Soft Tissue Release with
FASCIAL CUPPING THERAPY:
New Uses for Old Tools


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Course Description
CUPPING THERAPY

Myofascial Cupping Therapy is a centuries-old method of managing medical conditions, based on traditional Asian Medicine. Now you can reap the benefits of modern cupping therapy in your practice, to release scar tissue and fascial adhesions, manage trigger points, improve circulation, relieve pain and promote mobility.

Many clinical conditions may benefit from cupping as part of program design to improve functional outcomes. In this hands-on course, you will experience the benefits of cupping techniques with clinical tips on how to utilize specialized manual therapy tools to improve functional outcomes with measurable results!

LEARNING OBJECTIVES

- Discuss the history and benefits of cupping therapy
- List indications, contraindications, and precautions for cupping therapy
- Discuss the evidence based research for cupping therapy
- Discuss the application of cupping therapy as part of program design to treat a variety of clinical conditions to promote mobility and functional outcomes.

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AGENDA

- **Introduction, history of negative pressure cupping, theory, equipment safety and infection control**
- **Oriental medicine theory and practice, historical and modern**
- **Evidence related to cupping therapy, precautions, indications and contraindications, benefits**
- **Myofascial release concepts, scar release**
- **Medical cupping and demonstration: skin glide and scar release**
- **Cupping interventions for specific conditions**
- **Question and answer time**

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EDUCISE
Educate the Body
Exercise the Mind

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Introduction from Dr. Theresa Schmidt

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Centuries-Old Method of Managing Medical Conditions

You saw it on the Olympian swimmers in the 2016 Games, on Michael Phelps, on the backs of actresses sashaying down the red carpet

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History of Cupping Therapy "Baguan"

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Folk Medicine Remedy

- Ancient cups were hollowed horns or bones of animals and bamboo plants, used to suck out toxins from snakebites and insect venom

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HISTORICAL USE

- Asians
- Egyptians
- Greeks
- Hebrews

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TCM

Acupuncturists use glass fire cups along with Traditional Chinese Medicine (TCM) to treat a variety of conditions

Cupping is often combined with acupuncture needles, moxabustion, herbs and other traditional remedies

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USE CUPPING FOR FASCIAL RELEASE!

GET A GRIP!

- **Imagine how much easier it is using a tool to grip and elevate the skin and fascia!**
- **Save your hands and be ergonomically efficient with CUPPING!**

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ORIENTAL MEDICINE THEORY

- The whole is greater than the sum of the parts. All is connected
- Five Element Theory
- Chi or energy flow through the body in a system of channels or meridians- 12
- Excessive or deficient energy flow leads to dis-ease
- Balancing the Five Elements restores health

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ORIENTAL MEDICINE PRACTICE

- Acupuncture
- Herbs
- Exercise
- Breathing
- Diet, nutrition
- Manipulation, cupping, *BaGuan*, scraping, *Gua sha*, TuiNa, Amma, Shiatsu, massage styles

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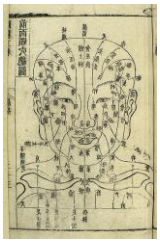

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ACUPUNCTURE THEORY

- Yin and Yang forces must balance for health, 6 divisions of the two form the 12 meridians through which the Qi flows
- 12 channels or meridians and governing and conception vessels carry energy Qi throughout the body, interconnected in a balance
- Lung, colon, stomach, spleen, heart, small intestine, bladder, kidney, heart envelope, San Jiao, Gall Bladder, Liver

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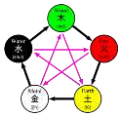
Bioenergy Flow



- **Imbalances in the flow** of creation and control indicate dis-ease
- Acupuncture points may be overly sensitive
- Acupressure stimulates points on the energy channels to **restore flow of Qi and blood,** to balance the organ related to that point/channel
- **Cups are applied to points** or tendino-muscle channels to restore Qi flow and balance

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FUNCTIONAL VS STRUCTURAL

- Oriental medicine focuses on the synthesis of how the body parts interrelate in terms of energy and function, and restoring balance for health
- Western medicine focuses on breaking down the body parts into components, to be medicated or repaired individually without regard to the whole, to restore health

(Sohn, *Amma Therapy*, 1996)

MANUAL THERAPY TOOLS

Today, manual medicine practitioners, doctors, therapists, massage therapists and trainers want to save their hands and get a grip on skin and muscle for soft tissue mobilization.

Suction Cups, known as negative pressure cupping tools,

make excellent tools to save your hands and

release abnormal tissue tension.

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EQUIPMENT: Instrument-assisted soft tissue mobilization (IASTM)

- Cups
- Lubricants
- Pumps
- Draping, gloves
- Disinfection materials
- Positioning and accessory devices

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CUPPING TOOLS

- Bamboo, pottery- single use, not recommended, chance of infection
- **Glass fire cups** "fishbowls"
- **Plastic cups**
- Rubber cups
- **Silicone cups**

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CUPPING SUCTION METHODS

- **Manual suction-** silicone or rubber bulbs create negative pressure
- Rubber or silicone cups and toilet plungers
- **Mechanical or electrical suction** creates measurable negative pressure in Pascals (Pa) to lift the tissue
- *This course will address manual suction tools and other therapy tools to facilitate mobility*

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RECOMMENDED CUPS

- For **fire cupping,** thick glass with rounded rims to glide over skin easily
- For **silicone or plastic** cups, thicker rounded rims allow greater glide, some have flat rims for direct stationary suction
- Desire optimal vacuum effect with **air-tight** contact
- Requires **lubricant** for gliding cups to adhere effectively, not needed for stationary

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GLASS FIRE CUPS: caution!

