it is uncomfortable for the client. Ratio is usually about four minutes to one minute, hot to cold.

# Combine with cellulite treatments for optimum results.

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# Optimizing and Learning to Use the Vichy Shower

- 1. Test water temperature to make sure it is ready when the client comes in the room. In some facilities, it may take a few minutes for the water heater to get going, especially if it is the first treatment of the day.
- 2. After the water is heated, turn all of the showerhead nozzles OFF (counter clockwise).
- Before using the Hydro-Kinetic Vichy Shower, and usually after some application of product, check water temperature again with hand held nozzle before you turn the Hydro-Kinetic Vichy Shower on over the client.
- 4. When turning the Hydro-Kinetic Vichy Shower on, open nozzles in order from feet to head. This gradual beginning gives the client time to adjust to the pressure and temperature of the water. Aim showerheads toward shoulders, lumbar and foot/calf areas, if clients is facing down, or lower legs, abdominal and chest area, if client is facing up.
- 5. Therapist can adjust nozzles and rotate showerheads to give client an invigorating hydro-massage.
- 6. Near the end of the treatment, if client receives a warm hydro-massage, this will also serve to wash any remaining product off the client.
- 7. Hydro-Kinetic Vichy Shower can be pushed out of the way when not in use.

# Cleanup:

- Make sure you let the showerheads drain completely, then close the shutoff valves.
- Wipe down any products that may have gotten on the handheld shower or the showerheads.
- Wet Spa Table should be wiped down with a mild disinfectant after each treatment.
   Wipe Closed-Cell Pad with gentle soap and water only; harsh abrasives will destroy it.
- Dry treatment room floor to an adequate level for you and your next client's safety.

# **Cleansing Product Overview**

The following product recipes are for cleansing treatments, such as salt glows and body polishes, that can be used in combination with the wet room. We have found that some people prefer the stimulating and invigorating feel of a salt glow while others prefer a gentler body polish.

# **Preparing products needed for the Salt Glow:**

Salt Glow

Products needed 1. 3-8 drops of essential oil blend

- 2. 2/3 cup Salt
- 3. 1 Tbs. Oil
- 4. 2 Tbs. Body Cleanser (optional)
- 5. 2 Tbs. of Moisturizer

Mix salt with oil, add 3 to 8 drops of pure essential oil blend, mix. Add a splash of water to adjust consistency if necessary. Mixture should be loose but hang together.

# Preparing products needed for a Body Polish

- 1. 3-8 drops of essential oil blend for body
- 2. 2 Tbs. Body Polish
- 3. 2 Tbs. Body Cleanser
- 4. 2 Tbs. of Moisturizer

Add 3 –8 drops of essential oil blend to exfoliating agent (Body Polish) and 3 to 8 drops of essential oil blend to the Body Cleanser.

# Introduction To Cleansing/ Body Polish and Scrub

Exfoliation treatments are used to remove dead skin cells from the body and leave the skin looking and feeling fresh, smooth, clean, and "polished." These treatments are also called body polishes or scrubs. Exfoliation is the process of removing dead skin cells, dirt and debris from the skin by rubbing, scrubbing or polishing. It allows the skin to accept more readily moisturizers, nutrients and treatments designed to improve the skin texture and the inner skin function.

A body polish or scrub is a three-step procedure, which includes 1) the application of a gentle exfoliant or polish, 2) cleansing with body soap and 3) an application of an emollient moisturizer.

# A fully functioning wet room is recommended for exfoliating treatments

#### Equipment required:

Wet Spa Table (pedestal option ideal)
Hydro-Kinetic Vichy Shower (optional, but ideal)
Infrared Lights in the ceiling
Wet mat surrounding table or non-slip flooring
Roll about cart or product tray

#### Accessories needed:

One piece of thermal plastic wrap- 6 ft.
Flex bowl
Loofah (optional)
2 Hand towels
3 Bath towels
Fitted sheet
Waste receptacle
Towel Hamper

#### **Treatment Time:**

30 minutes including table set up and cleanup 60 minutes with Hydro-Kinetic shower

