

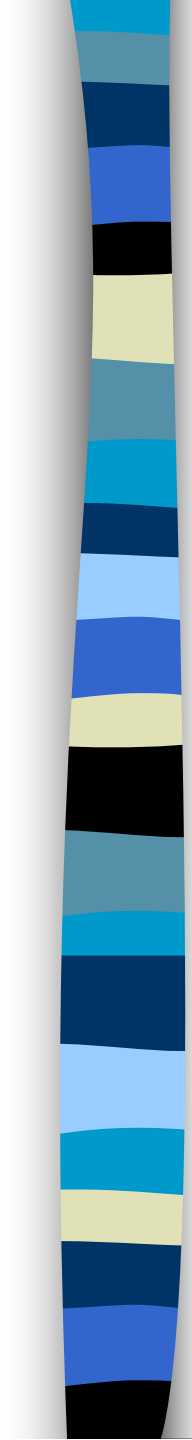


## 31b Passive Stretches: Technique Demo and Practice - Lower Body



## 31b Passive Stretches: Technique Demo and Practice - Lower Body Class Outline

|                                |   |
|--------------------------------|---|
| 15 minutes                     | Break   |
| 5 minutes                      | Attendance, Breath of Arrival, and Reminders      |
| 75 minutes                     | 1 <sup>st</sup> trade technique demo and practice |
| 20 minutes                     | Break and switch tables                           |
| 75 minutes                     | 2 <sup>nd</sup> trade technique demo and practice |
| 20 minutes                     | Break down, clean up, and discussion              |
| Total time: 3 hours 30 minutes |   |



# 31b Passive Stretches: Technique Demo and Practice - Lower Body

## Class Reminders

### Exams:

- 34a Exam  
(0b, 2a, 2b, 3a, 3b, 4a, 5a, 6a, 7a, 8b, 9a, 9b, 11a, 12a, 13a, 13b, 15a, 16a, 17a, 17b, 18a, 20a, 20b, 21b, 22a, 23a, 24a, 24b, 25a, 26a, 27a, 28a, 29a, 29b, 30a, 30b, and 31b)

### Assignments:

- 36a State Law Review Questions
  - Packet A: 159-164

### Preparation for upcoming classes:

- 32a Critical Thinking
- 32b Passive Stretches: Guided Full Body
  - Packet F: 75-76
- 33b Chair Massage: **This class cannot be made up in the make-up room.** To schedule a sit-in, please contact the Student Administrator.



# 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.*



## 31b Passive Stretches: Technique Demo and Practice - Lower Body

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# Benefits of Joint Mobilization

- For the therapist, joint mobilization is useful as a tool of assessment of quality and range of motion
- For the client it may serve several purposes:
  - If debilitated, it promotes circulation and stimulates nerves and muscle to prevent atrophy
  - It lubricates the joint capsule
  - If done slowly, it helps the client identify areas of disruption in smooth movement
  - Induces a state of extraordinary consciousness



# Principles of Joint Mobilization

- Move smoothly, not too quickly
- Support any joints that might feel vulnerable to hyperextension
- Move to the edges of possible range of motion without triggering the stretch reflex



# Benefits of Stretching

- Maintains (or increases) length of the connective tissue component
- Relaxes the contractile component of the muscle, resulting in greater length
- Induces greater sense of relaxation in the whole system
- Feels good





# Principles of Passive Stretching

- Each stretch should be preceded and followed by joint mobilization
- Stretching (especially of another person) should be done slowly and gently
  - The muscle spindle monitors length and tension of the muscle fiber. If length increases too much or too fast, the stretch reflex fires, causing the muscle being stretched to contract. For stretching purposes this is counter-productive and dangerous.
  - Use only enough force to move to the point of resistance which is comfortably effective for the client



# Principles of Passive Stretching

- The person being stretched should be able to relax completely, and breathe fully and deeply (if they hold their breath it indicates a lack of relaxation to begin with).
- Use just a little traction to open up the joint before you stretch it.
- Once the person being stretched indicates that they feel a stretch, lean into the stretch gently but firmly and ask them to let you know when it feels just right (thus the receiver has the ability to limit the process). At that point hold the stretch for at least 2 cycles of your breath.