- **Glass Fire Cupping** uses negative pressure for suction
- Heat the air inside the cup with alcohol wipe or other flammable agent, (coconut oil) light just prior to application to the skin, create a suction vacuum effect as the air cools and oxygen is used, the flame is extinguished just prior to application to avoid burns
- Timing is critical, to prevent burns
- Might not be insured by malpractice insurers

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SILICONE CUPPING TOOLS

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SILICONE CUPS

Silicone cups are made of relatively soft material to allow one to squeeze the cup, applying pressure to empty the air inside,

then quickly place the cup on the skin,

As the pressure is released, the vacuum effect anchors the tissue into the cup, allowing it to adhere to the skin, no burning required

Lubricant helps seal the cup edges to the skin, and allows one to glide the cups while maintaining suction, oils work best

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PLASTIC CUPS & PUMP

Mechanical cupping is performed using plastic cups with movable valves on top for use with a **handheld** or **pneumatic/ electric suction pump**

The valves and pump **allow adjustments** in degree of suction (-Pascals) for light, medium and strong negative pressures

Some have magnets built in for acupuncture effects

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Mechanical Suction Cups & Pump

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TYPES OF CUPPING STYLES

- **Wet**- still used by TCM practitioners but high risk of adverse events (Hijama)
- Small cuts are made on the skin for medicinal bloodletting, then stationary suction cups are placed to drain the body of stagnant energy and toxins, such as heavy metals
- High risk due to open wounds
- Most states do not allow wet cupping as part of PT, LMT, OT practice
- **Wet cupping is not addressed in this seminar**

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Wet Cupping: Bleeding

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TYPES OF CUPPING STYLES

- **Dry**- what we use for soft tissue mobilization
- Involves placing pressurized suction cups on the skin to draw the tissue into the cup to increase circulation, stimulate energy flow and tissue mobility/ stretching
- May be used with or without lubricants
- May be **stationary-static or movable/ gliding**
- May be temperature controlled for fire cups

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TYPES OF CUPPING STYLES

- **Moxa**: using mugwort herb heated to apply to acupuncture points, under the cups
- **Herbal** cupping, using herbal oils, tinctures, preparations, teas or poultices inside the cups
- **Flash** cupping- 1-2 second application and removal of fire heated cups
- **Water** cupping, filling cups with heated water and applying to skin

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TYPES OF CUPPING STYLES

- **Needle** cupping- placing acupuncture needles in the skin, then applying suction cups over the needle
- **Magnet** cupping- include a magnet in the cup to stimulate the skin
- **Aquatic** cupping- placing suction cups when body part is submerged in water

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SAFETY

- **Infection control**: ensure cups are clean, for silicone, wash with antimicrobial soap and hot water
- **Maintain sanitary conditions** for your treatment area, proper handwashing
- ***Never use cups over broken, irritated, abnormal or damaged skin***
- **Never leave clients alone** when cups are engaged, keep an eye on the response

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SAFETY

- Manage the amount of negative pressure carefully, **too strong a suction may damage** the skin or cause the superficial layers to separate from the dermis
- **Avoid leaving the cups in place for more than a 10-15 minutes** to limit the development of bruising/ reddish/purple discoloration
- **Use ample lubricant** to allow gliding, sliding

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TYPICAL CUPPING MARKS

Dark purple marks- a normal reaction when cups left in place several minutes, differs with age, skin type, color, and level of toxicity

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ADVERSE REACTIONS

- **Infection**- unclean cups, hands, broken skin, cross contamination (burns if firecups)
- **Blistering**- too strong suction or cups left on too long
- **Hives-** some people have high inflammatory reactions to soft tissue mob STM
- **Pain-** typical with gliding if tissue is tight, may sting or hurt during the stretching

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INFECTION CONTROL INFO

Websites for sterilization/ disinfection:

- Centers for Disease Control and Prevention:
- http://www.cdc.gov/ncidod/dhqp/sterile.html
- Food and Drug Administration: http://www.fda.gov/dcrh/ode/germlab.html
- Environmental Protection Agency: http://www.epa.gov/oppad001/chemregindex.htm
- University of North Carolina: http://www.disinfectionandsterilization.org

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CDC RECOMMENDATIONS

- "Medical equipment surfaces (e.g., blood pressure cuffs, stethoscopes, hemodialysis machines, and X-ray machines) can become contaminated with infectious agents and contribute to the spread of health-care–associated infections 248, 375.
- For this reason, noncritical medical equipment surfaces should be disinfected with an **EPA-registered low- or intermediate-level disinfectant.** Use of a disinfectant will provide antimicrobial activity that is likely to be achieved with minimal additional cost or work." From: https://www.cdc.gov/hicpac/index.html

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CDC CATEGORIES

To reduce risk of transfer of pathogens

Instruments are categorized as

- **Critical**- pass through tissue and vascular
- **Semi-critical**- may contact non-intact skin or mucus membranes
- **Non-critical-** contact intact skin
- **Cups are semi-critical since we cannot guarantee skin is fully intact**

