TITLE: A helping hand for swelling management: MEM (Manual Edema Mobilization)

DESCRIPTION: The lymphatic system plays a crucial role in fluid homeostasis, yet this role has been greatly over overlooked. Persistent edema is often the result of an overloaded lymphatic system following orthopedic surgery or trauma to the upper extremity/hand, often leading to fibrosis and stiffness. Knowing how to stimulate the lymphatic system to quickly reduce edema can make all the difference to patients for pain reduction, increasing range of motion, and return to function. This session will introduce the lymphatic decongestion method of manual edema mobilization (MEM) and teach some of its concepts that may be incorporated immediately. MEM is a specific treatment method with an evidence-based rationale designed to reduce subacute and chronic edema. Attendees will learn the tenets and 5 key components of the method. Problem-solving through case study presentations will help clinicians apply aspects of MEM to decrease swelling and improve outcomes in patients with UE/hand diagnoses. This method is not applicable for primary lymphedema or post-cancer lymphedema treatment.

OBJECTIVES: Upon completion of this course, the learner will be able to:

1. Describe the lymphatic system's role in fluid homeostasis (edema/swelling management).

2. Discuss differential diagnosis of edema.

3. Identify the 5 key components of MEM including: diaphragmatic breathing; light manual lymphatic system stimulation (with Pump Points and Clear and Flow); exercise; adjuncts; and self-management home program design.

4. Distinguish the limitations, precautions, and contraindications of manual edema mobilization.

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SESSION OUTLINE:

11:00 Inflammation and Swelling in the hand – why does it matter?

11:15 The lymphatic system – a new understanding.

11:40 Key components of MEM – harnessing the lymphatics.

12:00 Take home points – treatment approaches to apply now.

12:30 Edema management studies – who is looking at this?

12:45 Discussion

Tenets of Manual Edema Mobilization

#1: The lymph system alone is responsible for removing large proteins and excess fluid from interstitial tissues, and works in tandem with the circulatory system. There are specific therapeutic techniques to increase its functioning when that system is intact, but overwhelmed.

#2: The lymphatic system moves fluid more effectively at "neutral warmth" and when cleared centrally and proximally first, to create an escape path for congested protein and fluid.

#3: Maximal stimulation of the lymphatic system occurs when manual techniques and compression do not collapse the anatomic components.

#4: A home program that includes the "5 Key Components" is essential to maximize edema reduction and recovery.

#5: The MEM technique is appropriate for use in the orthopedic, sports, and neurologic patient populations [and should become an entry-level skill for PTs and OTs] to improve patient outcomes.

The 5 Key Components of MEM:

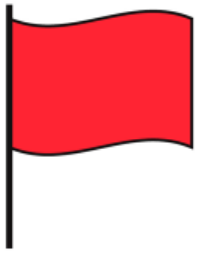
1. Diaphragmatic breathing
2. Light manual lymphatic system stimulation with "Pump Points" and "Clear and Flow"
3. Exercise (before and during)
4. Use of Adjuncts
5. Self-Management instruction

Helpful Adjuncts to Edema Management

- Low stretch bandaging – pumps with muscle movement, does not collapse lymphatics at rest.
- Kinesiology tape to continue to work at the level of the initial lymphatics/anchoring filaments.
- Foam bandage – to create neutral warmth and give some low stretch compression.
- "Chip Bags" (Schneider Packs) – with varied density to soften indurated tissues.
- Conical shaped rather than tubular elastic bandages.
- Compression garments to maintain, once reduced.

Contraindications

- Currently in ACTIVE STATE of:
  - CHF
  - COPD
  - Severe/advanced kidney failure
  - Liver disease or decreased function
  - Malnutrition
  - Infection
  - Localized or systemic
  - Flu, bad cold, post op
  - Cellulitis
  - Blood clots/DVT
  - Presently suffering from asthma or allergies



Sample Home Program

- Warm ups
- Diaphragmatic breathing
- Proximal to distal exercises
- Light stroking distal to proximal
- Distal to proximal exercise

Recommended Reading:

Artzberger S. **Manual edema mobilization: treatment for edema in the subacute hand.** In: Mackin EJ, Hunter JM, Callahan AD, Skirven TM, Schneider LH, Osterman AL (eds). **Rehabilitation of the Hand and Upper Extremity.** 6th ed. St. Louis, MO: Mosby. 2011:868-81.

Artzberger S. **Edema reduction techniques: A biologic rationale for selection.** In: Cooper C's **Fundamentals of Hand therapy: clinical reasoning and treatment guidelines for common diagnoses of the upper extremity.** 2nd ed. St. Louis, MO: Elsevier Mosby. 2014; 35-50.

