EFFECTS AND BENEFITS OF MASSAGE

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OBJECTIVES

Based on this lecture and other information presented at Irene’s Myomassology Institute, by graduation, the student will be able to:

1. Identify the effects of massage on body systems and specified tissues.
2. Explain how the effects of massage are produced on the body systems.
3. State the mechanisms that explain how massage works and give examples.
4. Explain how the components of massage assist in producing the effects of massage.
5. Explain the mechanisms by which massage reduces pain.
6. List the contraindications of massage and explain why they are contraindicated.

EFFECTS OF TOUCH

Skin largest organ of body: has nerve endings
• We respond to our environment via sensations
• Touch is a means of communication
• Touch is a means of healing
• Touch aides in our physical, emotional, and energetic development

TYPES OF RECEPTORS

• Mechanoreceptors
• Thermoreceptors
• Nociceptors
### HOW RECEPTORS WORK

- Stimulus Compresses/Deforms and Activates the Sensory Neuron
- This Depolarizes the Sensory Neuron
- Information Sent to the Thalamus Via Spinal Cord
- Thalamus Relays Information to Cortex
- Cortex Interprets Information
- Cortex Sends Message to the Body Via Spinal Cord
- Body Responds

### HOW SENSATION STOPS

1. When the stimulus is no longer applied depolarization does not take place.

2. Adapts or Habituates to Stimulus
   Constant stimuli does not cause depolarization
   i.e. Clothing

### MECHANISMS OF EFFECTS

- MECHANICAL

- REFLEXIVE

- Dependent on the application of the components of massage.

### Components of Massage

<table>
<thead>
<tr>
<th>Pressure</th>
<th>Positioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate &amp; Rhythm</td>
<td>Draping</td>
</tr>
<tr>
<td>Direction</td>
<td>Duration</td>
</tr>
<tr>
<td>Lubricant</td>
<td>Frequency</td>
</tr>
</tbody>
</table>
QUIZ

True or False:

___ Nociceptors are pain receptors.
___ Mechanoreceptors sense heat and cold.
___ Most sensory sensation is interpreted by the Thalamus.
___ Mechanical effects of massage are caused by pressure and movement.
___ Constant stimuli causes depolarization and stimuli is no longer felt.
___ Touch effects physical but not social and emotional development

INTEGUMENTARY SYSTEM

• Pressure Stimulates Sensory Receptors
  – Relaxation, Body Awareness, Pain
• Exfoliates Dead Skin
• Oil/Lubricant Moisturizes Skin
• Friction → Heat: Which has Healing Effects

CIRCULATION

• ARTERIAL
  – Pressure — Reflex Vasodilation Which increases arterial circulation and healing.
• VENOUS AND LYMPH
  – Pressure: Fluids Move from Interstitial Space into Lymph Vessels
  – Movement Toward the Heart Pushes Fluids Along to Increase Venous and Lymph Return
  – Light pressure for Lymph & Deeper for Veins

CIRCULATION

• Muscle Pumping Moves Fluid Towards the Heart
• Elevation of Limbs uses gravity to move fluids toward the heart
  Resulting In:
MUSCULAR SYSTEM

- HYPERTONIC MUSCLES:
  - Tight / Tense / Shortened
  - Trigger Points
  - In Spasm: Types of "spasms"
    - True Muscle Spasm
    - Protective Spasm
    - Muscle Cramps
    - Spasticity
  - Decreased Circulation
  - Painful

“Milking” of Muscles: Normal Muscles will:
1. On Contraction: Produce Toxins, move them into veins and increase venous flow
2. On Relaxation: Allow more arterial blood to enter muscles.

Grasping and Releasing Motions:
- Mimic Normal Muscle activity
- Pumps out Waist Products via Increased Venous Return
- Brings in More Oxygen via Increased Arterial Circulation

MUSCULAR SYSTEM

- Static Compression
  - Releases Trigger Points
  - Stretches Muscular Fibers

- Muscle Contractions:(isometric/resistive)
  - Produces Tension which Reflexively Relaxes Muscle Tissue
  - Tension Fatigues Muscles —— Relaxation

MUSCULAR SYSTEM: PROPRIOCEPTORS

MUSCLE SPINDLE CELLS

- Reflexively Responds to Muscle Length
  - Too Long:
  - Shortened:
- Placing Muscle in a Shortened Position Causes Muscle to Relax
MUSCULAR SYSTEM: PROPRIOEPTORS

GOLGI TENDON ORGANS (GTO’s)

- Responds to Tension or Pressure
  - Causes a Reflex Inhibition to the Motor Neuron
  - Resulting in Muscle Relaxation

MUSCLE PROPRIOEPTORS

SKELETAL SYSTEM

- Passive or Active Limb Motion
  - Maintains Joint Mobility
  - Increases Synovial Fluid Production In Joints

- Massage Pressure and Movement
  - Prevents or Breaks Up Adhesions in Joint Capsule

FASCIA

1. A type of connective tissue that surrounds, supports, separates, protects and binds all body structures.
2. Is a 3 dimensional web with holes, folds, and twists.
3. A type of loose, irregular, low density fibers.
4. Fibers are multi-directional.
5. Composed of Elastin, Collagen, and Ground Substance.
FASCIA