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CUP INFECTION CONTROL

"Cups (made of glass or plastic), scraping spoons, gua sha tools and any other equipment **which has been in contact with intact skin only** are non-critical items and can be reprocessed by cleaning and/or disinfecting according to the NHMRC Guidelines. NHMRC 2010, pp. 34-45, available at:

www.nhmrc.gov.au/book/australian-guidelines-prevention-and-control-infection-healthcare-2010/b1-1-hand-hygiene"

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HIGH LEVEL DISINFECTION OR STERILIZATION REQUIRED

- Use high level disinfection of cups for re-use
- FDA regulates disinfecting agents used in a staging area separate from patients
- Use immersion in Sporox or hydrogen peroxide
- Visit www.pdipdi.com for info

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Disinfection Procedure for Cups

- Wash with soap and water
- **"Immerse instruments in 7.5 % Hydrogen peroxide solution: Sporox® II Sterilizing and Disinfecting Solution**
- **30 minutes: high level disinfection**
- 6 hours: complete sterilization
- [Note: hydrogen peroxide sold in pharmacies is not strong enough at 3%]"
- (From: http://guasha.com/wp-content/uploads/2013/07/SafetyStandards_Guasha_Baguan.pdf)

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KEEP EQUIPMENT, CUPS, SKIN AND HANDS CLEAN

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CONTRAINDICATIONS

- **Skin must be intact, not broken or infected**
- **Do not use over any skin irritation**
- Do not use on juvenile or elderly skin
- Do not use if skin bruises easily, with bleeding disorders (anticoagulant meds/ bleeding tendencies/blood thinners)
- It is not advised for use during pregnancy
- Don't use with patients who cannot provide informed consent

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CONTRAINDICATIONS

- Skin wounds, lipomas, allergies, moles, cancer, purpura, ulceration, eczema, psoriasis
- Sunburn, pimples, swelling, abrasions, rash
- Fever, convulsions, cramps, chemotherapy
- Large superficial blood vessels, varicose veins, spider veins, pulses
- Poor circulation or severe heart disease
- Unhealed fracture or instability
- Leukemia, hemophilia, vasculitis, thrombocytopenia

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CONTRAINDICATIONS

- " When psoriasis was treated by cupping therapy, subsequent development of the Koebner phenomenon at the cupped sites was observed. Cupping can induce both epidermal cell injury and dermal vascular damage in terms of abrasions, ecchymosis, and purpura.[108] " (skin lesions due to trauma)
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4488563/

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ABNORMAL MARKS: PURPURA

From: By James Heilman, MD - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=11857197

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CONTRAINDICATIONS

- areas of poor circulation
- diabetic, thin or fragile skin
- over areas with abnormal sensation or lack of sensation, neuropathy
- over trachea, near eyes, genitalia
- cases of severe edema
- cases of heart disease
- Post-surgical scars require medical clearance prior to cupping
- **Get medical clearance for any condition you are unsure of**

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INDICATIONS

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CUPPING BENEFITS

- Mobilize scar tissue, myofascial release
- Soft tissue mobilization, improve ROM
- Decrease toxins
- Increase muscle and fascial mobility

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CUPPING BENEFITS

- Reduce painful trigger points
- Increase blood and lymph circulation
- Improve functional mobility
- *Some studies show improvements in other conditions, this seminar focuses on **musculoskeletal and myofascial disorders***

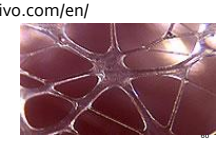
MYOFASCIAL SOFT TISSUE MOBILIZATION IMPROVES

- Areas of excessive tension, muscle, skin, and fascial stiffness or restriction,
- Limited range of motion (ROM)
- Mature scars and cicatrix
- Painful trigger points
- Postural asymmetry due to fascial and muscle tension
- Tissue texture stiffness or adhesion

MYOFASCIAL CONCEPTS

Fascial anatomy courtesy of Jean Claude Guimberteau, with permission, see more at:

http://www.endovivo.com/en/



FASCIA RESEARCH CONGRESS

"Fascia is the soft tissue component of the connective tissue system that permeates the human body."

"Fascia extends to all fibrous connective tissues, including aponeuroses, ligaments, tendons, retinaculae, joint capsules, organ and vessel tunics, the epineurium, the meninges, the periostea, and all the endomysial and intermuscular fibers of the myofasciae." *(Huijing, et al, p. 2)*

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FUNCTION OF FASCIA

- **Compartmentalizes and surrounds** all structures, as an interconnected, fully contiguous web
- **Maintains posture**: Fascia will adaptively shorten in whatever position the body is kept
- **Observe posture** to detect where muscles/joints may be restricted

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FUNCTION OF FASCIA

- **Aids circulation-** forms interstitial spaces, provides the fluid matrix for support of immune cells (*Pert, Engler, Passerieux, Pukhlyakova)*
- **Influences cell metabolism**: fascial compartments contain plasma, interstitial fluid, and lymph in the ECF: matrix for chemical mediators, cytokines, peptides

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FUNCTION OF FASCIA

- **Mechanotransmission**: transmits and adapts to mechanical stresses, transmits torque and tension three dimensionally *(deBruin)*
- Vectors of tension travel 3-D through the fascia to distant regions where the tension may transit pain or affect biomechanics, resulting in altered mobility *(Travell)*
- **Relays and stores** information *(Oschman, pp 213-214)*