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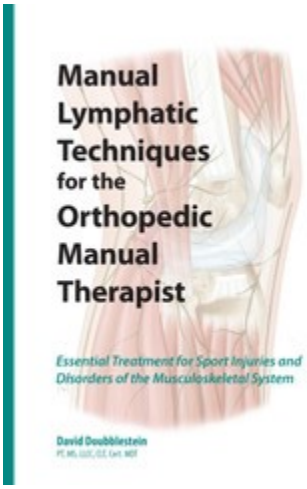

David Doubblestein, PT, MS, LLCC, CLT, Cert. MDT
192 pages

To order the book, you can either order on line or call in utilizing **promo code MEM20**. Ordering on line is perfectly fine and convenient, but sometimes one of the reps can find a cheaper shipping by a few dollars with a phone call.

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MEM Full Reference List

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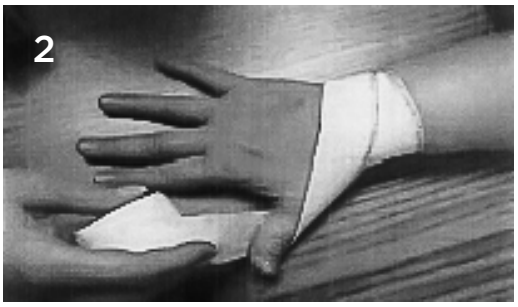
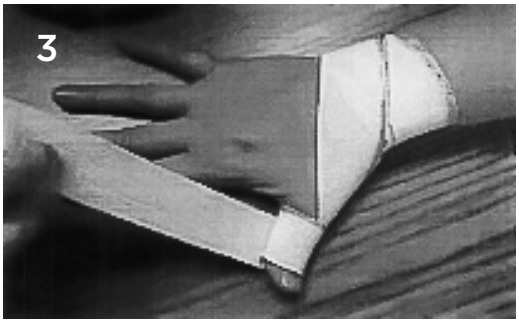
Finger Wrapping Using One-Way Stretch Cotton Finger Bandages

Use skin tape to hold bandage end at ulna. Wrap 2x around wrist, spread bandage.



Come up radial side of thumb to base of nail bed.

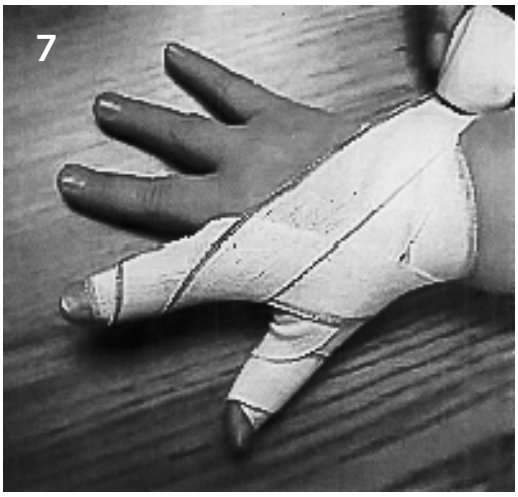


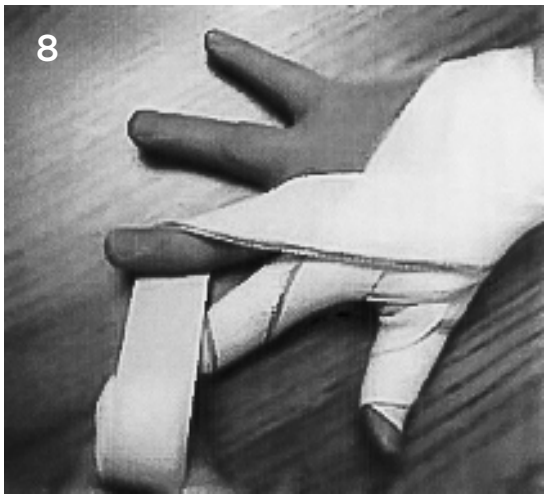
Do a 360° wrap around nail base.

Continue overlapping 360° wraps to thumb web, end at ulna.

Volar Wrist, Dorsum, radial side nail bed.

360° wraps into web.





Hints

- For patients to self-wrap fingers, it is easier for them to start at the radius rather than the ulna, because they can hold the start area up against their body to secure when wrapping.
- Hypoallergenic tape can be used to hold the finger wrap in place at the wrist when the patient is self-wrapping.
- Sometimes, lightly applied pre-stretched Coban (self-adherent elastic wrap), can be applied on top of the finger wraps to hold wraps on while the fingers reduce in size during day. Problem: self-adherent wrap can stick fingers together, also heat builds up.
- If the palm is swollen, put chip bag in palm and secure by bringing finger wrap across palm.
- If using chip bag to soften tissue, first secure chip bag on skin and then finger wrap over chip bag.