#### **Classes:**

- Yoga
- Tai Chi
- Stretching
- Strength
- Cardio
- Get Active! For body, and Mind! Therapy:
- Massage Therapy
- Hydrotherapy



#### Stretches:

- Pectorals Minor / Major
- Scalenes
- Wrist extensors/flexors
- Exercises:
- Scapular retraction
- Diaphragmatic breathing





- Enough rest
- Eat well
- Healthy lifestyle

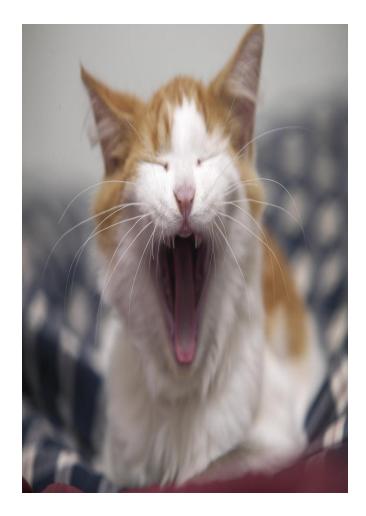




## **Injury Prevention:**

#### Internal-

- Tight/weak musculature
- Fatigue
  - Sprint vs marathon
- Pain
- Duration of activity
- Poor biomechanics



## **Injury Prevention:**

External-

- Terrain
- Shoes
- Table height
  - Diff for diff C's



- What To Look For:
- Fatigue
- Pain
- Mood/behavior changes



## **Endangerment Sites**

- Areas where nerves and blood vessels are located superficially, therefore not being well protected
- Deep and sustained pressure in these areas can potentially damage these vessels and nerves
- Kidney area is included because the kidneys are loosely suspended in fat and connective tissue therefore heavy pounding is contraindicated

Fill in human body as we go. Write at the bottom of the page

## **Endangerment sites**

## **11 Endangerment Sites**

#### **1.** Anterior triangle of the neck

- Carotid artery, jugular vein, vagus nerve
- Mandible, SCM, trachea
- 2. Posterior triangle of the neck
  - Brachial plexus, brachiocephalic artery and vein, subclavian artery and vein
  - SCM, trap, clavicle

#### 3. Axilla

 Brachial artery, axillary artery and vein, cephalic vein, nn of brachial plexus.

## 4. Medial Epicondyle of the Humerus

• Ulnar nerve

#### 5. Lateral Epicondyle of the Humerus

Radial nerve

#### 6. Sternal Notch/Anterior neck

 Vagus nerve, nn's and vessels to the thyroid gland

#### 8. Lateral to umbilicus

- Aorta
- 9. 12<sup>th</sup> Rib
  - Dorsal aspect, location of kidneys

## **11 Endangerment Sites con't**

#### 9. Sciatic Notch

Sciatic nerve

#### 10. Inguinal triangle/Femoral triangle

femoral artery and vein, femoral nerve

#### **11.** Popliteal Fossa

popliteal artery and vein, tibial nerve

## Palpation pg. 118

- Def'n
- The placement of the RMT's hands on the C's tissues for assessment purposes
- Process of assessing the body my means of touch
- Why is it important?
  - Constant evaluation process during treatment
  - Used to measure and evaluate effects and results
- 3 common errors made while palpating...
  - Lack of concentration of *what* is being palpated
  - Too much movement of palpating fingers
  - Using too much pressure

## **4 T's of Palpation**

- Temperature hot, cold, even
- Texture smooth, ridges, even vs uneven
- Tenderness twitching, move/pull away, jumping
- Tone hypertonic vs hypotonic

## How to palpate effectively...

- 1. Obtain Consent
  - 1. What area is going to be palpated
  - 2. Explanation
  - 3. Tell C to tell you if they experience any P during palpation and where
- 2. Palpate Bilaterally
  - 1. Start on Unaffected side 1<sup>st</sup>
- 3. Compare unaffected side and affected side
- 4. Use palmar surface of your hands
- 5. Use broad, light pressure

## Look for...

- If the C is showing signs of discomfort
  - Flinching
  - Rapid breathing
  - Sweating
  - Flushing
  - Facial expressions
- If C reacts to pressure of palpation
  - Some will have no problem reporting P
  - Others will have to be asked

#### Stroking: pg 20

- Lightest technique
- Introductory/closing technique
- Temperature differences
- Palmar surface of hand used
- Pressure evenly applied
- Tissue not compressed
- Long or short movements
- Lotion/gel/oil unnecessary
- Performed on skin or through sheets



### Stroking:

• *Stroking*: running the entire hand or fingertips over parts of the body to relax the muscles reflexively and help eliminate muscle spasm, improve circulation, or produce a parasympathetic response.