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FUNCTION OF FASCIA

Fascia allows **gliding** by separating structures and ***transfers force*** while **connecting** structures

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FUNCTION OF FASCIA

- **Electromagnetic** transmission agent (Oschman, pp 213-214)
- The energy meridians or channels that connect the acupuncture points are found in the ***fascial planes*** (Chaitow, 2012, Ahn, in Huijing, 2012)
- These are areas of demonstrated changes in galvanic electrical skin resistance in the body
- Positive correlation between acupuncture points and fascial planes (Huijing)

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FUNCTION OF FASCIA

- **Deposits collagen** to heal injuries and to rebuild the body on a regular basis
- Collagen is a dense connective tissue protein which gives strength to the tissues
- During abnormal conditions such as stress, trauma or certain diseases, the body deposits *too much collagen* in a *disorganized* fashion, leading to **adhesions/scar** tissue and dysfunction

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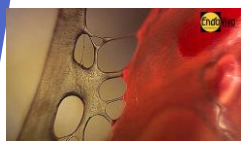
Strolling Under the Skin by Dr. Guimberteau
www.endovivo.com/en/ with permission



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VIDEO: Muscle Attitudes

More fabulous fascial anatomy on youtube, free!

From Jean Claude Guimberteau, MD

Reference:

https://www.youtube.com/watch?v=YqqB4NVtAvE

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WHAT HAPPENS DURING THE HEALING PROCESS?

After tissue damage, inflammatory process

- Fibrosis: scar tissue formation
- Fibrositis- inflammation of fibrous tissue with hyperplasia
- Collagen is laid down in haphazard fashion
- Gradual remodeling along lines of stress

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Release Scar Tissue and Fascial Adhesions

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WHAT CAUSES RESTRICTIONS?

- Macrotrauma- strains, sprains, contusions
- Microtrauma- Repetitive strain, overload
- Mechanical- Improper posture, scoliosis, inefficient ergonomics
- Neurological- compression neuropathy, neural sensitization, spasticity
- Disease- infections, SLE, CT disorders
- Endocrine abnormalities- thyroid, estrogen deficiencies
- Nutritional- minerals, vitamin deficiencies
- Sedentary behavior- muscle imbalance

(Yap, 2007)

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PHYSIOLOGIC RESPONSE TO MFR

Increase in:

- circulation,
- oxygen,
- waste removal,
- lymph & venous drainage,
- temperature,
- relaxation
- flexibility, elasticity

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HAVE YOU TRIED SKIN ROLLING?

- Pinch the skin in between your fingers gently
- Lift the skin away from underlying tissue
- Press and roll it away from you (or toward you), rolling it between your thumbs and fingers like rolling a pill, don't let it slip away
- Assess the amount of lift or adherence
- **It may feel painfully pinchy or even burning when very tight, inform patients**
- Usually feels good when normal

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SKIN ROLLING AND GLIDING

- Try it on the spine, abdomen, upper and lower extremities
- What is different about various regions
- Note the difference in mobility near joints compared to over muscles
- Can you roll in all directions? Compare sides
- Can you pinch and lift the skin or is it adherent?

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Ultrasonographic Changes with MFR Skin Rolling/Pressing

- Pohl: high resolution-high freq. ultrasound (22MHz)
  4 mm subcutaneously to echo collagen
- 10 cases, compared normal to restricted areas
- Did MFR to both, No pre/post differences in **unaffected** areas
- collagen distribution changed in affected areas post MFR
- MFR changed collagen density and tissue tension
- Dermal densifications reduced, fibroblasts relaxed

(Huijing, FRCIII p. 208-215)

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WHAT DOES IT FEEL LIKE?

NORMAL:

- Clinically, we note that normal tissues have elasticity at the endrange:
- there is a slight bounciness when you
- take up all the slack in the tissues and oscillate. It is not painful.
- Joint have normal ROM in the area, if ROM is limited, there is a restriction in the region.

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WHAT DOES IT FEEL LIKE?

RESTRICTED:

- In restricted tissues, there is no elasticity, the motion just ends abruptly. No bounce.
- There is less quantity of glide available.
- It may be painful! Feels stuck or stiff.
- Compare bilaterally to perceive the quality and quantity of motion.

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WHAT IS NORMAL?

Be sure to examine motion on many different people to develop a sense of what is normal in various populations.

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MEASURE SKIN GLIDE & ROM

Adherometer: instrument to measure skin glide, like a transparent grid

Easier: use a **ruler** to measure the excursion of the skin as you move it in all directions, superior, inferior, medial, lateral and oblique angles

Document the mm of skin mobility and joint goniometric ROM pre- and post- interventions

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CUPPING AS A TOOL FOR MYOFASCIAL RELEASE

Plungers make interesting tools, when clean!

