

Chapter 24 Hydrotherapy and Spa Applications

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Introduction

- Throughout history and in many cultures, water has been used to maintain health and treat illness
- Hydrotherapy is the internal and external therapeutic use of water and complementary agents
- Father Sebastian Kneipp (1821-1897): “father of hydrotherapy”; from Germany; published *My Water Cure* in 1886

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Father Sebastian Kneipp



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Spa

- A spa is a place where water therapies are administered
- Spa therapies: body treatments (including massage) in which use of water is central
- Four types of spas:
 - Day spa: day use only
 - Resort or hotel spa: located in resort or hotel
 - Destination spa: overnight accommodations
 - Medical spa: includes medical services

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Water as a Healing Agent

- Liquid water changes to solid ice after being cooled to 32° F or 0° C
- Changes to steam (gas) after being heated to 212° F or 100° C

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Water as a Healing Agent

- Body's maintenance of homeostasis in a changing environment is key to hydrotherapy
 - When heat is applied, blood vessels dilate and perspiration is produced to cool the body
 - When cold is applied, blood vessels first constrict to prevent body from losing heat
 - After a time, blood vessels dilate so that heat can be carried to the application site

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Water as a Healing Agent

- Temperature:
 - The greater the difference between body and water temperature, the greater is the physiological effect
 - Gate theory (Chapter 5)—when multiple nerve impulses compete for same synaptic gate, stimulus affecting Type A (fast) fibers preempts that affecting Type C (slow) fibers
 - Tissue damage can result from temperatures below 32° F or above 124° F

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Water as a Healing Agent

- Moisture:
 - Steam baths (100% sauna)—heavier air more difficult to breathe, but moistens mucous membranes and skin
 - Saunas (10–20% sauna)—air easier to inhale, but may be too drying to skin and mucous membranes

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Water as a Healing Agent

- Mineral waters from natural springs:
 - Saline—purgative
 - Iron oxide—restorative
 - Sulfur—cleansing
- Re-create natural mineral water—sea salt, magnesium sulfate (Epsom salts), and sodium bicarbonate soaks can enhance detoxification and reduce soreness

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Water as a Healing Agent

- Mechanical Effect
 - Water may be pressurized as in whirlpool or shower
 - Mechanical effect of water intensifies with increased pressure
 - Two important effects of water
 - Density
 - Buoyancy

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Water as a Healing Agent

- Density
 - Principle of Relative Density: a body immersed in water experiences an upward force equal to the weight of water
 - Density of water = 1
 - Objects less dense than water float; those more dense sink
 - Density of human body is close to that of water, so water has a buoyant effect on body

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Water as a Healing Agent

- Hydrostatic Pressure
 - Law of Pascal: pressure exerted on a body immersed in fluid is equal at a constant depth and is exerted equally in a horizontal direction at any level experiences an upward force equal to the weight of water
 - Hydrostatic pressure increases with depth and fluid density
 - Water immersion of a limb with edema can move the fluid up and reduce swelling

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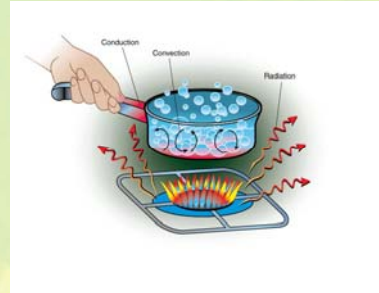
Thermotherapy

- Thermotherapy—external application of heat for therapeutic purposes
- Heat can be delivered in four ways:
 - Conduction: direct contact
 - Convection: air or liquid
 - Radiation: heat rays
 - Conversion: energy converts to heat
- Short-term heat applications = stimulating effect; prolonged = depressing effect

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Conduction, Convection, and Radiation



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Cryotherapy

- Cryotherapy—external, therapeutic application of cold
- Safer, simpler, and more effective than heat for reducing pain and swelling in injuries
- Has replaced the use of heat in many clinics

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Cryotherapy

- Hunting response—15–30 min. cycle:
 - Vasoconstriction—reflex that causes a reduction in blood flow (first 9–16 minutes)
 - Vasodilation—increase in the diameter of blood vessels to restore homeostasis (next 4–6 minutes); a thermoregulatory response to restore homeostasis and raise local temperature
 - Cycles lead to vascular pumping, which flushes out tissue debris and brings in oxygen

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Cryotherapy

- Client experience during cold application:
 - Coldness or cooling
 - Burning
 - Stinging or aching
 - Numbness or reduced sensation
- Short application has a stimulating effect on the body
- Long application has a depressing effect on the body