# Principles of Passive Stretching

- When working with people who are hypermobile (i.e. have extremely wide range of motion) avoid a tendency to needlessly increase their range, as this could result in damage to ligaments or joint capsules.
- When possible it will be more effective to massage a muscle group before stretching it.



# Lower Body Joint Mobilization and Stretching

## *QUADRICEPS FEMORIS*

**Joint Mobilization** – *Hip (coxal joint) and Knee (tibiofemoral joint):*

Standing by the knee, facing the table, use the lower hand to scoop under the ankle and flex the knee to 90 degrees or so. Palm of the upper hand rests on the sacrum. Lower hand moves the foot through a circular range that involves flexion & extension of the knee and medial & lateral rotation of the hip. Increase the amplitude of the movement in all directions until you begin to feel resistance.



## *QUADRICEPS FEMORIS*

### **Traction and Stretch:**

The lower hand flexes the knee to 90 degrees or so. The upper hand contacts the proximal portion of the gastroc belly and tractions the tibia away from the femur. Lower hand continues with flexion of the knee as upper hand releases the gastrocnemius and moves out of the way. Upper hand moves to contact the sacrum as the stretch is continued by the lower hand, moving the calcaneus toward the buttocks, on a line towards the ischial tuberosity. If the low back tends to hyperextend (seen as anterior pelvic tilt) as the quads are stretched, move the upper hand to the ilium on the near-side to provide a counteracting inferior and anterior pressing force. This is done with the fingers pointing towards the client's feet. Contact is between the heel of the therapist's hand and the client's upper gluteal area, lateral to the sacrum and just inferior to the upper margin of the ilium.

Repeat the mobilization after the stretch is finished.

Additional stretches may be done at different angles, in a similar fashion, using a line to the coccyx, and/or the greater trochanter.



# Lower Body Joint Mobilization and Stretching

*GASTROCNEMIUS / SOLEUS*

## **Joint Mobilization** – *Ankle (talocrural joint):*

With the therapist at the foot of the table facing up, standing in a lunge position or kneeling, outside hand grasps Achilles tendon, as the heel of the inside hand contacts the ball of the foot at the metatarsal heads, with fingers pointing in the same direction as the toes, and dorsiflexes the ankle, with inversion, then eversion, in this dorsiflexed position; then the fingers of inside hand slide around the medial arch to contact the dorsal surface of the metatarsals, plantarflexing the ankle, with inversion, then eversion, in this plantarflexed position. Finish by circumducting the ankle.



# Lower Body Joint Mobilization and Stretching

*GASTROCNEMIUS / SOLEUS*

## **Traction/Stretch:**

Standing alongside the leg, with the calcaneus in the palm of the inside hand and the ball of the foot against the forearm, use the outside hand to stabilize the limb beside the knee, keeping it in a neutral alignment, so that the hip is neither medially nor laterally rotated. Inside hand tractions the calcaneus distally. Using pressure of the forearm on the ball of the foot, lunge slowly forward to take the ankle into dorsiflexion. As you lunge, ask the client to pull the toes up towards the knee, to facilitate the stretch.

Repeat the mobilization after the stretch is finished.



# Lower Body Joint Mobilization and Stretching

## *TIBIALIS ANTERIOR*

### **Joint Mobilization** – *Ankle (talocrural joint):*

With the therapist at the foot of the table facing up, standing in a lunge position or kneeling, outside hand grasps Achilles tendon, as the heel of inside hand contacts the ball of the foot at the metatarsal heads, with fingers pointing in the same direction as the toes, and dorsiflexes the ankle, with inversion, then eversion, in this dorsiflexed position; then the fingers of inside hand slide around the medial arch to contact the dorsal surface of the metatarsals, plantarflexing the ankle, with inversion, then eversion, in this plantarflexed position. Finish by circumducting the ankle.





# Lower Body Joint Mobilization and Stretching

## *TIBIALIS ANTERIOR*

### **Traction/Stretch:**

With therapist standing in a lunge position, at the foot of the table facing up, outside hand grasps the calcaneus, shifting it superiorly to initiate plantarflexion. Then inside hand grasps the foot with the palm on the dorsum and the fingers wrapped around the medial arch, and tractions distally while applying pressure on the foot to continue plantarflexion. Finally, use inside hand to add slight inversion.