POSITIVE OR NEGATIVE PRESSURE

Positive pressure or compression is typically used in massage and myofascial work, pressing into the tissue, pulling while pressing

Negative pressure or distraction is used in cupping to separate fascial layers and pull the tissue instead of pushing

Various tools are used for both styles of release

NORMAL AFTER-EFFECTS OF CUPPING

- Erythema: redness
- Ecchymosis: purple coloration
- Edema: **puffiness**
- Warmth

MYOFASCIAL RELEASE MFR TECHNIQUE PRACTICE

Identify the mobility or functional deficit:

- **Move the skin** in all directions
- **Imagine a clock** or compass- directions
- Compare sides, compare to normative values
- Document the limitation or restriction (mm)
- Measure joint ROM and document
- Measure the mm of skin mobility

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MYOFASCIAL STRETCHING, MOBILIZATION

Place your hand, fingers, or palm on the tight area, take up the slack to strain (stretch)

Stretch the tissue in the direction of greatest limitation (unless it is painful to do)

Hold it until the tissue gives, lengthens, and softens, and warms up (may be 1-2 mins.)

As it gives, **take up the slack** and perform another stretch into the barrier

Repeat 3-5 reps until greater motion is observed

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FASCIAL RELEASE USING CUPS/ PLUNGERS to STRETCH SOFT TISSUE/ FASCIA

Instead of using your hands and fingers to grip the skin and muscles to lift the tissue, use the cup to suction it up away from the deeper structures, to stretch the fascial layers

It is more energy efficient!

Less tiring, saves your hands!

For even better grip, wear gloves

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CUPPING TECHNIQUES

- In this course, we will focus on using cups as tools for IASTM, increasing mobility
- to get a purchase on the tight tissue and perform a stretch to engage the barriers, to lengthen the short tissue, skin, fascia or muscle

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TYPICAL ERYTHEMA RESPONSE

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INTRO TO CUPPING VIDEO

Reference

https://www.youtube.com/watch?v=ViWRam1V4Zs

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PRECAUTION

When practicing at first, do not leave the static cup on in the same place for greater than 1-2 minutes

You must discover how long each person takes for their skin to change color, we do not want to leave large bruises when just beginning to practice!

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PRACTICE WITH OTHER PEOPLE

- Repeat the same procedures on two other people to note how different skin types react to the cupping intervention
- Use 2-3 different clean cup sizes
- Try stationary and gliding cups
- **Avoid repeating the cupping on the same area, use a new area to avoid over-stretching and excessive skin suction, leading to more redness.**

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CLINICAL APPLICATIONS

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PRESSURE AND SIZE CONSIDERATIONS

$$Pressure = \frac{Force}{Area}$$

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MECHANICAL EFFECT *SIZE MATTERS*!

Tham showed larger cups produce maximum stress, along an axis passing through the cup center (Tham, 2006)

- Skin compresses under the cup rim, the area around periphery tenses
- Tensile stresses are greatest inside the cup rim, and at the center, affecting into the muscular layer

(Tham, 2006)

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CUP DIAMETER MATTERS!

- Start with small to medium diameter cups to test client response
- There are greater skin-surface displacements and greater underlying tissue stress with larger diameter suction cups

(Kravetz, 2004)

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RIM SHAPE MATTERS

- Use rounded rolled rims, especially with gliding cups
- Sharper rims are more painful and produce greater compressive stresses

(Kravetz, 2004)

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TIME MATTERS!

- In a study by Zhao, et al., 34 subjects were tested at a dozen sites on the back to determine the effect of duration of stationary cup placement, 10, 20, 30 mins
- Time had a significant effect on color of the marks (Zhao, 2009)

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PRESSURE IS ON

- Greater pressure results in significantly more redness or purple marks with cupping
- Zhao used > -400, -500, -600 and -700 hPa pressures to compare results in skin color
- Pressure of >-400hPa caused marked ecchymosis
- Greater pressures increased darkness of the color

(Zhao, 2009)

1 hPa=1 millibar pressure

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EFFECT OF CUPPING

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IMPROVED CIRCULATION & RELIEF OF PAIN

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EFFECT ON CIRCULATION

Tensile stress development in the skin layers leads to hyperemia, capillary vasodilation and rupture,

producing the ecchymosis marks on the skin as the blood escapes into the surrounding tissues

(Rosenfeld, 2016)

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CIRCULATION INCREASES

- Observe the skin prior to cupping
- Note the gradual reddening of the area under the cup
- The longer duration of application, the more blood is brought to the area, resulting in deeper redness
- When cups are left for several minutes, erythema or bruising marks form as capillaries spill blood into the superficial regions of the skin

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EFFECT OF CUPPING ON SKIN TEMPERATURE

- Research shows a significant temperature change secondary to cupping.
- Observe the temperature of the skin pre and post cupping on your partner
- If you have a skin thermometer, you can measure the temperature change

CUPPING MANIPULATION

As a soft tissue manipulation,

cupping activates mechanoreceptors, and

"will stimulate the inhibitory receptive fields of cortically projecting multi receptive dorsal horn neurons or provoke diffuse noxious inhibitory controls"

Stimulates A beta fibers to reduce pain input

(Rozenfeld, 2016)

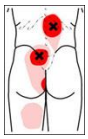
RELAXATION EFFECT

- Musial reported a relaxing effect of cupping therapy
- Stress reducing effect

(Musial, et al., 2013)

PAIN REDUCTION

- Counterirritant action of cupping pressure
- Gating of pain
- Neuromodulation of pain
- Production of endorphins



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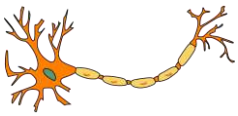
PAIN NEUROMODULATION

- Neural mechanism theory of acupuncture
- Activation of small diameter nerves leads to release of endorphins, serotonin or cortisol and monoamines, chemical transmitters that block pain messages or gate the pain

(Rozenfeld, 2016)



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PAIN MEASUREMENT

- VAS Visual Analog Scale, from 0-10, measures the pain experience
- 0_____10
- Zero is no pain
- Ten is the worst pain imaginable
- Most common method to document pain

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NOT RECOMMENDED!