#### **Uses of Stroking:**

- Introductory or closing technique
- Particular body part or whole body
- Run from head to feet
- Creates awareness/sense of connection to body
- Temperature differences
- Palpation of tone unlikely

#### Stroking How to Perform Stroking:

- Palmar surface of hand or fingers
- Pressure equal through surface of hand or fingers
- Applied superficially
- Tissue not compressed, minimum pressure
- Direction centripetal or centrifugal
- Long or short movements
- Lubricant unnecessary
- Applied on broad areas
- Can be performed through sheets

## Stroking:

#### **Effects of Stroking:**

- Soothing technique
- Decreases sympathetic nervous system firing
- Reduces pain perception
- Reflexive effect on circulatory system

#### **Contraindications:**

• Uncovered or open contagious skin lesions

### Effleurage: pg 21

Derived from the french word "effleurer" meaning,

To glide, stroke, or touch lightly

- Used to spread lotion/oil/gel
- Introduces therapist's touch
- Palpation of tone, texture, and temperature
- Prepares tissue for deeper techniques
- Transitional stroke
- Introductory/closing technique

## **How to Perform Effleurage :**

- Hand with fingers together
- Fingertips, ulnar border
- Conforms to contours of body<sup>2</sup>
- Pressure applied broadly
- Applied smoothly
- Light to moderate depth



## **How to Perform Effleurage :**

- Long stroke, covering length of thorax or limb
- Direction is centripetal
- Return stroke maintains contact without pressure



## How to Perform Effleurage:

- Single hand
- Double hand
- Single forearm
- Supported hand
- Loose fist



# Mechanical and Reflexive Effects of Effleurage:

Depends on depth, rate and rhythm of technique

- -Less pressure = more reflexive effect
- -Deeper pressure = more mechanical effect
- Increases local venous return
- Increases local lymphatic return
- Reduces local edema
- Increases tissue pliability
- Warms tissue/blood to area



# Mechanical and Reflexive Effects of Effleurage:

- Stimulates peristalsis (abdominal massage)
- Sedative effect (slow, rhythmic)
- Stimulating effect (quick, erratic )similar to Petrissage

# Effleurage Contraindications: pg 23

- Contagious lesions
- Open lesions
- Varicose veins
- Distal to areas of infection
- Not repetitively on limbs for those with hypertension, heart disease, variscosities, or edema caused by thrombus

## **Effleurage Contraindications:**

- Sepsis
- Phlebitis
- Very diseased/degenerative kidneys



## Effleurage Contraindications: Careful modifications for:

- Contusions, inflamed tissue
- Reflex sympathetic dystrophy
- Hypertension
- Congestive heart failure
- Coronary by-pass( 48 hours)

#### Petrissage:

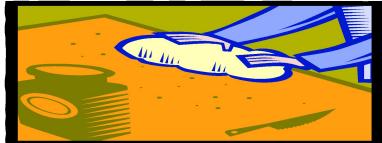
Techniques that rhythmically compress and release tissues

- Squeezing
- Stripping
- Wringing
- Picking up
- Skin rolling
- Kneading



#### **Petrissage:**

• "To knead"



- Used after tissue is warmed up
- Increased focus and pressure
- Key to treatments

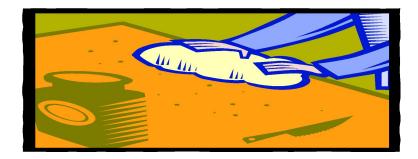
#### **Petrissage:**

- Applied to muscle groups
- Applied to individual muscles
- Applied to part of muscle
- Shorter motions
- Direction is variable
- Pressure can be modified

(Print)
J.C.

