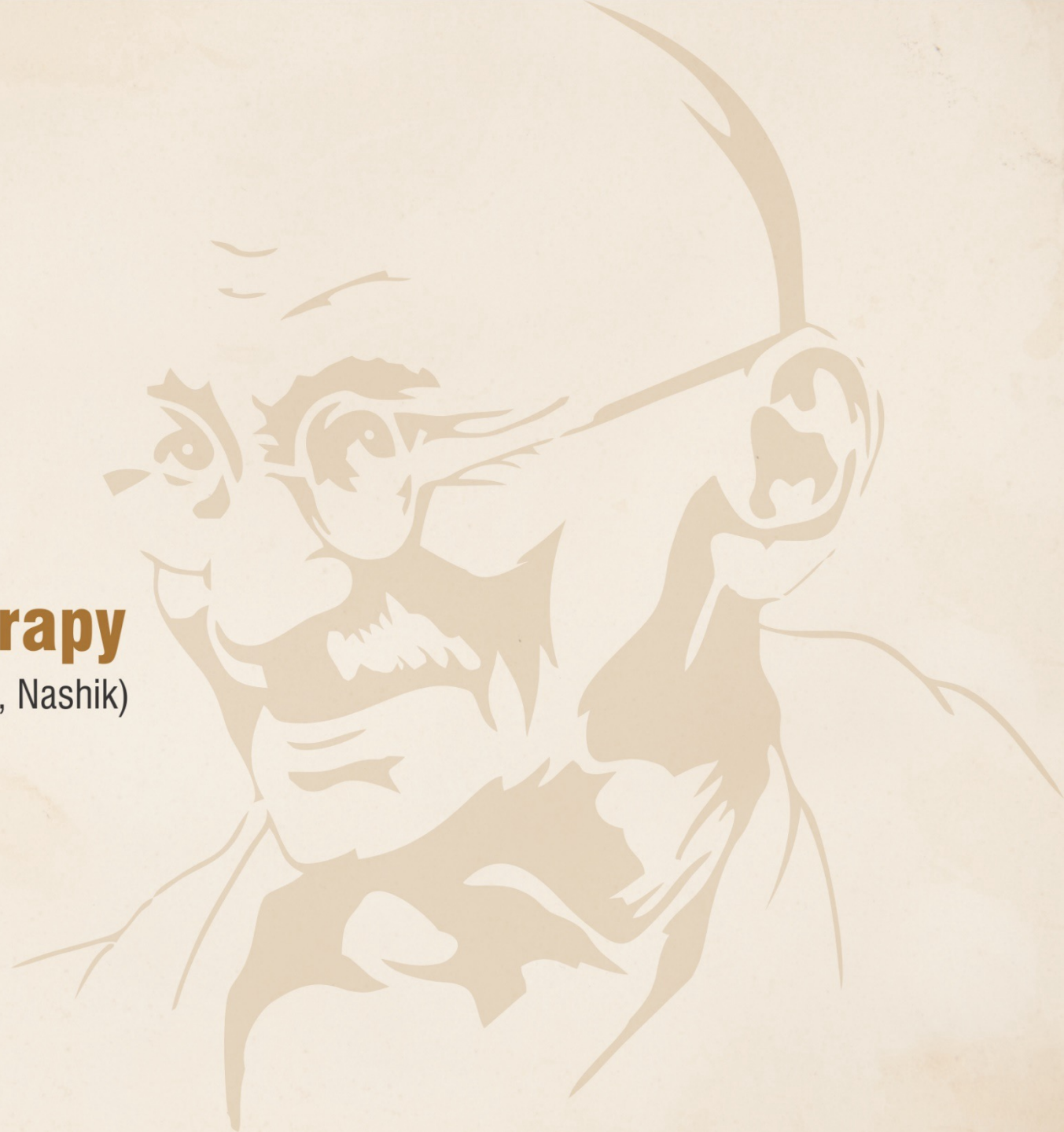




MAHATMA GANDHI MISSION

MGM Institute of Physiotherapy

Chh. Sambhaji Nagar, Maharashtra (Affiliated to MUHS, Nashik)



MASSAGE

Dr Srilatha Girish
Associate Professor

OBJECTIVES



By the end of this therapeutic massage lesson, students will be able to

- Articulate a clear and concise definition of therapeutic massage
- Categorize therapeutic massage techniques
- Describe the fundamental principles that guide the practice of therapeutic massage
- Understand the indication and contraindication of therapeutic massage
- Explain the physiological effects of therapeutic massage
- Demonstrate therapeutic massage techniques

CONTENTS



- Definition
- Classification
- Principles
- Effects & uses
- Indications and contra indications
- Techniques- Upper limb, Lower Limb, Neck, Back, Abdomen, Face & Scalp

REFERENCES



- Massage for the therapist: A guide to soft tissue: Margaret Hollis
- Principles and Practice of Therapeutic Massage : Akhoury Gourang Sinha

TOPIC STRUCTURE



- Didactic lecture
- Demonstration
- Group assignment
- Journal writing
- Assessment : MCQ's