Repeat the mobilization after the stretch is finished.



# Lower Body Joint Mobilization and Stretching

## *GLUTEALS*

**Draping:** With the leg draped as ready for massaging, bring the hems of the drape above and below the hip together at the table, just inferior to the greater trochanter, and make the drape snug against the thigh. Then hand the drape to the client to manage.

### **Joint Mobilization** – *Hip (coxal joint):*

Standing alongside the leg near the ankle, take the calcaneus in the foot hand, and place the head hand on the upper posterior calf, just below the knee. Lift with the head hand and push with the foot hand, flexing the knee and hip towards 90 degrees. Keeping the knee mostly over the hip joint, explore range of motion in the hip by making circles, clockwise and counter-clockwise. Increase the amplitude of the movement in all directions until you begin to feel resistance (thus assessing the conservative edges of the range of motion).



# Lower Body Joint Mobilization and Stretching

## *GLUTEALS*

### **Traction:**

Simultaneously lower the calcaneus and lift the calf, creating traction in the hip joint.

### **Stretch:**

Maintaining the lift from traction and an angle of about 90 degrees at the knee, continue to flex the hip by moving the leg and foot superiorly, on a line toward the coracoid process of the scapula.

Repeat the mobilization after the stretch is finished.

Additional stretches may be done at different angles, in a similar fashion, using a line toward the sternum, and/or the ipsilateral deltoid.



# Lower Body Joint Mobilization and Stretching

## *LOW BACK*

### **Joint Mobilization** – *Hip (coxal joint):*

Standing alongside the leg near the ankle, take the calcaneus in the foot hand, and place the head hand on the upper posterior calf, just below the knee. Lift with the head hand and push with the foot hand, flexing the knee and hip towards 90 degrees. Keeping the knee mostly over the hip joint, explore range of motion in the hip by making circles, clockwise and counter-clockwise. Increase the amplitude of the movement in all directions until you begin to feel resistance (thus assessing the conservative edges of the range of motion).



# Lower Body Joint Mobilization and Stretching

## *LOW BACK*

### **Traction/Stretch:**

From a position of knee and hip flexion, place arch of the foot outside opposite knee, on the bolster. Foot hand moves to tibial tuberosity area to stabilize the knee flexion. Head hand moves to upper IT Band. Head hand initiates traction distally on the femur. Foot hand moves to lateral thigh, inferior of head hand, and continues pressing the thigh across the other leg. Head hand may assist movement of the thigh, or move to the shoulder to stabilize upper torso from coming off the table.

Repeat the mobilization after the stretch is finished.



# Lower Body Joint Mobilization and Stretching

## *ADDUCTORS*

### **Joint Mobilization** – *Hip (coxal joint):*

Standing alongside the leg near the ankle, take the calcaneus in the foot hand, and place the head hand on the upper posterior calf, just below the knee. Lift with the head hand and push with the foot hand, flexing the knee and hip towards 90 degrees. Keeping the knee mostly over the hip joint, explore range of motion in the hip by making circles, clockwise and counter-clockwise. Increase the amplitude of the movement in all directions until you begin to feel resistance (thus assessing the conservative edges of the range of motion).



# Lower Body Joint Mobilization and Stretching

## *ADDUCTORS*

### **Traction/Stretch:**

From a position of knee and hip flexion, set the foot beside (medial to) the contralateral knee. Head hand stabilizes the knee, and the foot hand stabilizes the foot. Slowly lower the client's femur into abduction, supporting it on the lateral side with the head hand. Foot hand moves to the medial distal femur, opposite the head hand – fingers perpendicular to the femur. Pull the femur distally to initiate traction, then press the femur towards the floor. Head hand may be moved to stabilize the contralateral ASIS, in which case the therapist will turn her body to face more towards the table.

Repeat the mobilization after the stretch is finished.



# Lower Body Joint Mobilization and Stretching

## **Quadriceps Femoris**

- Ischial tuberosity
- Coccyx
- Greater trochanter

## **Gastrocnemius / Soleus**

## **Tibialis Anterior**

## **Gluteals**

- Coracoid process
- Sternum
- Ipsilateral deltoid

## **Low Back**

## **Adductors**





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