72b Orthopedic Massage: Techniques & Effects

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Class Outline

15 minutes	Break
5 minutes	Attendance, Breath of Arrival, and Reminders
10 minutes	Lecture
70 minutes	1st trade Lecture with technique demo and practice
20 minutes	Break and switch tables
70 minutes	2nd trade Lecture with technique demo and practice
20 minutes	Break down, clean up, and discussion

3 hours and 30 minutes total

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Class Reminders

Quizzes:

- 78a Kinesiology Quiz (erectors, lats, quadratus lumborum, multifidi, rotatores) – 50 questions in 40 minutes

Spot Checks:

- 75b Orthopedic Massage: Spot Check – Piriformis and Sacroiliac
- 78b Orthopedic Massage: Spot Check – Low Back Pain

Assignments:

- 85a Orthopedic Massage: Outside Massages (2 due at the start of class)

Preparation for upcoming classes:

- 73a Orthopedic Massage: Introduction – Piriformis and Sacroiliac

  Trail Guide (Quadratus Femoris and Piriformis)

  Packet J: 49-54.
- 73b Orthopedic Massage: Technique Demo and Practice - Piriformis and Sacroiliac

  Packet J: 55-62.
- 74a MBLEx Prep – see syllabus for reviews topics

Classroom Rules

Punctuality - everybody's time is precious

- Be ready to learn at the start of class; we'll have you out of here on time
- Tardiness: arriving late, returning late after breaks, leaving during class, leaving early

The following are not allowed:

- Bare feet
- Side talking
- Lying down
- Inappropriate clothing
- Food or drink except water
- Phones that are visible in the classroom, bathrooms, or internship

You will receive one verbal warning, then you'll have to leave the room.

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Packet J - 36

Massage Techniques

Effleurage Lubricate, warm, fluid movement, muscle tension reduction.

Wringing Fluid movement, warm, enhance pliability, muscle tension reduction.

Fulling/Compression Broadening Reduce adhesions, myofascial elasticity and pliability.

Massage Techniques, continued

Deep transverse friction (AKA: deep cross fiber friction) Changing cross-linking bonds of fibrous scar tissue, stimulate fibroblast activity.

Deep longitudinal stripping Deactivate trigger points, reduce hypertonicity, assess tissue quality.

Melting Deactivate trigger points, reduce hypertonicity, assess tissue quality.

Deep transverse friction (AKA: deep cross-fiber friction)

Example: sacroiliac ligament sprain

1. Client is in the prone position
2. Locate the sacroiliac ligaments
   - Midway between the sagittal plane passing through the PSIS and the median plane, from S3 to L1
3. Address one side and then the other
   - Use thumbs or finger tips with hands stacked for stability
   - Work in a superior-inferior direction
   - Use moderate pressure for about 1 minute
4. Results
   - Stimulates fibroblasts to produce collagen needed to repair torn ligaments
   - Removes adhesions (breaks cross-linking bonds of fibrous scar tissue)
   - Reweaves and remodels scar tissue to mature and strengthen it

Massage Techniques, continued

Myofascial release Reduce muscle tension, increase pliability.

Stretching Reset the muscle's resting length.

Superficial fascia assessment

Example: assessing low back superficial fascia

1. Client is in the prone position with shirt pulled up and pants slightly lowered
2. Locate the target area
   - From S1 to T10, and from side to side.
3. Work without lubricant, address one side and then the other
   - Use your palm and fingers to apply light tangential pulling pressure
   - Place your fingertips flatly on the skin surface
   - Press in just enough to traction the superficial fascia without sliding
   - Slowly traction in all directions taking note of restrictions
   - Use before and after treating superficial fascia to gauge progress
4. Optional: repeat on another area such as the calves

Myofascial release

Example: releasing restricted low back fascia

1. Client is in the prone position with shirt pulled up and pants slightly lowered

2. Locate the target area

   - From S1 to T10, and from side to side

3. Work without lubricant, address one side and then the other"

   - Arms crossed: place hands 5 to 10 inches apart on either side of the spine

   - Apply a light degree of pulling force between the hands

   - Hold. Wait for a subtle sensation of tissue release or a working sign

4. Optional: repeat on another area such as the calves, but without crossed arms

Inhale and exhale

Ahhh!