# Procedure: Exfoliation Body Polish in the Wet Room

- 1. Place fitted sheet or one towel on treatment surface for the body and a hand towel at the top for the head. Cover with plastic thermal wrap.
- 2. Client lies face down and is draped.
- Use the handheld sprayer to sprinkle warm water on the client's backside including torso, legs and feet. The draping towel may be dampened to keep the client warm.
- 4. Apply a quarter-sized dab of exfoliant (scrub or polish) with the palm of your hand or the soft side of a loofah, starting at the foot and moving up the leg and back. Use circular motions to avoid stretching tissues.
- 5. Rinse the back of body down with the hand held sprayer. Make sure the water is warm; your client may be chilled.
- 6. Next, apply the body bath with warm water and your hand or a loofah, again using circular motions going up the back of the body.
- 7. Rinse the back of body down again with hand held sprayer.
- 8. Turn on Hydro-Kinetic Vichy Shower to rinse, warm and invigorate the client. Important: if your wet table is motorized remember to adjust the table height to maximize the treatment. Follow standard operating directions. Treatment should last approximately three minutes.
- 9. Brush any excess water to the sides so that it can drain.
- 10. Ask client to turn over into supine position, draping appropriately. Repeat exfoliating and cleansing procedure on front of body- feet, legs, arms, shoulders and abdomen, stopping at base of neck. Never apply body exfoliating products to the face, since they are too powerful for this sensitive area.
- 11. Set Hydro-Kinetic Shower in place, adjust table. Note: An extra towel compress can be placed on face to avoid any splashing. Turn shower on according to standard directions. Treatment time is approximately three minutes.
- 12. After Hydro-Kinetic treatment, swing Rainbar out of the way. Remove wet towel and replace with dry towel, per draping procedures.
- 13. Roll thermal plastic wrap up and tuck in the groove between the table and mat. Client will now be lying on a dry surface.

- 14. Pat client's skin dry to remove excess moisture.
- 15. Apply finishing lotion/cream application to front of the body; lifting each leg to cover the back of the leg and the gluteus maximus. Application strokes should move upward towards the heart. Next, instruct client to hold their drape in place, and help them client sit up, with legs over the side of the table. Finish applying the lotion or cream to the back of the body.
- 16. Adjust pedestal table, and help client carefully get off the table. A towel should be placed under the feet, if the floor is damp

# **Introduction To Traditional Salt Glow**

The names "salt glow" and "spa glow" are both used to describe this treatment, which utilizes Dead Sea Salts from the Dead Sea in Israel. It is generally understood that the mineral salts from the Dead Sea help relieve minor aches and pains, nervous stress, and psoriatic skin. Salts should never be used on open wounds or skin lesions; or used on very sensitive skin. With ten times the mineral content of seawater, salts offer high concentrations of minerals.

#### Dead Sea Salts:

- Magnesium Chloride: for fluid retention & stress.
- Potassium Chloride: indispensable for athletes.
- Calcium: to fight water retention and aid in pain relief.

#### Ocean Salts:

- Sodium Sesquicarbonate: softens skin
- Sodium Bicarbonate: pulls toxins form the skin, aids in pain relief
- Magnesium Sulfate: increases circulation and removes toxins

#### A fully functioning wet room is recommended for salt glow treatments

#### **Equipment required:**

Wet Spa Table (pedestal option ideal)
Hydro-Kinetic Vichy Shower (optional)
Infrared Lamp (optional)- must be on a ground fault circuit
Wet mat surrounding table or non-slip floor mat
Roll about cart or product tray

#### Accessories needed:

One piece of thermal plastic wrap- 6 ft.
Flex bowl
Loofah
2 Hand towels
3 Bath towels
Fitted sheet
Waste Container

#### **Treatment Time:**

30 minutes including table set up and cleanup 60 minutes with Hydro-Kinetic shower

Note: Salt glows can be performed in a dry massage room, but they are very messy. We suggest that you use products designed for the dry room in your massage rooms, and save the salt for the wet room.