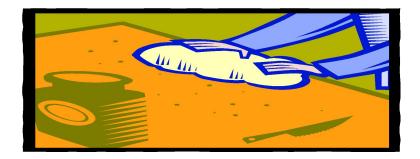
### How to Perform Petrissage:

- Applicators:
  - --Palm
  - Finger pads
  - Thenar Eminence
  - Ulnar border of forearm
  - Knuckles



How to Perform Petrissage:

- Application:
  - Methodical
  - Firm
  - Slow strokes



- Lift muscles, stretch gently while alternating squeezing and relaxation
- Variable pressure while squeezing

#### How to Perform Petrissage:

- Contact maintained with tissue
- Performed centripetally
- Wrists at 120 to 130 degree angle
- Extended arm to body at 45\*



### Squeezing:

- muscle compressed between palm and fingers or between both palms
- Gently squeeze muscle
- pressure applied towards venous flow
- directed slightly vertically
- May help relieve muscle spasm
- Perform after Picking up technique

### Stripping:

- Thumb, elbow or ulnar border of the hand or fingertips
- Moderate to deep pressure
- Follow contours of muscle
- Distal to proximal
- Pressure applied *with* fibre direction

### Wringing:

- Applied smoothly and quickly
- Both hands conform to tissue



- Muscle is firmly picked up with thumb and palm
- Wrung out like wringing a soaked wet sponge
- Alternating hand action contacting tissue
- Thumbs at 90 degree angle to 2<sup>nd</sup> and 5<sup>th</sup> digit
- Thumb and thenar eminence pushes tissue towards opposite thumb and thenar eminence
- Tissue bulges as hands pass each other

### Wringing:

- Movement is performed transverse across the muscle at 90 degree angle
- Tension is created



- Pressure changes during technique
- Increased pressure when tissue lifted and torqued
- Less pressure at beginning and end of movement
- Use on large muscle groups (i.e. Hamstrings)

### Picking up:

- Final stroke after client has been re-draped
- Fingers and thenar eminence
- Palms of the hands
- Grasp muscle in both hands on either side
- Release slowly
- Vertical pressure



### Skin rolling:

- Skin lifted between thumb and fingers
- Overlap slightly
- Gently roll over treated area
- Slow movements for deeper stroke
- Superficially to palpate restrictions
- Performed on deeper structures
- Repeat 3 times
- Monitor client's response to treatmer



#### Kneading:

- Thumb, fingertips, palmar surface or ulnar border of hand/forearm
- Both hands work together
- Move tissue upwards and towards therapist's thigh
- Tissue is compressed down against bone
- Thenar eminence and pisiform of both hands
- Slowly easing off the mass of muscle
- Deliberate slow movement
- Like kneading bread dough

### Kneading:

- Thumb, fingertips, palmar surface or ulnar border of hand/forearm
- Short, rhythmical unidirectional or circular movements
- Pressure peaks in the middle of technique
- Deeper pressure needed
- one handed or thumb
- other hand for reinforcement /support

#### **Uses of Petrissage:**

- Improvement of circulation
- Reduce inflammation (proximal/distal to injury)

#### **Contraindications:**

- Abdominal inflammation (gastro-enteritis or appendicitis)
- Acute inflammation (recent scars, muscle strains,)
- Bone pathologies
- Frail skin

### **Petrissage Mechanical Effects :**

- Muscle fiber separation
- Creates hyperemia flushing fluids at deeper layers than effleurage
- Increases tissue pliability
- May break down inter-fiber and cross fiber adhesions
- Like breaking stones into pebbles

### **Petrissage Effects :**

- **Muscle stripping--**treats trigger points in muscle belly
- Skin rolling--assesses superficial fascial restrictions or trigger points
  --treats trigger points in muscle belly
- Picking up--may aid in venous and lymphatic flow as it creates a pressure change in deeper tissue
  -may stretch muscle and connective tissue differently than usual stretching

### Petrissage:

### Mechanical Effects on Circulatory System:

- Drain and refill lymph and venous tissues
- Facilitating fluid flow to heart

### **Reflex Effects on Circulatory System:**

- Increased blood supply (pumping--vasoconstriction-vasodilation)
- Toxin removal (Increase of cellular nutrients and O2)