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Treatment Guidelines

- Maintain equipment in good working order; take care that water does not damage floors, walls, furniture, or equipment
- Follow safety and sanitation procedures
- Use standard precautions for clean-up if body fluids touch equipment or linens
- Client should not eat at least 1 hour before scheduled appointment

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Application Methods

- Categories of hydrotherapy applications:
 - Packs—a bag, sack, or other item used to apply or retain cold or heat
 - Baths—partial or full immersion in water, wax, light, or heated air
 - Frictions (rubs)—shampoos, brushes, polishes, scrubs, and glows

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Packs

- Compress—a wet cloth (washcloth or towel) wrung out and applied to skin
 - Hot compresses—most often used on forehead, spine, or over entire back
 - Cold compresses—used to keep client comfortable during heat treatments (bath, steam bath, sauna, body wrap) or to soothe an area after deep-pressure massage

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Packs

- Hot packs (fomentation packs)—many different varieties, from hot water bottles to electrically heated
- Hydrocollator packs—heated in a special warmer that keeps them at 165° F
 - Cannot be handled directly; must be wrapped in several layers of insulation (towel or cloth) to avoid burning the skin
 - Never place underneath client

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Packs



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Packs

- Cold gel packs and cold pack—often used to decrease inflammation or reduce postmassage soreness



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Packs

- Cryokinetics
 - Cold pack, ice immersion, or ice massage followed by full range of motion
 - Cold reduces pain barrier and allows restricted muscles to be freed

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Packs

- Thermal mittens and booties:
 - Two types: (1) filled with buckwheat and heated in microwave; (2) electric
 - Often used to enhance a moisturizer, such as Shea or cocoa butter, jojoba oil, or paraffin wax, which is applied to the skin

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Heated Mitts and Booties



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Packs

- Hot or cold stones—basalt and marble stones applied to skin or used as a tool
- Product pack or mask—many different topical applications available



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Packs

- Body wraps: sheets or bandages wrap the body
 - Compression wraps—use an soaked elastic bandage material to cover body tightly
 - Cover wrap—use wet or dry sheets
 - Dry cover wraps—often used to cover a mask
 - Wet cover wraps—soaked in herbal tea (herbal wrap) or other product

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Packs

- Body wraps—preparing table and client



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Mud Packs



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Cover Wraps



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Compression Wrap



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Packs

- Shirodhara: Ayurvedic treatment using oil poured over client's forehead
- Oil pours from copper vessel hung above client's head



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Packs

- Contrast packs—application of heat and cold; two types
 - Alternating
 - Simultaneous

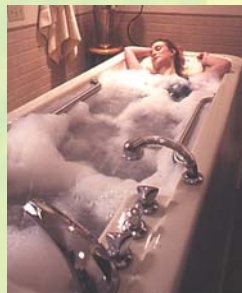


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Baths

- Hot immersion bath—full or partial immersion
 - Hot tub: no jets
 - Spa tub: chemically treated water
 - Whirlpool: water drained after use



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Whirlpool Tub



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Spa Tub



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Hot Tub



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Baths

- Underwater massage—client soaks in warm-water tub and is massaged by jets from a hand-held hose
- Ice immersion—short soak of a limb in icy water; usually to reduce inflammation
- Pool plunge—immersion in 50–60° F water to close pores and reduce vasodilation; usually follows a heat treatment such as sauna, steam bath, or hot tub

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Underwater Massage



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Plunge



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Baths

- Watsu (water shiatsu)—therapist holds client in pool of neutral-temperature water, massaging muscles and mobilizing joints
 - Releases and opens energy pathways
 - Warm water and buoyancy are ideal for reducing mental and physical tension
- Flotation—sensory deprivation technique; client floats in tank or capsule filled with neutral-temperature, sterile salt water

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Watsu



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Baths

- Hot air baths
 - Sauna—10-20% humidity at 160–210° F in a wood-lined room
 - Indicated for tension and insomnia; increases metabolism and circulation; removes toxins
 - Steam baths—100% humidity at 105–120° F in a ceramic-tiled room
 - Steam canopies and cabinets are practical as they allow head to be exposed

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Sauna



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Steam Bath



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Baths

- Paraffin baths—dipped baths that are particularly useful on angular, bony areas
 - Softens skin and relieves pain
 - Paraffin wax kept in heated container at 125–134° F
 - Wax may also be painted on
 - Lotion or cream may be applied to area before dipping, to assist in wax removal after treatment

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Paraffin Bath



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Baths

- Shower—bath technique where water is sprayed in fine streams from a showerhead under low to medium pressure
- Can use regular water, or seawater, mineral water, or aromatic water