PRETEST



GROUP ASSIGNMENT

Define massage

Classify massage

Mention the effects of massage

List the contraindication of massage

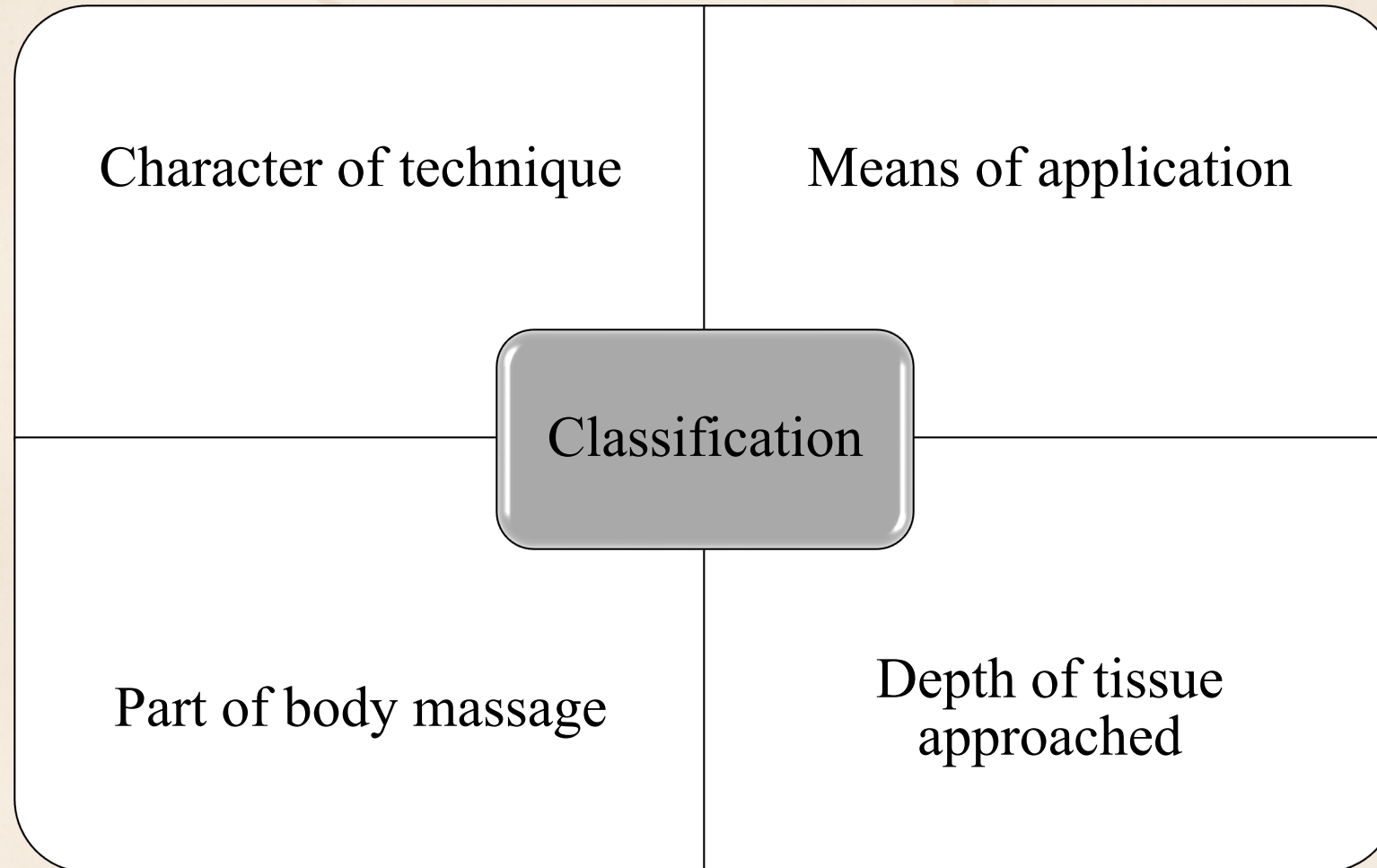
Mention the therapeutic uses of massage

DEFINITION