#### Procedure: Traditional Salt Glow in the Wet Room

- 1. Place a sheet or one towel on treatment surface for the body and a hand towel at the top for the head. Cover with thermal wrap.
- 2. Client lies face down and is draped.
- Use the handheld sprayer to sprinkle warm water on the client's backside including torso, legs and feet. The draping towel can be dampened to keep the client warm.
- 4. Apply the salt mixture with a vigorous circular motion to the back of the body. Start at the feet, moving up the legs to the back. Circular motions are critical to avoid stretching the tissues.
- 5. Rinse the back of body down with the handheld sprayer. Make sure the water is warm; your client may be chilled.
- 6. Turn on Hydro-Kinetic Vichy Shower to rinse, warm and invigorate the client. Important: remember to adjust pedestal table to maximize the treatment. Follow standard operating directions. Treatment should last approximately three minutes.
- 7. After treatment, brush any excess water to the sides so that water can drain.
- 8. Ask client to turn over into supine position, drape appropriately.
- 9. Repeat salt glow procedure on front of body—going from feet, legs, arms, shoulders and abdomen, stopping at the base of the neck. Never apply salt to face.
- 10. Set Hydro-Kinetic Vichy Shower in place, and adjust table. Note: an extra towel compress can be placed on the face to avoid any splashing. Turn shower on according to standard directions. Treatment time is approximately three minutes.
- 11. After Hydro-Kinetic treatment, swing Rainbar out of the way. Remove wet towel and replace with dry towel.
- 12. Roll thermal plastic wrap up and tuck in the groove between the table and mat. Client will now be lying on a dry surface.
- 13. Pat client's skin dry to remove excess moisture.
- 14. Apply finishing lotion/cream application to front of the body; lifting each leg to cover the back of the leg and the gluteus maximus. Application strokes

should move upward towards the heart. Next, instruct client to hold their drape in place, and help them client sit up, with legs over the side of the table. Finish applying the lotion or cream to the back of the body.

15. Lower pedestal table if available, help client carefully get off the table. A towel should be placed under the feet if the floor is damp.

# **Introduction To Full Body Masque**

This relaxing treatment revitalizes the body and re-mineralizes the skin using nature's most exquisite yet basic products. These include muds, seaweeds, spirulina, and some clays. This full body masque encloses the client completely in a nourishing cocoon for a luxurious, meditative experience. The natural agent is removed and a re-moisturizing application of a finishing lotion or cream is used to complete the treatment.

Wet Room equipment should includes:

Wet Spa Table (pedestal option ideal)
Hydro-Kinetic Vichy Shower (optional but ideal)
Wet mat around table or non-slip flooring
Infrared Lamp (optional)- must be on a ground fault circuit
Roll about cart or product tray

#### Accessories needed:

- Washable Wool Blanket
- Thermal Space Blanket, keep two in the room to accommodate clients of size
- Full Length Bolster
- Flex Bowls 2 ideal
- Two pieces of thermal plastic wrap or Mylar® sheeting- 6 feet each
- Loofah can be used for easier natural agent removal
- 1 latex glove
- 4 hand towels, 4 bath towels, 1 fitted wet sheet can replace a hand towel and bath towel
- Bin for wet towels
- Waste container

#### Products needed for treatment:

Products required for most body masques include:

- 1. 1/3 cup to 2/3 cup natural agent (Moor Mud, Algae, Spirulina, Clay)
- 2. Essential Oils
- 3. Finishing Lotion or Cream

Examples of product combinations are as follows:

# Exfoliating and Mineralizing Moor Mud Body Masque:

- 1. 1/3 to 2/3 cup Moor Mud
- 2. 4 drops pure essential oil
- 3. 2 Tbs. moisturizer

# Detoxifying Seaweed Body Masque:

- 1. 2/3 cup Algae (e.g. Digitata Laminaria and Lithotanium Calcarium)
- 2. 4 drops pure essential oil
- 3. 2 Tbs. moisturizer

# Nourishing Spirulina Body Masque:

- 1. 1/2 to 2/3 cup Spirulina
- 2. 4 drops pure essential oil
- 3. 2 Tbs. moisturizer

#### Purifying Clay Body Masque:

- 1. 1/3 to 2/3 cup Clay
- 2. 4 drops pure essential oil
- 3. 2 Tbs. moisturizer

**Treatment Time: 60 to 90 minutes** 

# **Procedure: Full Body Masque In the Wet Room Environment**

Prepare your room for the client

- Begin warming natural agents to body temperature in a TouchAmerica Hot Towel Cabi or according to facility procedures. DO NOT USE THE MICROWAVE. Remember to add essential oils later.
- 2. Set table up. Layer in the following order:
  - Bath towel and hand towel, or fitted sheet
  - Thermal Wrap (Mylar® is too expensive for this layer)
  - Wool Blanket
  - Bath towel at head of table, use folding technique for cocoon wrap
  - Optional: hand towel for head wrap
  - Thermal space blanket
  - Thermal plastic wrap or Mylar®
  - Bath Towel for draping
- Prepare and measure remaining ingredients and place on work tray.
   Remember to customize with essential oils at this point. Have towels easily accessible.