• THIXOTROPIC PROPERTIES:
  Becomes Softer and More Pliable with Movement or Heat.
  • Relaxes with Constant Pressure
  • Movement Re-aligns Tissue and Creates Heat
  • Responds to Low Force Loads Held for a Long Time.
  • Prevents and Breaks Up Adhesions with Movement
  • Pressure & Movement Decreases Fibrosis

Nervous System

• Proper Touch Stimulates Parasympathetic System
  – ↑ Alpha Brain Waves → Relaxation
  – ↓ Release of Stress Hormones
  – Reduces Pain Via Gate Theory

QUIZ

<table>
<thead>
<tr>
<th>Tissue</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscles</td>
<td>a. Movement of limbs</td>
</tr>
<tr>
<td>Skin</td>
<td>b. Movement removes dead tissue</td>
</tr>
<tr>
<td>Joints</td>
<td>c. Grasping and releasing movements</td>
</tr>
<tr>
<td>Veins</td>
<td>d. Constant pressure or movement using light force</td>
</tr>
<tr>
<td>Fascia</td>
<td>e. Pressure and movement towards the heart</td>
</tr>
</tbody>
</table>

PAIN REDUCTION

• Usually Why People Come To You

• Pain Cycle

• Different Tissue Respond Differently to Pain Stimuli (refer to handout)
PAIN REDUCTION

Usually a Combination of Many Things

• General Overall Relaxation
• Decrease in Muscle Hypertonicity
• Improve Fascial Mobility
• Increase in Endorphin Release
• Removal of Toxins & Waste Products
• Increase in Circulation
• Reduced Stress

GATE THEORY OF PAIN REDUCTION

Pressure and Heat/Cold can Reduce Pain

• Mechano & Thermal Receptors Are More Myelinated than Pain Receptors
  – Stimuli From Mechano & Thermal Receptors Travel Faster And Arrive at the Brain Before the Pain Stimuli
  – Pain Stimuli Arrives Later and the CNS Does not Register it.

It “Closes the Gate” to the Pain Stimuli
Ronald Melzack

ENDOCRINE SYSTEM

• Touch, Pressure, and Movement
  – Reflexively Increase Production of:
    • Serotonin
    • Endorphins
    • Pituitary Hormones
### IMMUNE SYSTEM

- **Pressure & Movement:**
  - Increases Absorption and Lymphatic Flow
  - Increases Venous Return

- **Overall Relaxation of Massage**
  - Reduces Stress which
  - Increases Immune System Function

### DIGESTIVE SYSTEM

- **Pressure and Movement**
  - Abdominal Massage Moves Contents Along the Large Intestine
  - Reflexively Activates the ANS Which Increases Peristalsis

- **Reduction of Stress by Massage**
  - Increases Digestive Function

### RESPIRATORY SYSTEM

- **Improved Breathing Via:**
  - Vibrations and Cupping: Loosens Secretions
  - Pressure and Movement Stimulates Intercostal muscles

### REPRODUCTIVE SYSTEM

- **Stimulates Parasympathetic System for relaxation and stress reduction producing better system function.**
- **Reflexive stimulation of Pituitary improves hormone activity in males and females and improves menstrual cycle and menopause in women.**
- **Movement may break up adhesions and helps to realign structures.**
URINARY SYSTEM

- Stimulates Parasympathetic System for relaxation and stress reduction producing better urinary system function.
- Movement increases circulation which increases elimination of waste products through the kidneys.
- Reflexology points help the urinary system to maintain homeostasis.
- Massage reduces edema which helps in decreasing kidney problems.

MENTAL

Touch and Relaxation Massage Reflexively

- Stimulates Parasympathetic System
- Improves Sleep
- ↑ O2, ↓ Bld Lactates & ↓ BP — Mental Alertness
- Improved Memory due to ↑ Circulation to the Brain

EMOTIONAL

- Touch and Massage Stimulates Parasympathetic System
  - Reduces Anxiety, Fear, Phobias
  - Release of Emotions (neuropeptides)
  - Release of Endorphins

During Relaxation Natural Psychological Defenses are Lowered Allowing Feelings to be Expressed.

ENERGETIC SYSTEM

- Release of Energy Blocks
- Improve Energy Flow Through the Body
- Balance Body Energies
  By using our Body as A Conduit or Channel We Direct Universal Energy Into Client’s Body:
  Feel/Sense, Visualize, Intend the Energy to Move.
MECHANICAL EFFECTS

- Venous & Lymphatic Flow to Reduce Edema
- Breaks Up Adhesions
- Loosens Secretions in Lungs
- Removes Toxins
- Maintains Muscle Length
- Maintains Joint Mobility
- Reduces Muscle Hypertonicity
- Maintains Integrity of the Skin
- Improvement of Fascial Mobility

REFLEX EFFECTS

- Arterial Vasodilation for Healing
- Reduction of Muscle Hypertonicity
- Pain Reduction (Gate Theory)
- Stimulation of Parasympathetic System
- Reduced Stress & Overall Relaxation
- Release of Endorphins and Serotonin
- Emotional Release
- Improves and Balances Body Energies

CONTRAINDICATIONS OF MASSAGE

- Contraindication: Do Not Perform due to Adverse and/or Dangerous Effects
- Precautions: Can perform with caution and/or modifications

REFERENCES

4. The Science and Practice of Myomassology, by Irene Gauthier: Irene’s Myomassology Institute, 5th Ed.