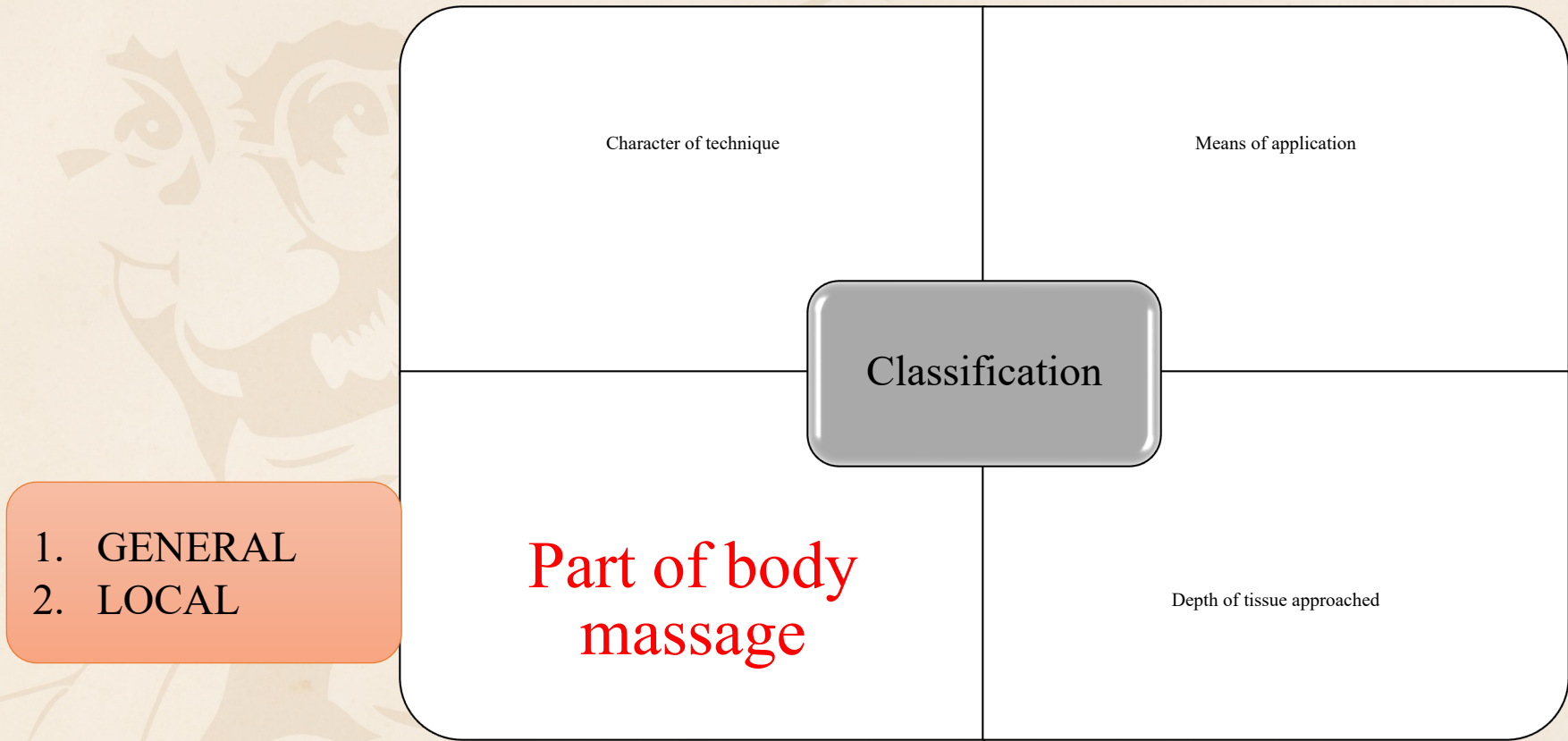


- What is it : Scientific & Systematic
- How it is done: Mechanical (hands) & Manipulative procedure
- What is the purpose: Curative or Palliative

CLASSIFICATION:

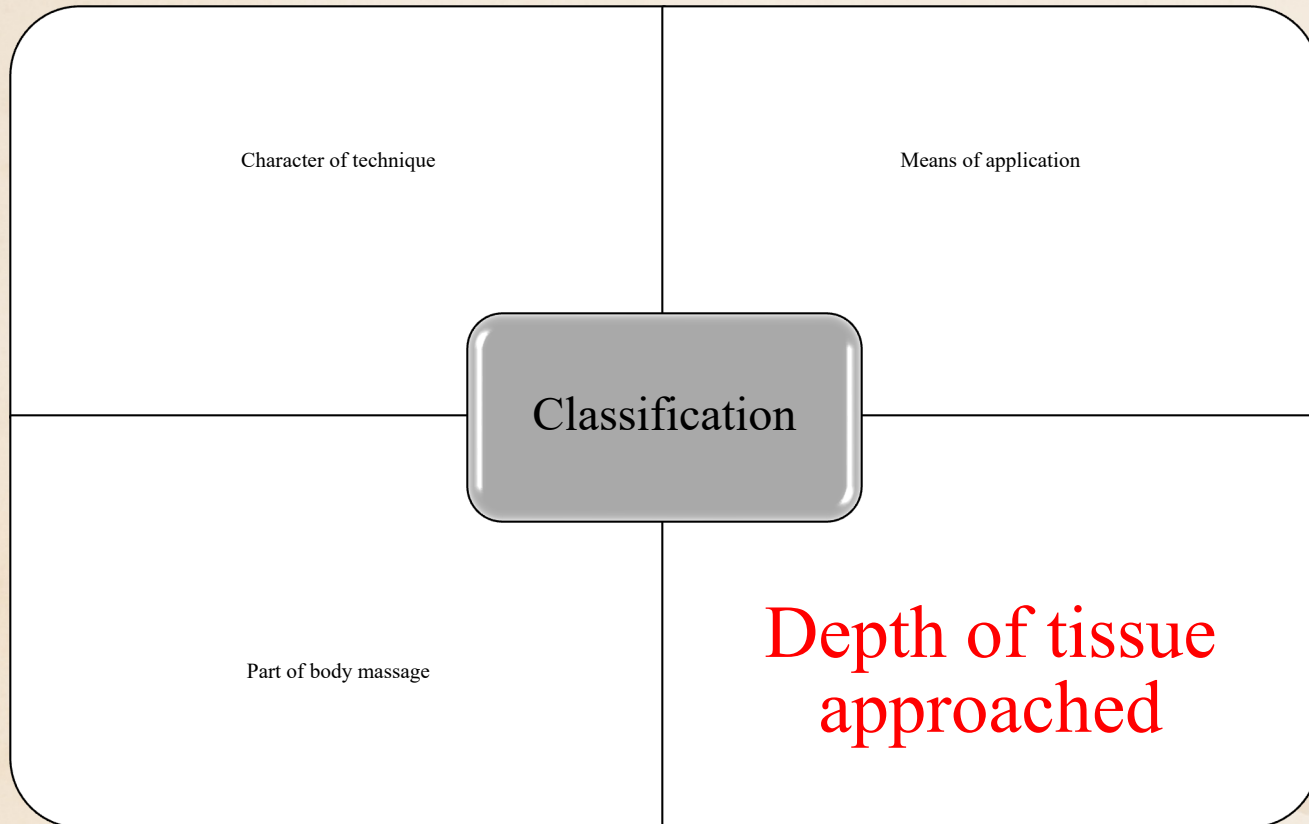


CLASSIFICATION:



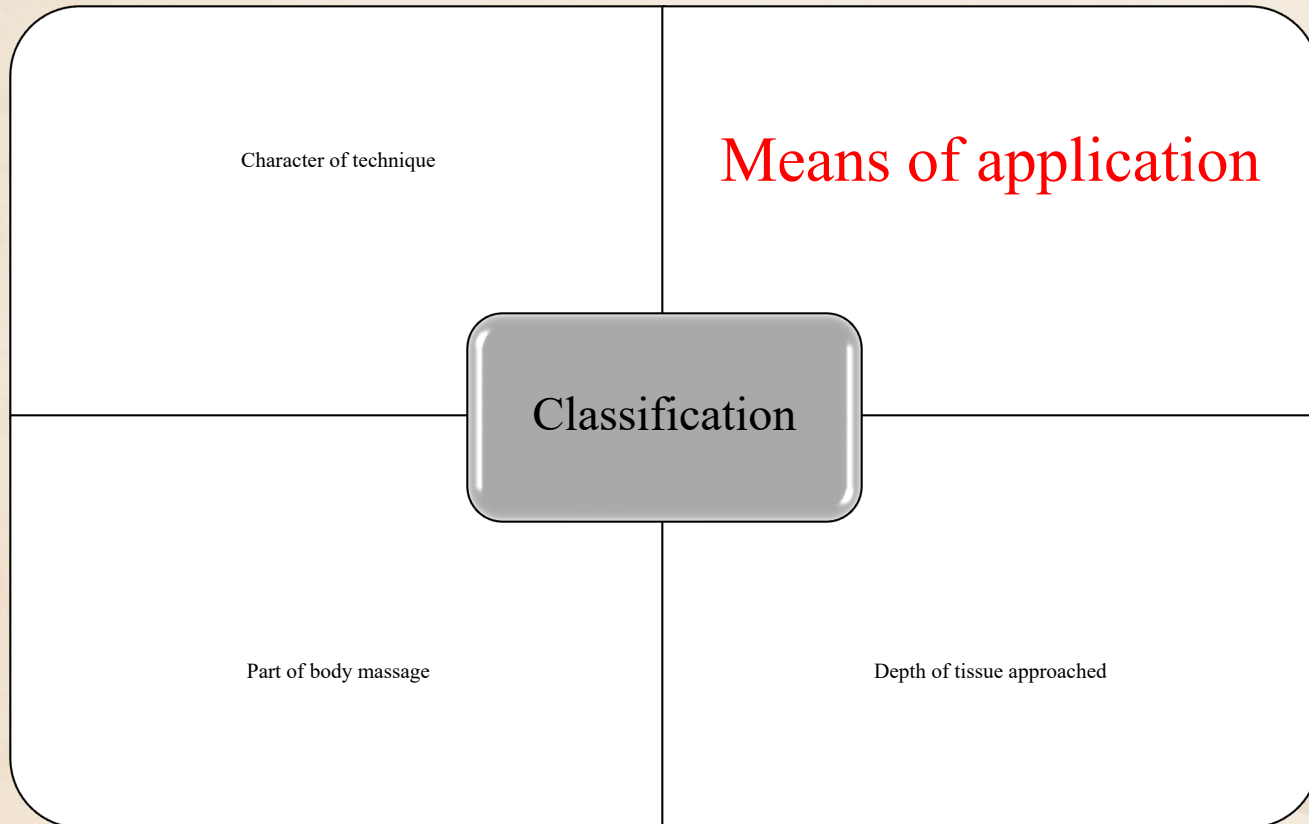
- 1. GENERAL
- 2. LOCAL

CLASSIFICATION:



1. LIGHT
2. DEEP

CLASSIFICATION:



1. Manual
2. Mechanical

CLASSIFICATION

1. Stroking

- i. Superficial
- ii. Deep or effleurage

2. Pressure

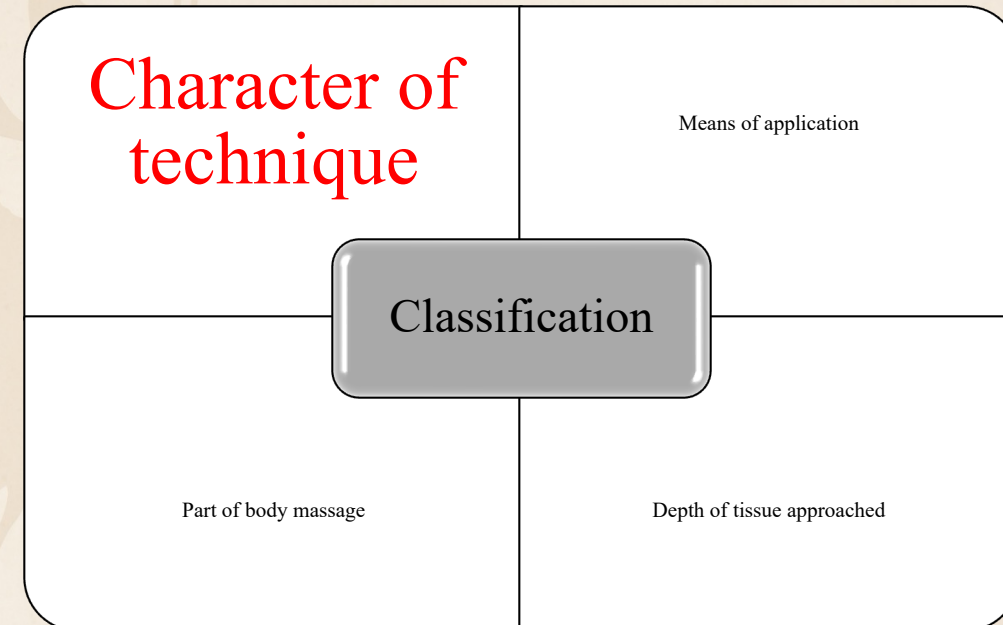
- i. Kneading
 - Palmar
 - Digital
 - Ironing
- ii. Petrissage
 - Picking up
 - Wringing
 - Skin rolling
- iii. Friction
- iv. Circular
- v. Transverse

3. Percussion

- i. Clapping
- ii. Hacking
- iii. Tapping
- iv. Beating
- v. Pounding
- vi. Tenting
- vii. Contact heel percussion