### Petrissage:

### **Mechanical Effects on Nervous System:**

- Stimulates receptors
- Elicits an inhibitory reflex

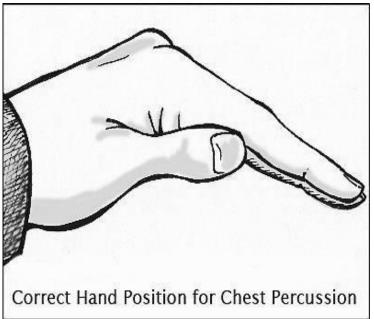
### **Reflex Effects on Nervous System:**

- Interrupts pain cycle
- Triggers changes in venous/arteriole tone vis sympathetic efferent

# Massage Techniques: Tapotement

#### **Tapotement:**

- French "tapoter" meaning 'to rap, drum or pat'
- "Percussion"
- Stimulating technique



#### **Application of Tapotement Techniques:**

- Percussive
- Rhythmic and rapid
- Pressure applied with both hands alternately
- Fingertips
- Ulnar border of hands
- Full palmar surface of hands
- Fists
- Relaxed wrists\*\*\*



#### **Application of Tapotement Techniques:**

- Movement originates from wrists
- Elbows tuck close to body
- Hands close to client's body
- Parallel to muscle fiber
- "C" shaped and relaxed hands
- No lubricant needed
- Appropriate anytime during treatment
- Follow principle of massage Superficial-Deep-Superficial

#### **Tapotement Uses:**

- Loosen mucus ---respiratory conditions
- Increases local circulation
- Increases sympathetic nervous system firing
- temporarily increasing muscle tone
- Generalized fatigue
- Cystic Fibrosis

#### **Tapotement Effects:**

- Reciprocal inhibition of the antagonist (i.e. Tapotement to quadricep muscle group relaxes the hamstrings)
- Stimulates weak/hypotrophied muscles
- Desensitizing areas such as amputation sites or tissue just after a cast is removed.

### **Light Techniques:**

**Pincement**—tissue gently plucked between thumb and fingertips

**Tapping**– tissue is tapped with fingertips

- Hands springy
- Wrists relaxed
- Applied superficially
- Without force

### **Light Techniques:**

### **Apply Tapping:**

- Around joints
- Tendons
- Face and hands
- Along spine

#### **Heavy Techniques:**

**Beating/Pounding/Knuckle Percussion:** 

hand held in loose fist



- tissue struck with ulnar border of fist
- extensor surface of phalanges (rapping knuckles)
- Buttocks/large leg muscles

**Heavy Techniques:** Hacking –ulnar border of hand less force -- relaxed hand more force -- stiff hand -- upper back/shoulders **Cupping** – hand in cupped position fingers and thumb together wrists pronated tissue struck with alternating hands making audible "clopping" sound --Thorax

#### **Tapotement:**

#### **Mechanical Effects:**

- Increases venous blood supply
- Increases waste removal via Lymphatic system
- Loosens and softens fibrocystic tissue adhesions
- Loosens mucus (cupping)
- Stimulation (light and short)
- Increases venous/lymph blood flow to superficial vessels of skin

#### Tapotement: Reflex Effects:

- Hyperemia (vasoconstriction then vasodilation)
- Histamine release
- Reaction response that relaxes muscles
- Localized contraction of muscle fibers (stimulation of motor nerves)
- Temporary analgesic effect (heavy/prolonged tapotement)
- Increases glandular activity
- Enhances effects of cold hydrotherapy

#### **Indications for Tapotement:**

- Stimulation of circulation
- Anemia
- Debility where stimulation necessary
- Scar tissue
- Stiff joints
- Stimulation of atrophied muscles
- Stretched muscles/tendons
- Decrease nerve conduction
- Alleviate pain (chronic neuralgia)

#### **Contraindications of Tapotement:**

- Bony prominences
- Kidneys
- Abdomen
- Fragile tissue
- Spastic paralysis

#### **Contraindications of Tapotement:**

- Heavily atrophied(only light tapotement)
- Flaccid muscle tissue (only light tapotement)
- Spasm
- Acute inflammation
- Insomnia

### **Quiz 2 Next Class**