Now shifting to something different

Active and passive engagement

Massage with **passive** engagement

- Simultaneous combination
- Massage stroke and **therapist-controlled** (passive) joint movements
- These movements will either shorten or lengthen the target muscle
- Magnifies the effects of the stroke
- Client is instructed to relax their muscles during the stroke

Massage with **active** engagement

- Simultaneous combination
- Massage stroke and **client-controlled** (active) joint movement
- These movements will either shorten or lengthen the target muscle
- Magnifies the effects of the stroke
- Only use if the target muscle can contract without pain

Massage with passive engagement

Passive engagement with **shortening**

- First the therapist applies static compression to an area of the muscle that has a heightened neurological response such as a myofascial trigger point, an area of restricted fascial movement or muscle tightness.
- Next the therapist uses passive joint movement to shorten and broaden the target muscle.
- Used to treat severe muscle spasm following acute injury
- This technique is very similar to strain/counterstrain and positional release

Massage with passive engagement shortening

Example: myofascial trigger point at levator scapula insertion

1. Client is in the prone position

2. Therapist applies static compression to the target muscle for 20 to 90 seconds

3. Therapist uses passive joint movement to shorten and broaden the target muscle

Massage with passive engagement

Passive engagement with **lengthening**

- First the therapist uses passive joint movement to shorten the target muscle
- Next the therapist pins or strips the target muscle and simultaneously uses passive joint movement to lengthen the target muscle
- Results in:
  - Mobilization of connective tissue
  - Reduction of muscular tension
  - Elongation of myofascial tissue
- Referred to as “Pin and Stretch”

Massage with passive engagement lengthening

Example: fascial restriction and muscle tension of the hamstrings

1. Client is in the prone position.

2. Therapist uses passive joint movement to shorten and broaden the target muscle

3. Next the therapist pins or strips the target muscle and simultaneously uses passive joint movement to lengthen the target muscle

Side by Side Comparison

Passive engagement with **shortening**

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Now shifting to something different

Massage with active engagement

Active engagement with **shortening**

- First the target muscle starts in a fully lengthened position
- Next the therapist melts or fulls into the target muscle while the client concentrically contracts the target muscle
- Results in:
  - Enhanced broadening of the muscle during concentric contraction
  - Removal of inter-fiber adhesions

Massage with active engagement shortening

Example: restricted concentric contraction in triceps surae

1. Client is prone with feet hanging off the end of the massage table.
2. First the target muscle starts in a fully lengthened position:
   - "I'm going to have you help me with this next technique"
   - "Please pull the top of your foot against the end of the table (dorsiflexion)"
3. Next the therapist melts or fulls into the target muscle while the client concentrically contracts the target muscle:
   - Now, slowly point your toes (plantarflexion)"

Massage with active engagement

Active engagement with **lengthening**

- First the target muscle starts in a fully shortened position
- Next the therapist melts into or strips the target muscle while the client contracts the antagonists to lengthen the target muscle
- Results in:
  - Decreased muscle tightness
  - Reduction of trigger points
  - Elongation of tissues

Massage with active engagement lengthening

Example: hypertonic forearm flexors with trigger points and restricted length

1. Client is in the supine position.

2. First the target muscle starts in a fully shortened position:

   - "I'm going to have you help me with this next technique"
   - "Please curl your fingers into a fist and flex your wrist"

3. Next the therapist applies static compressions or performs deep longitudinal stripping to the target muscle(s) while the client lengthens the target muscled(s):

   - Now, slowly uncurl your fingers while fully extending your wrist"

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Now shifting to something different

Active-assisted stretching

Active-assisted stretching Active engagement of specific muscular contraction by the receiver prior to or during a stretch. Uses the neurological principles of PIR and RI.

Post-isometric relaxation (AKA: PIR) Neurological principle stating that immediately following an isometric contraction, there is an increased degree of relaxation in the muscle.

Reciprocal inhibition (AKA: RI) Neurological principle stating that when an agonist contracts, the antagonist is neurologically inhibited from contracting.

Post-isometric relaxation and reciprocal inhibition

Example: active-assisted hamstring stretch

- Hip joint mobilizations
- Instruct the client:
  - "I'm going to stretch your hamstrings."
  - "Let me know when you begin to feel this stretch."
  - (Supporting the knee to avoid hyperextension, flex the leg until the client says that they can feel the stretch)
  - "Inhale and hold your breath. Using only 25% of your strength, press your thigh down toward the table against my resistance and I will count down from 5." (isometric contraction)
  - "Slowly release the contraction and the breath." (PIR)
  - "Now pull your thigh toward your chest until you feel a stretch. I'll follow you with my hands and support your leg."
  - "Relax your leg and I will hold it here for a stretch."
- Hold the stretch for three of your breath cycles
- Slowly release the stretch and repeat hip joint mobilizations

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