4. Vibration

- i. Vibration
- ii. Shaking



CONTRAINDICATIONS

General

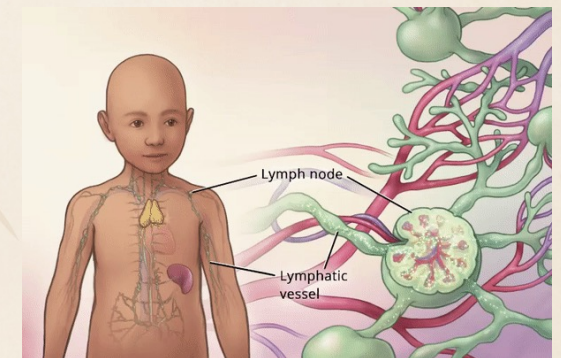
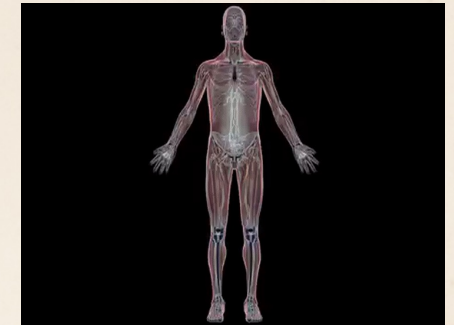
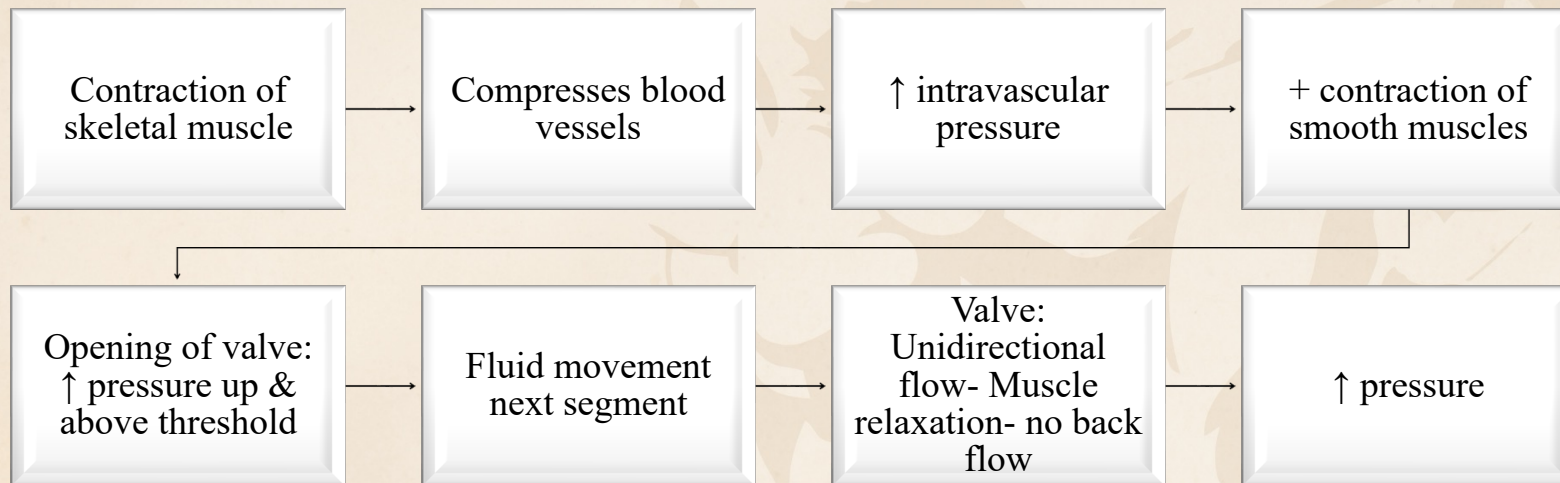
- High fever
- Severe renal or cardiac diseases
- Deep X-ray therapy
- Osteoporosis
- Severe spasticity
- Very hairy skin
- Patient's preference

Local

- Acute inflammation
- Skin diseases
- Recent fractures
- Severe varicose veins
- Atherosclerosis
- Thrombosis
- Myositis ossificans
- Malignancy
- Open wound
- Poisonous foci

EFFECTS OF THERAPEUTIC MASSAGE:

Circulatory system: Venous & Lymphatic flow



- Massage resembles normal muscular contraction
- Different techniques have different way of action

EFFECTS OF THERAPEUTIC MASSAGE:

Circulatory system: Arterial blood

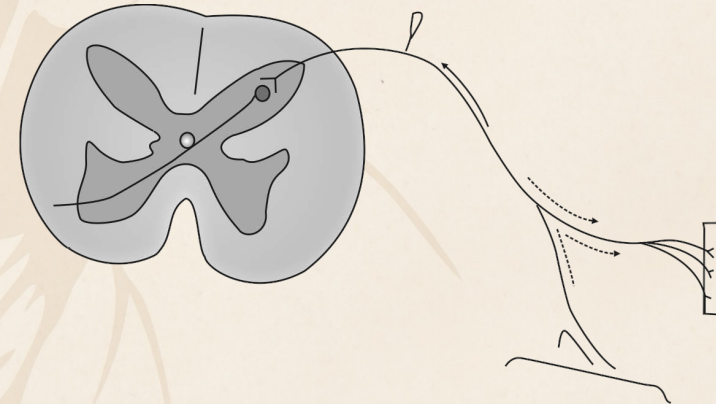
Improves blood supply of area being massaged

Release of
Vasodilators

Acts as a succession of mild traumatisation
+ mast cells → release of histamine & other
substances → Vasodilation