115

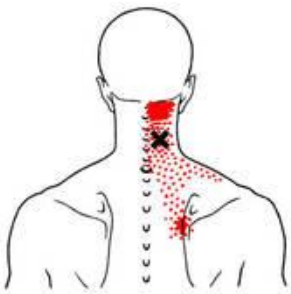
NRPS: TRY IT FOR YOURSELF

Numeric Pain Rating Scale: same 0-10

- Shown valid and reliable in over 20 studies
- Measure the pain of a trigger point pre and post treatment using the cupping method
- Find a TP on your partner, get a number
- Apply the cup for 30 seconds
- Measure the pain at the point again

116

MANAGE PAINFUL MYOFASCIAL TRIGGER POINTS



117

WHAT ARE TRIGGER POINTS?

Abnormally hyperirritable areas of the muscle and/or its associated fascia, that are painful to compression, refer pain to regions distant from the palpated site, are present in taut ropy bands of muscle, and often respond with a twitch or snapping sensation

(Dr. Janet Travell, MD)

118

EFFECT ON TPs

Fousekis et al. RCT: 70 soccer players with low back TPs

Intervention: 3 IASTM, (instrument assisted STM) or static cupping to 3 TPs for 5 mins. or 3 tx. ischemic pressure vs. control

Result: significant decrease in pain in all treatment groups, greater results with IASTM vs. controls

(Fousekis, et al., 2016)

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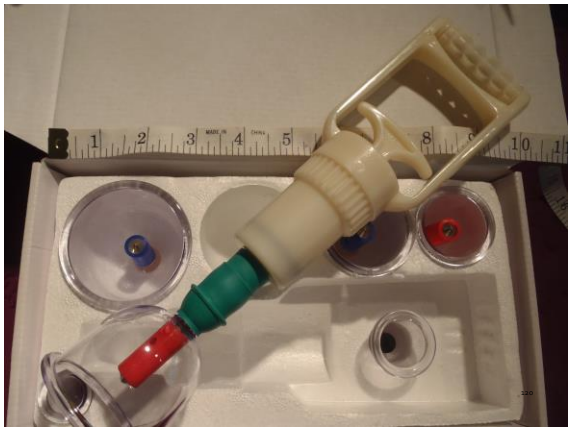

120

EFFECT ON FIBROMYALGIA (FMS)

- Lauche et al., studied 141 people with FMS in RCT of usual care, sham or cupping
- Given 5x 2x/wk pneumatic glass cupping with 4-8 stationary cups for 10-15 mins. to upper/lower back
- Significant pain reduction and improved quality of life after 18 days cupping vs. usual care, not different from sham
- (Lauche, et al., 2016)

121

EFFECT ON NECK PAIN & DISABILITY & QUALITY OF LIFE

Saha, et al., RCT of 50 people with nonspecific neck pain given

5 gliding cup massages 2x/wk x 3 wks vs. control of usual treatment

Results: Reduced pain scale, (VAS) decreased pain on movement, improved quality of life, and reduced functional disability

(Saha et al., 2017)

122

EFFECT ON NECK SHOULDER PAIN

- Chi et al., RCT studies changes in skin surface temperature SST, Pain VAS, and BP in 60 subjects with chronic pain. Cupping vs. control resting
- Fire Cupping 10 mins per side with 4 cm cup at 3 acupuncture points in neck and shoulder (SI15, GB21, LI15)
- Result: Signif increase in SST and reduction in VAS in cupping group, small decrease in BP in cupping group (Chi, et al., 2016)

123

SYSTEMATIC REVIEW OF CUPPING

- Cao reviewed 6 databases of 135 trials on cupping from 1966-2014,
- chose 8 studies on 11 diseases
- Result: cupping and cupping + other interventions produced better outcomes for improved pain, facial paralysis and acne than medications or other interventions alone

(Cao, et al., 2015)

124

125

APPLICATION OF MEDICAL CUPPING

126

PREP CLIENT

- **Interview, check for contraindications**
- Examine, determine problems
- Set goals for session
- Provide informed consent
- Give handout explaining expectations and results of cupping, meaning of the marks on the skin
- Some clinics require a release form

127

PREP

Identify the affected region:

- TPs, tight muscles, limited joint ROM, fascial restriction, loss of skin mobility, scars
- Initially apply where it is easiest to work: over fleshy or muscular areas:
- erector spinae, gluteals, quads, hamstrings, gastroc, biceps, triceps, wrist/finger flexors and extensors, palm and sole

128

PREP CUPS

- **Prepare the cups.** Disinfect the cups with soapy warm water and soak in the CDC recommended hydrogen peroxide solution as directed. Dry thoroughly.
- Have a selection of at least 3 sizes of cups to treat different body parts. Smaller openings for the hands and feet, larger openings for the back, abdomen and thighs.
- Wider mouth cups achieve greater suction than smaller mouth cups.