# Client Preparation:

- 4. Guide client from steam, shower or sauna. This raises the client's core body temperature, making the treatment more effective. However, it is optional. Lower the Pedestal Wet Spa Table for easy client entry. For added service, place a towel where the client sits on the table. Another towel can be placed on the floor as well if it is damp or cold. Drape client.
- 5. Ask client to sit on side of table, holding towel up as a drape.

#### **Natural Agent Application**

- 6. To minimize moving, as the client is sitting on table, apply warm product to back of body with one hand in the latex glove. Have client lie down and continue applying product to shoulders and arm. Loosely wrap with thermal wrap to keep client warm. Note: Natural agents can be messy; that's why we recommend you apply it with only one hand. It keeps things neat, keeps one hand clean, and gives you more control. Application of product should be even and smooth with long intentional strokes.
- 7. Raise knee to triangular position, anchor leg with one hand while applying product to the top and bottom of the leg. Bring the leg down onto the table

- and cover with thermal wrap. Do the same with the other leg. Note: Take care to cover most of the body, especially the torso and the back. Do not worry if you miss a spot.
- 8. With your clean hand apply a breast drape for females and place modesty drape as shown in class for maximum product coverage. Apply product to abdomen in gentle clockwise circular strokes. Next apply products to the décolleté area and arms (avoid the breast area).

# **Wrapping Procedure:**

- 9. After the client is completely covered in the product, begin the cocoon wrapping procedure. Wrapping the body correctly is very important. Air pockets and drafts should be eliminated to keep the client warm and ensure the product does not dry out. Make sure thermal wrap is securely tucked around legs and around the shoulders, as these are the major heat loss areas. Remember: Tuck and fold.
- 10. Next, wrap, tuck and fold space blanket. Enclose head in cocoon wrap and finish with remaining wool blankets layers. Neatness counts! Client should remain in the cocoon wrap for approximately 18 to 20 minutes. Note: For large clients, an extra piece of thermal wrap or towel can be placed around the client before finishing with the wool blanket.

When adding a facial: If a client is receiving a facial masque procedure, remember to make sure head wrap is in place before cocooning the head. Cocoon wrap can be loosened if you are giving a facial.

11. A full-length, Wet Bolster should always be placed under the knees for wraps as this relieves tension on the lower back when lying supine. Relaxation for the client can be aided by: low lights, soft music, a room temperature facial compress or an aromatherapy diffuser. A facial masque or aromatherapy massage with steam towel is an excellent addition to this treatment.

# **Unwrapping procedures:**

12. After client has been wrapped for 20 minutes, place towel for draping on top wool blanket, remove bolster and unwrap wool blanket and space blankets. This takes a little practice. Loosen wool blanket and thermal blanket to prepare for backward tootsie roll. Have client sit up and roll wool blanket and thermal space blanket out from under client. (Remember space blanket wraps around wool blanket). Have client lay down with draping towel in place. Remove thermal plastic wrap using side-to-side procedure. Have client turn onto their stomach to prepare for Hydro-Kinetic Shower rinsing.

# **Rinsing Procedures:**

- 13. Rinse the back of body down with the hand held sprayer. Make sure water is warm before you start. The client can get chilled at this point.
- 14. Turn on Hydro-Kinetic Vichy Shower to rinse, warm and invigorate the client. Important: Remember to adjust Pedestal table to maximize the treatment. Follow standard operating directions. Treatment should last approximately three minutes.
- 15. After treatment, brush any excess water to the sides of the table so that water can drain.
- 16. Ask client to turn over into supine position, drape appropriately.
- 17. Set Hydro-Kinetic Shower in place. Note: Towel compress can be placed on the face to avoid any splashing. Turn shower on according to standard directions. Treatment time is approximately three minutes.
- 18. After Hydro-Kinetic Vichy treatment, swing Rainbar out of the way. Remove wet towel and replace with dry towel, per draping procedures.
- 19. Roll thermal plastic wrap to the side. Client will now be lying on a dry surface.
- 20. Pat client's skin dry to remove excess moisture.
- 21. Apply finishing lotion/cream application to front of the body; lifting each leg to cover the back of the leg and the gluteus maximus. Application strokes should move upward towards the heart. Next, instruct client to hold their drape in place, and help them client sit up, with legs over the side of the table. Finish applying the lotion or cream to the back of the body.
- 22. Lower pedestal table. A towel should be placed under the feet if the floor is damp. Give the client a robe and slippers.