Activation of axon
reflex

Firm skin stroke → + sensory nerve ending →
impulse to spinal cord by peripheral nerves →
impulses return back to periphery to produce
its effects on → cutaneous vessels →
relaxation of the smooth muscles of arterial
wall & vasodilation

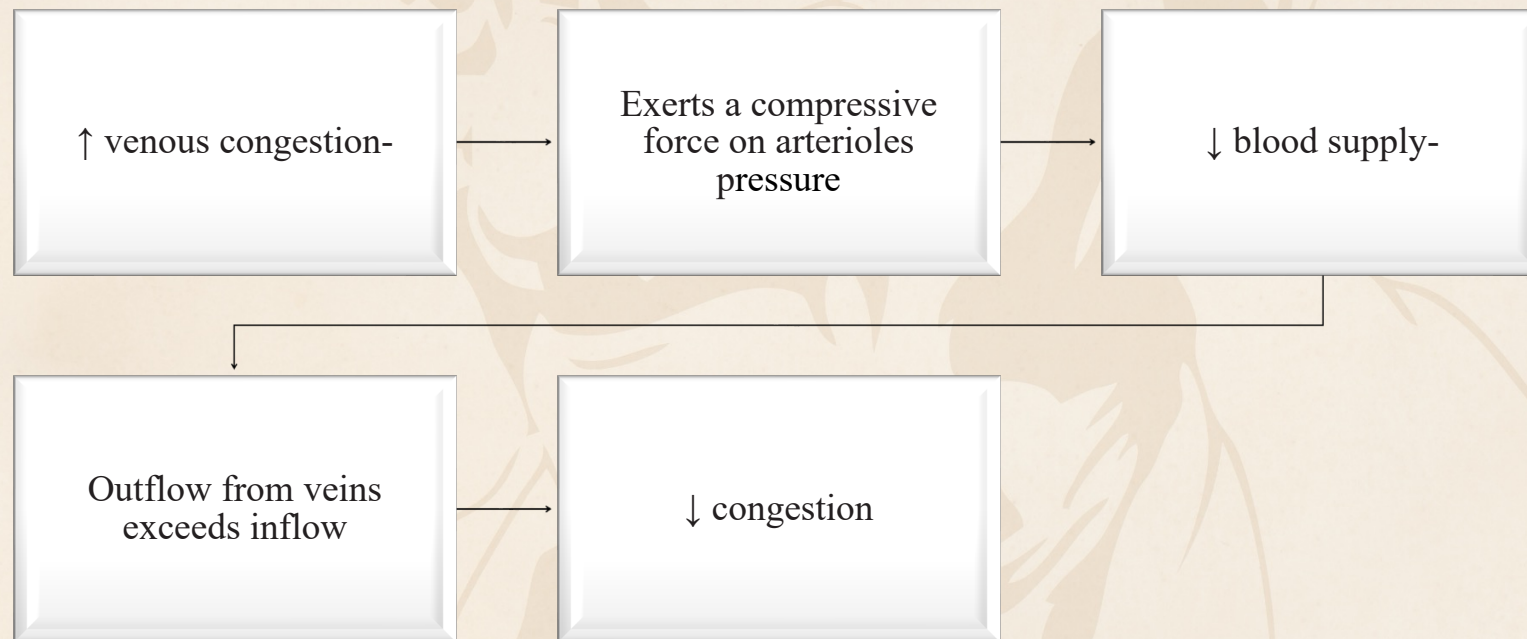


EFFECTS OF THERAPEUTIC MASSAGE:

Circulatory system: Arterial blood

Decrease of Venous Congestion

Avon reflex: Any portion of vessel is dilated, neighbouring vessels also become constricted



EFFECTS OF THERAPEUTIC MASSAGE: BLOOD



↑ blood cells: RBC & Hb, neutrophil, lymphocyte, monocyte platelet: Unknown reasons

EFFECTS OF THERAPEUTIC MASSAGE: EXCHANGE OF METABOLITES

↑ blood,
lymphatic &
venous flow

- Promotes rapid disposal of waste products
- Replenishment nutritive elements
- ↑ movement of liquids & gases in body

EFFECTS OF THERAPEUTIC MASSAGE: METABOLISM

↑ blood,
lymphatic &
venous flow

Accelerates metabolic process: No
evidence

EFFECTS OF THERAPEUTIC MASSAGE:

NERVOUS SYSTEM: Sensory system



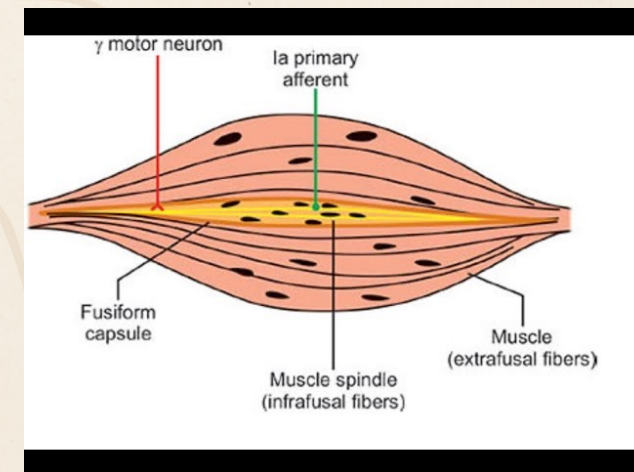
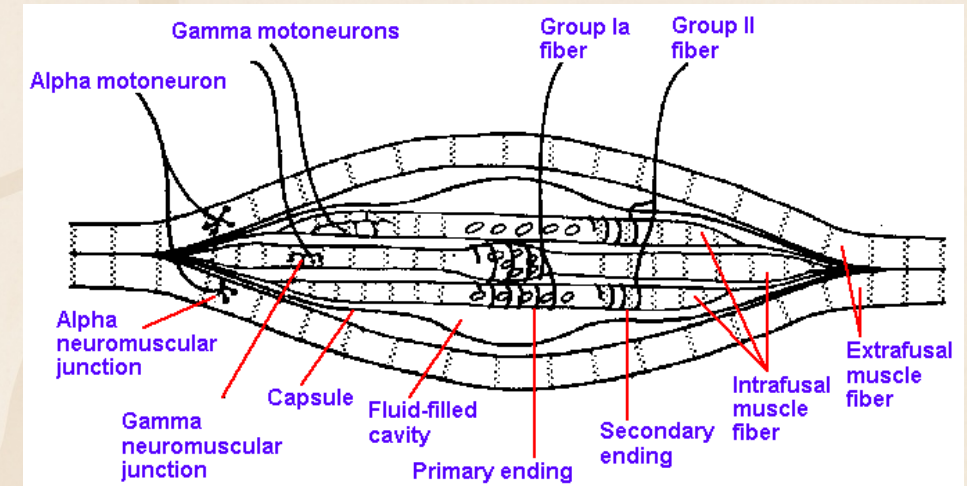
- **Sedative effect on CNS**
- **Pain relief**
 1. + peripheral sensory receptor (touch & pressure receptors) @ skin & soft tissue → large diameter A β (beta) fibres
→ - of perception of pain, carried by A δ (delta) & C fibres
 2. + of low threshold mechanoreceptor (light pressure manoeuvres massage) blocks pathway of pain sensation by presynaptic inhibition at level of substantia gelatinosa of spinal cord
 3. Counter irritant effect :Mild to moderate pain by + of painful areas of body → facilitate secretion of certain antipain substances, such as β endorphin & enkephaline @ periaqueductal gray matter (PAG) at level of midbrain
→ these substances descend to the dorsal horn of spinal cord → suppress the release of substance P (neurotransmitter of blocks transmission of pain impulses to higher pain perception area of brain.

EFFECTS OF THERAPEUTIC MASSAGE:

NERVOUS SYSTEM: Motor system

Facilitatory Effects of Massage on Motor System

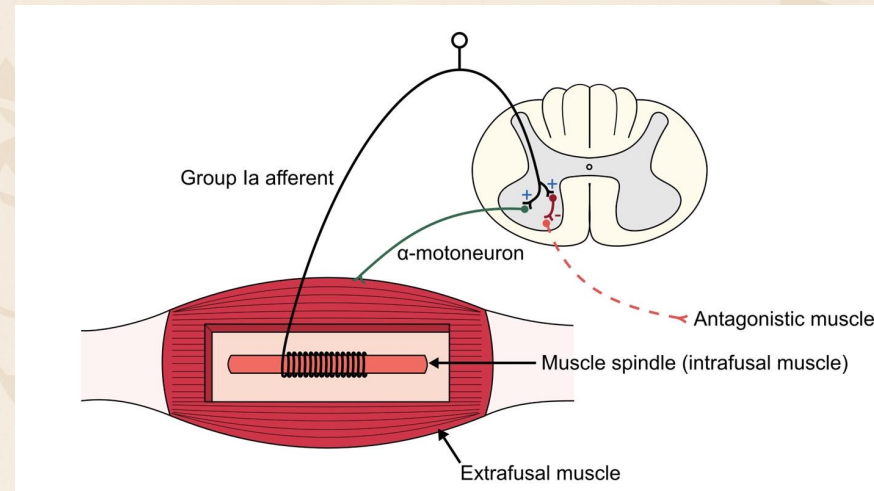
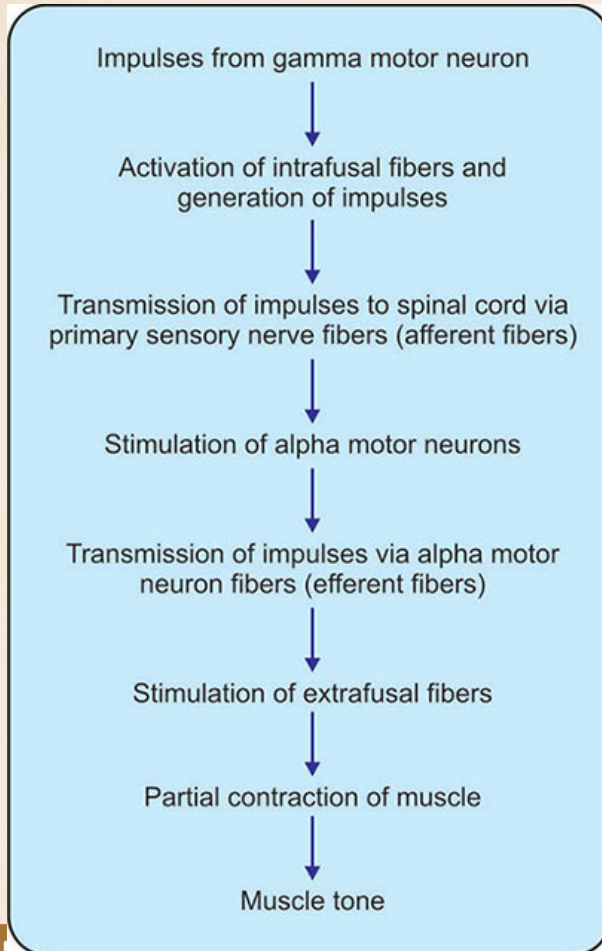
- Tone of muscle: Muscle spindle
- Muscle spindle: Intrafusal fibres supplied by gamma motoneuron
- Extrafusal fibres: Supplied by alpha motoneuron
- Capsule of muscle spindle is attached with extrafusal fibres.
- Any stretch to muscle spindle, either by activation of gamma motoneuron or by passive mechanical procedures, activates the reflex arc.
- Impulse travels via the afferent nerve fibres & propagates toward the spinal cord.
- Activation of alpha motoneuron produces contraction of extrafusal fibres of muscle



