Therapeutic Massage

Massage

- The act of rubbing, kneading, or stroking the superficial parts of the body with the hand or with an instrument.
- Mechanical stimulation of the tissues by means of rhythmically applied pressure and stretching.

Massage

- Reflexive Effects
  - Sedation is induced via slow, gentle, rhythmical motion in order to relieve tension, soothe, and relax musculature
  - Sensory receptors are stimulated in the skin and superficial fascia
Massage

- **Mechanical Effects**
  - Mechanical or histological changes in myofascial structures through direct superficial force:
    - Stretch muscle
    - Elongate Fascia
    - Mobilize soft tissue adhesions
  - Always accompanied by some reflexive effects
  - As mechanical effects become more effective, reflexive effects become less effective
  - Mechanical techniques are best performed after reflexive techniques

- **Psychologic Effects**
  - General sedative effect
  - Decrease tension and anxiety
  - Elicit feelings of well-being
  - "Hands on" effect helps patients feel as if someone is helping them

Massage Benefits

- **Pain Control**
  - **Gate Control Theory**
    - Cutaneous stimulation of large afferent nerve fibers blocks transmission of pain carried in competing small afferent nerve fibers
    - Release of endogenous opiates
Massage Benefits

Circulation
- Light massage produces local dilation of lymphatic and capillary vessels
- Heavier pressure produces longer lasting dilation
- Blood flow increases, increasing the temperature of the tissue being treated
- Lymphatic flow increases, increasing the removal of edema

Massage Benefits

Metabolism
- Does not significantly alter general metabolism
- Increased blood flow does generate:
  - Increased dispersion of waste products
  - Fresh blood and oxygen supply
  - Removal of lactic acid

Massage Benefits

Musculature
- Mechanical stretching
- Relieve Pain
- Increase ROM in hamstrings
- Decrease neuromuscular excitability
- Massage does not increase muscle strength, bulk, or tone
**Massage Benefits**

**Skin**
- Increased skin temperature
- Loosens subcutaneous adhesions
- Stretches and breaks down fibrous scar tissue

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**Hoffa Massage**

- Classical massage techniques that use a variety of superficial strokes that include:
  - Effleurage
  - Petrissage
  - Tapotement
  - Vibration

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**Effleurage**

- A stroke that glides over the skin without attempting to move the deep muscle masses
- Helps to accustom the patient to the contact of the clinician
- Initial strokes distribute lubricant
- Search for areas of muscle spasm and soreness with finger tips
- Contact maintained at all times to enhance relaxation
- Every massage begins and ends with this stroke, as well as in between other types of strokes
Effleurage

- The stroke should start at the periphery and work toward the heart

Effleurage

- Pressure is applied with the heel of the hand, fingers slightly bent, and thumbs spread

Petrissage

- Kneading manipulations that press and roll the muscles under the fingers or hand
- No gliding motions over the skin
- Muscles are squeezed, lifted, and relaxed
- Stroke moves from the distal to the proximal point of muscular attachment
- Grasp parallel to or at right angles to muscular fibers
Smaller muscles may be kneaded with one hand.

Larger muscles, or muscular groups, will require the use of both hands.
Tapotement

- Percussion massage using a series of brisk blows, administered with relaxed hands and following each other in rapid, alternating movements.
- Hacking, cupping, slapping, beating, tapping

Tapotement

- Penetrating effect stimulates subcutaneous structures
- Increases circulation for more active flow of blood
- Peripheral nerve endings are stimulated such that they convey impulses more strongly

Tapotement

- Hacking
  - Alternate striking of patient with the ulnar border of the hand
Tapotement

- Slapping
  - Alternate slapping with fingers

Tapotement

- Beating
  - Half-closed fist using the hypothenar eminence of the hand

Tapotement

- Tapping
  - Tips of the fingers
Tapotement

- Clapping/Cupping
  - Use fingers, thumb, and palm together to form a concave surface
  - Used primarily in postural drainage

Massage Routine

- Individual massage strokes alone do not make a good massage
- The form and progression of the massage depend on the individual requirements of the patient

Massage Routine

- Example massage progression:
  - Superficial stroking (effleurage)
  - Deep stroking (effleurage)
  - Kneading (petrissage)
  - Tapotement
  - Superficial stroking (effleurage)
Friction Massage

- According to the area to be covered, this technique is performed by either the tips of the fingers, the thumb, or the heel of the hand
- Make small circular movements that penetrate into the depth of the muscle
- Move the tissues under the skin rather than moving the hands over the skin

Friction Massage

- Loosen adherent fibrous tissue
- Reduce local muscular spasm
- Provide deep pressure over trigger points to produce reflex effects
Transverse Friction Massage

- Treatment for chronic tendon inflammations
- Place the tendon to be treated on a light stretch
- Use the thumb or index finger to exert intense pressure in a direction perpendicular to the muscular fibers

Transverse Friction Massage

- Massage performed every other day
- 7-10 minutes
- Explain to the patient before beginning the massage that it is a painful technique
- It may be beneficial to apply ice to the treatment area before beginning for analgesic effects

Transverse Friction Massage

![Image of hand applying pressure to tendon](image_url)
Myofascial Trigger Points

- Hyperirritable locus within a taut band of skeletal muscle, tendons, myofascia, ligaments, joint capsules, periosteum, and skin
- Points may activate and become painful due to direct muscle trauma or overuse inflammation

This diagram shows an example of a myofascial trigger point and the referred pain patterns for one of the neck muscles.

This diagram shows an example of a myofascial trigger point and the referred pain patterns for one of the hip muscles.

This diagram shows an example of a myofascial trigger point and the referred pain patterns for one of the neck muscles.

Myofascial Trigger Points

- Pain from a particular point is usually referred to areas that follow a specific pattern
- Stimulation of these points has been shown to relieve pain
- Referred pain is an important characteristic of trigger points, and differentiates them from tender points
### Myofascial Trigger Points

**Latent Trigger Points**
- Does not cause spontaneous pain
- Can resist movement or cause muscular weakness
- Pain originates from the point when pressure is applied directly over the point

### Myofascial Trigger Points

**Active Trigger Point**
- Causes pain at rest
- Tender to palpation with a referred pain pattern away from the trigger point
- Pain described as spreading or radiating

### Myofascial Trigger Points

**Identification of Active Trigger Points**
- Palpation of a hypersensitive bundle or nodule of muscular fiber of harder than normal consistency
- Palpation elicits pain directly over the affected area and a radiating pattern of pain
- Contraction against resistance increases pain
- Firm pressure over the point elicits a “jump sign”, crying out, wincing or withdrawing
Myofascial Release

- Technique used to relieve soft tissue from the abnormal grip of tight fascia
- Once a myofascial restriction is located, the massage should be directly through the restriction
- Progress from superficial tissue to deep tissue
- Treatment recommended 3 times per week

Indications for Massage

- Muscular, tendon, and joint conditions
- Adhesions
- Muscle spasms
- Myositis
- Tenosynovitis
- Postural strain of back
- Bursitis
- Fibrositis
- Tendinitis

Contraindications for Massage

- Arteriosclerosis
- Thrombosis
- Embolism
- Severe varicose veins
- Acute phlebitis
- Cellulitis
- Synovitis
- Abscesses
- Skin injections
- Cancers
- Pregnancy
- Acute inflammatory conditions of skin, joints, and soft tissue