# **Hydrotherapy: Temperature Ranges for the Body**

| Description     | Range Degrees in F | <u>Comments</u>                       |
|-----------------|--------------------|---------------------------------------|
| Dangerously Hot | 125                | Can injure tissue                     |
| Painfully Hot   | 111-124            | Intolerable                           |
| Very hot        | 105-110            | Can tolerate for short period of time |
| Hot             | 100-104            | Tolerable but skin turns red          |
| Warm            | 92-100             | Comfortable                           |
| Neutral         | 94-97              | Average skin temperature              |
| Tepid           | 80-92              | Slightly below skin temperature       |
| Cool            | 70-80              | Produces goose flesh                  |
| Cold            | 55-70              | Tolerable, but uncomfortable          |
| Very cold       | 32-55              | Painfully cold                        |

# **Guidelines for Selecting Hot or Cold**

| Problem                         | Response Desired                                 | Heat        | Cold        |
|---------------------------------|--|-------------|-------------|
| Pain                            | Analgesia by hyper-stimulation<br>Anesthesia     | Yes         | Yes         |
| Muscle spasms                   | Reduce pain by clearing metabolites              | Yes         | No          |
| Edema                           | Unclear evidence<br>Acute edema<br>Chronic edema | No?<br>Yes? | Yes?<br>No? |
| Joint Stiffness                 | Increased mobility                               | Yes         | No          |
| General stimulant or relaxation | Mild/moderate sensory stimulation                | Yes         | Yes         |

# **Physiological Responses to Applied Heat**

| Physiological Response                             | Results   | Clinical Significance                            |
|--|---|--|
| Mild heat sensation                                | Analgesic/sedative  | Decreases pain and spasms;                       |
| Moderate heat sensation                            | Autonomic   | Aids relaxation                                  |
| Extreme heat sensation                             | "Fight or flight" reaction                                  | Invigorating<br>Pain/fear                        |
| Changes in skin color                              | Erythema  | Increased blood flow                             |
| Increased metabolic rate                           | Increased healing and waste production                      | Increases heat production and tissue temperature |
| Increased blood flow                               | Increased bleeding  | Increased healing                                |
| Reflex response                                    | Increased cutaneous blood flow in related areas of the body | Transitory effect                                |
| Increased capillary permeability                   | Increase/decrease in interstitial fluid                     | Increase/decrease edema                          |
| Increased sweating                                 | Increased cooling   | Decreases fluid/salt balance in body             |
| Fluctuation in cardiovascular activity             | Changes in heart rate & blood pressure                      | Puts stress on CV system                         |
| Increased respiration                              | Little value in maintaining thermal homeostasis             | Indicates heat distress                          |
| Decreased joint stiffness                          | Increase speed & freedom of joint movement                  | Increases agility                                |
| Increased extensibility of non-<br>elastic tissues | Assist in stretching tendons and scar tissue                | Increases range of motion                        |
| Increased peripheral nerve activity                | Increased conduction velocity                               | Motor function increases                         |

# **Physiological Responses to Applied Cold**

| Physiological Response                                   | Results   | Clinical Significance                         |
|--|---|---|
| Mild cold sensation                                      | Analgesic/sedative  | Decreases pain & spasms & relaxing            |
| Moderate cold sensation                                  | Autonomic   | Invigorating & stimulant                      |
| Extreme cold sensation                                   | "Fight or flight" response                                      | Pain and fear                                 |
| Initial vasoconstriction (Superficial)                   | Decreased superficial bleeding                                  | May not alter or may increase deep blood flow |
| Secondary vaso-fluctuations                              | Blood flow varies   | Protects tissues from cold injury             |
| Change in skin color                                     | Initial: blanching  | Decrease in superficial blood flow            |
|  | Secondary: redness  | Increases superficial blood flow              |
| Increased blood viscosity                                | Decreased blood flow  | Retards bleeding                              |
| Decreased metabolic rate                                 | Decreased inflammation may decrease edema                       | May retard healing                            |
| Rapid muscular contraction (shivering)                   | Increased metabolic rate  | Maintaining thermal homeostasis               |
| Piloerection   | Goosebumps  | Ineffectual attempt to maintain homeostasis   |
| Decreased extensibility of non-<br>elastic tissue        | Decreased ability to stretch tendons & joint capsules           | Decreased range of motion                     |
| Decreased peripheral nerve activity                      | Decreased firing & conduction of motor & sensory nerves         | May decrease spasticity                       |
| Possible decreased temperature of joint tissues & fluids | Increased joint stiffness & decreased activity of fluid enzymes | Decreased speed of joint motion               |