129

PREP THE SKIN

- **Skin and cups must be intact, clean and dry.**
- **Apply lubricant** to the entire treatment area for gliding cupping, massage or coconut oil work best (check for allergies)
- **Lubricant** may not be needed for stationary cups unless the skin is very dry. Oil helps cups adhere.
- **Liniment or aromatherapy** oils add a bonus therapy to the area, but the oils may cause early degradation of the cups. Menthol or warming oil may cause irritation with the heat.

130

APPLY SILICONE CUP

- Hold the cup bowl between your thumb and fingers.
- Squeeze the air out of the cup and apply directly to the skin. As you release, the vacuum in the cup will suck the skin up into the bowl, giving the appearance of a rounded ball of tissue.
- The suction holds the cup in place.
- Observe the skin reaction. Gradual reddening indicates increased blood flow.

131

GLIDING CUP THERAPY

- **Once the cup is adherent,** grasp the bowl and glide it in a sequence of directions to determine which direction is the most restricted.
- **Provide long sweeping strokes** with the cup in the direction of stretch. It must feel like a pulling or stretching sensation.
- **If it is painful, decrease the suction** by removing some of the air and /or reapplying the cup with less squeezing pressure for lighter suction.

132

COMPLETING THERAPY

Observe for redness as you glide. It usually takes only 1-3 minutes to provide a good stretch to the area.

Larger regions may require more time to cover.

Limit the time and **keep the suction gentle on the initial treatment** to determine client response.

Cups left on several minutes produce dark purple marks from capillary leakage.

Document results, changes in mobility and skin color.

133

REMOVING CUPS

- **To remove the silicone cup,** gently press your finger next to the rim to allow air inside.
- Some clinicians simply squeeze the bowl to allow air in to release the cup.
- **For pump cups,** lift the relief valve at the top and the cup will fall off.
- **Massage** the area gently to promote lymphatic and blood flow to the area
- Follow with therapeutic exercise or functional activities as indicated

134

POST CUPPING

- **Observe** and note skin color and tone
- **Document functional and mobility results**
- **Photos** of the area provide great documentation, cupping will usually result in redness or purple coloration of the treated area, sometimes elevated skin, which typically resolve in days to a week, depending on the client's skin type and health
- If coloration takes over ten days to resolve, refer for medical exam

135

FOLLOW WITH MOVEMENT

- Therapeutic exercise, range of motion, functional activities
- Neuromuscular re-education
- Posture training
- Ergonomics, sports training
- Use functional outcome measures
- Teach people how to prevent injury and to optimize health!

136

EXAMINE THE CHANGES

- Select 2 functional outcome measures to examine to determine the results of cupping on your partner.
- Example:
- Measure SLR hamstring length
- Cup the hams for 2-3 mins.
- Re-measure SLR, did it change?

137

138

SCAR CUPPING RELEASE MEDICAL CLEARANCE FIRST!

139

SCAR RELEASE

- **Test / measure skin glide** to identify direction of limitation
- **Apply cup** directly to well-healed mature scar, adjust pressure to start with gentle suction
- Use the cup as a handle to gently **lift and stretch the skin** in all restricted directions
- **Hold the stretch** until the skin lengthens, softens, gliding to mobilize the area

140

SCAR RELEASE

- **Scars may be painful** to stretch. Sometimes they feel like rope burns or scratching sensations.
- To reduce irritation post stretching, apply a **cool compress** over a thin towel for 5-10 minutes duration after stretching scars or tight regions as a natural anti-inflammatory agent

141

SCAR RELEASE

For someone with a well-healed skin scar,

1. Measure the scar mobility with a tape measure, superior,___mm inferior ___mm, medial___mm, lateral ___mm
2. Treat gliding the cup over the area for 1 minute. Measure results
3. Treat for 3 mins., measure mobility,
4. Note skin changes, _____,

sensitivity: pain scale __/10

5. Apply ice therapy post cupping to reduce soreness

142

VIDEO
SKIN GLIDE/SCAR RELEASE

143

ALTERNATE CUPPING METHODS

145

STATIONARY STATIC CUPPING

- **For acupressure indications or for TPs,** place a stationary cup over one or more points for 5-10 mins. depending on client tolerance, test an area first, 1-3 mins.
- Several cups may be applied at once to work an entire channel or muscle
- Watch for additional coloration with increased duration or suction pressure
- **AVOID leaving cups on over 15 mins.**

146

147

STATIC CUPPING + JOINT MOBILIZATION OR EXERCISE

For stiff joints such as the shoulder or knee, try **placing several cups** around key short muscles around the joint.

Use ROM exercise, joint mobs, with passive, active or active assistive exercise to provide maximal stretch and release adhesions

Be sure to document changes in ROM and function. **Limit 10-15 mins. cupping**

148

149

CUPPING TIPS

- First create suction and move the cup, see where the cups stick when trying to glide it,
- The sticky direction is in need of stretching
- See the skin through the cup, it should look like a rounded hamburger bun
- Lift it instead of pushing on it for greater stretch
- Twisting the cup may give more mechanostimulation

150

ERGONOMIC TIPS FOR USING CUPS

- Switch hands often
- Wear non-latex gloves for improved grip
- Keep cup clean of oil for better grip
- Use silicone cups that are warmed up for pliability
- Use the suction gun to create pressure instead of constantly gripping
- Position client for better stretch using tools