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Baths

- Swiss shower
 - Water sprayed on standing client from overhead and side-positioned jets
 - Water pressure and temperature varies to create stimulating or invigorating effects
 - Popularized in Switzerland

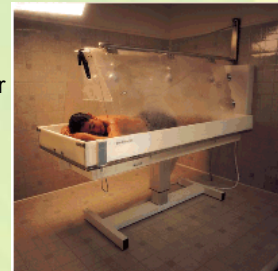


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Baths

- Vichy shower
 - Client reclines on a table while water is sprayed from overhead jets
 - Originated in Vichy, France



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Vichy Shower



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Baths

- Jet Blitz—therapist is located at a distance and uses a hose to spray strong jets of water on standing client
- Contrast baths—combining a hot bath with a cold one in same treatment
 - Most potent hydrotherapy method

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Jet Blitz



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Frictions

- Frictions used for exfoliation, or removal of dead skin cells
- Shampoos—gentle scrub using brush dipped in warm, soapy water
 - Swedish shampoo ends with a hot water pail pour (105° F)
 - Turkish shampoo ends with a tepid water (90° F) pail pour

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Frictions

- Dry brush massage—short, brisk strokes toward heart; often used before a body wrap or mask
- Body scrub—coarse, gritty material used to exfoliate skin

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Body Scrub



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Salt Glow



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Frictions

- Body polish—fine, grainy substance; finer than for scrubs or glows
- Udvartana—treatment using herbal paste to stimulate lymphatic circulation
 - Consistency of paste adds an exfoliating element
 - Usually done before Swedhana (steam therapy) for optimal effects

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Frictions

- Ice massage—circular friction using ice



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Frictions

- Cold-towel friction—towels dipped into icy water are rubbed against the skin, causing blood vessels to contract and dilate



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Aromatherapy

- Essential oils used in India for ayurvedic medicine for over 10,000 years and by Egyptians as early as 4500 BC
- Aromatherapy—use of plant-derived essential oils for therapeutic purposes
- Enhances treatment effectiveness and creates inviting atmosphere

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Aromatherapy

- Olfaction—sense of smell
 - Olfactory bulb, part of limbic system, is located on superior surface of nasal cavity
 - Olfactory receptors, when stimulated, send impulses along olfactory nerves to brain
 - Limbic system regulates emotional behavior
 - Easiest way to stimulate limbic system is through smell

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Aromatherapy

- Essential oils—concentrated essences of aromatic plants
 - Over 200 pure essential oils are available
 - 75 to 100 times stronger than dried versions
 - Must be diluted and used only in drops
 - Enter body by absorption through skin or inhalation
 - Most commonly extracted by steam distillation

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Aromatherapy

- Plant parts and associated essential oils:
 - Flowers (lavender, jasmine)
 - Fruits (bergamot, lemon)
 - Grasses (citronella)
 - Leaves (eucalyptus, peppermint)
 - Roots (ginger, vetiver)
 - Seeds (black pepper, fennel)
 - Tree blossoms (ylang-ylang, clary sage)
 - Woods & resins (sandalwood, frankincense)

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Aromatherapy

- Storage
 - Store in dark, airtight container in cool, dry place away from direct sunlight
 - No rubber caps or squeeze bulbs: oils will deteriorate them
 - Shelf life of up to 7 years, unless mixed with carrier oil
 - Volatile: will evaporate quickly in open air
 - Keep out of children's reach

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Aromatherapy

- Carrier oils—fatty substances used to dilute and suspend, or carry, essential oils
 - Examples: olive oil, almond oil, jojoba oil, Shea butter, whole milk, creams, lotions, shampoo, conditioner, liquid soap
 - Carriers with higher fat content are more stable (longer shelf life)
 - Vitamin E can be added to lengthen shelf life
 - Not water soluble, but can be added to water, if dispersed

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Aromatherapy

- Essential oil safety
 - Use only oils familiar and tolerable to you
 - Avoid using on infants
 - Cut dose in half for children
 - Avoid using near eyes
 - Always use carrier oil
 - Be aware of client contraindications (pregnant and nursing women, seizure disorders, etc.)
 - Take special care when using photosensitive and highly toxic oils

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Aromatherapy

- Essential oil uses in massage and spa
 - Inhalation
 - Diffusion
 - Room mister
 - Baths
 - Compress
 - Massage lubricant
 - Body treatment product

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Summary

- Hydrotherapy and spa techniques take advantage of water's healing properties
- Cryotherapies and thermotherapies include packs, baths, and frictions
- Aromatherapy enhances therapeutic effects of massage and spa techniques
- Offering spa treatments increase therapeutic effectiveness, client satisfaction, and marketability

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