151

COMPARE DIFFERENT CUP SIZES

- Apply massage oil liberally to the skin
- Grip the **larger** clean cup, squeeze out the air **fully** for first try
- Immediately apply to your oiled skin, release the pressure and allow the cup to adhere
- Feel the suction, observe the skin ball up
- Leave on for 10 seconds, squeeze cup to remove suction and release it from your skin

152

COMPARE TIME, SIZE, SUCTION

- Try the small and large clean cup on another body part, the back muscles and over the scapula and trapezius muscles
- Try using greater or lesser pressure when you squeeze the cup to test the difference in suction
- Try it for 10, 20, 30, secs.
- Note the difference in the skin, sensitivity, color, texture with changes in time, size, and pressure

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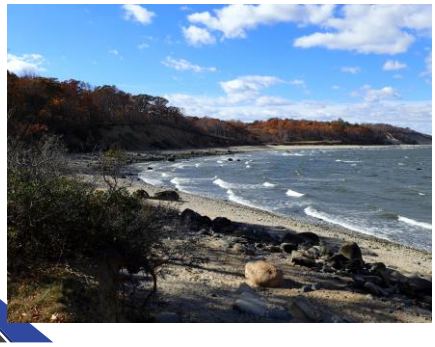
CLINICAL EXAMPLES



154

LIMITED MOBILITY

1. Measure joint mobility with a goniometer,
2. Treat stiff side of joint for 1 minute
3. Measure the ROM after cupping, document the difference.
4. Was there a difference?
5. What was the skin response? Color?
6. Repeat, but treat for 3 mins. Is there any difference after the increased time?

155

PAINFUL TRIGGER POINTS

1. Measure Pain Scale with TP palpation __/10
2. Treat for 1 min.,
3. Measure Pain Scale again after cupping, document the difference. ___/10
4. Now treat TP for 2 mins. Did the pain scale change after increasing the time treated or not? ___/10
5. What was the difference in the skin coloring response, redness?_____

156

NECK PAIN CUPPING

157

VIDEO
CUPPING NECK/THORAX

158

NECK MUSCLE PAIN & TENSION

1. Measure upper traps TP: palpate at superior border above scapula spine, pain scale ___/10
2. Measure lateral flexion to opposite side ____ degrees
3. Provide cupping to upper trap for 3 mins
4. Result: Palpate TP pain scale ___/10
5. ROM post cupping _____ degr.
6. Use Neck Disability Index

159

CUPPING DEMO: LOWER BODY POSITIONING & TECHNIQUE

160

VIDEO
CUPPING LOWER BODY

161

Video
CUPPING LOW BACK PAIN

162

SKIN MOBILITY: BACK

On lumbar lordosis, L3-L5 midline,

1. Measure the skin mobility with a tape measure, superior,___mm inferior ___mm, medial___mm, lateral ___mm
2. Treat gliding the cup over the area for 1 minute. Measure results
3. Treat for 3 mins., measure mobility
4. Note skin changes, _________.
5. Try functional outcome measures, such as *Oswestry Back Disability Index*, to measure progress.

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Video CUPPING FOR CALF LIMITATION/STRAIN

164

FOR TIGHT CALF or HAMSTRINGS:

1. Measure straight leg raise and ankle dorsiflexion ROM
2. Treat area for 3 mins.
3. Measure ROM, SLR after cupping, document _____degr.
4. Treat 2 more mins.
5. Measure again _____degr.

FUN! Measure the unaffected side without cupping to see if it changes or not!

165

FOR STIFF SHOULDERS

1. Measure functional reach flexion, (slide flexing shoulder with hand on wall ____ cm)
2. Treat anterior shoulder pectoralis for 1 min.,
3. Measure the reach after cupping, document _____cm
4. Treat 2 more mins.
5. Measure again _____cm

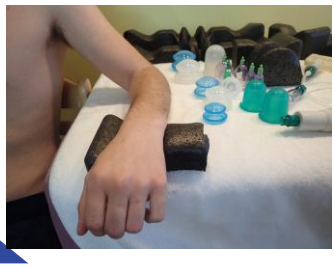
FUN! Measure the unaffected arm without cupping to see if it changes or not!

167

Video
ADHESIVE CAPSULITIS CUPPING DEMO

168

USE POSITIONING for stretch, comfort, or relaxation, use positioning tools



169

USE CUPPING & MOBILIZATION, EXERCISE

- While static cups are placed around the stiff joint, instruct client to perform ROM exercise of the affected joint, holding the stretch in the most limited range for optimizing the fascial mobility
- Apply arm distraction while static cups are in place to open up the tight capsule for additional mobilization

170

USE CUPPING WITH MOVEMENT

171

HOME PROGRAMS

- To optimize results of stretching with cups,
- provide an exercise and home program for clients using tools to make it easy and improve compliance
- Teach clients how to use a simple silicone cup for specific applications at home,
- be sure you check to see they are doing it properly and safely
- ***People love toys!***

172

FOLLOW CUPPING WITH FUNCTIONAL ACTIVITIES & EXERCISE TRAINING

173

HOME PROGRAMS

- **Can you teach a patient how to use the tools at home?**
- Design a handout, use the patient's cell phone to take pictures of positions and procedures as indicated, enable them to treat their conditions independently

  Be sure they understand all precautions!
- **Document the progress made using cupping therapy**

Enjoy the excellent results and help people move again!

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