EFFECTS OF THERAPEUTIC MASSAGE:

NERVOUS SYSTEM: Motor system

Facilitatory Effects of Massage on Motor System

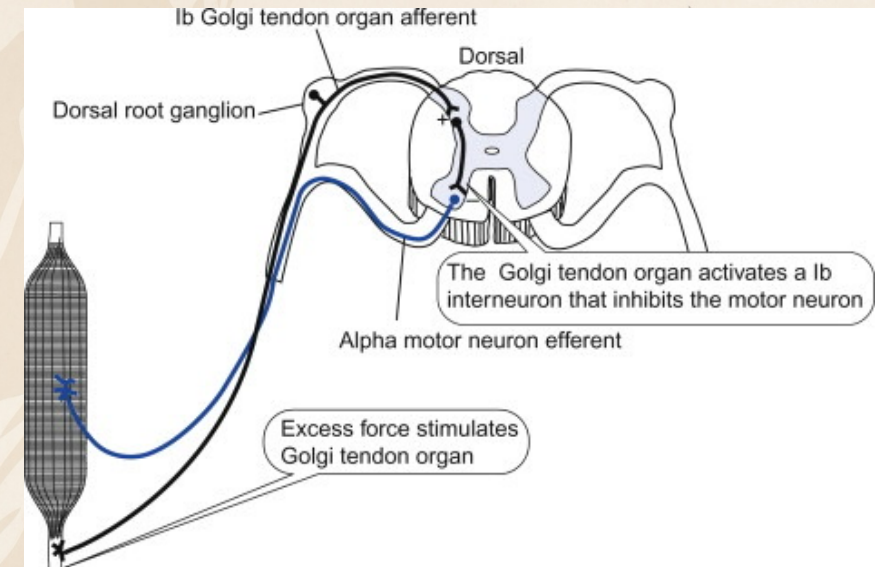
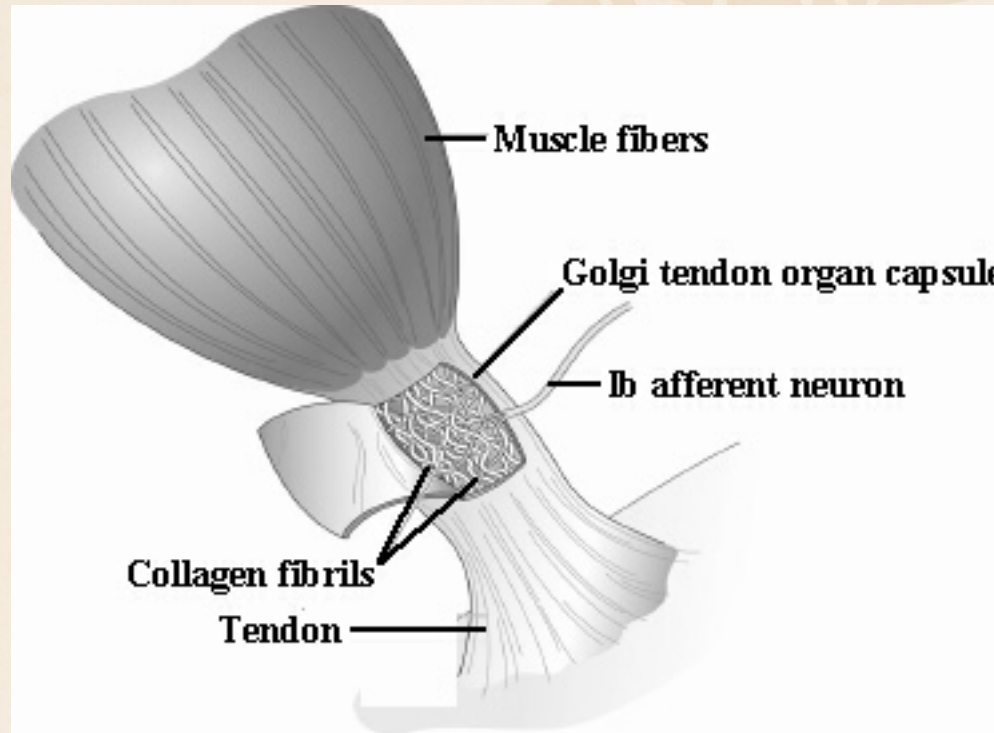


EFFECTS OF THERAPEUTIC MASSAGE:

NERVOUS SYSTEM: Motor system

Inhibitory Effects of Massage on Motor System

- Golgi tendon organ: Inverse stretch reflex



EFFECTS OF THERAPEUTIC MASSAGE: AUTONOMIC NERVOUS SYSTEM



- HR, CO, BP, RR, skin temperature, skin, conductance, activity of sweat gland
- Inconclusive

EFFECTS OF THERAPEUTIC MASSAGE: SOFT TISSUE



- Properties of soft tissues: elasticity, plasticity & mobility.
- Soft tissues: muscles, sheath, ligaments, tendons, aponeurosis, joint capsules & superficial & deep fascia.

EFFECTS OF THERAPEUTIC MASSAGE: MUSCLE STRENGTH



- Inconclusive
- Prepares muscle for contraction by increasing circulation & facilitating removal of metabolic waste.

THERAPEUTIC USES

MOBILITY OF SOFT TISSUES



- Injury or inflammation → New granulation tissue → Oedematous (presence of a protein rich fluid which leaks into the tissue space from capillaries in process of neovascularisation) → Persists for long time consolidates and binds the newly → Laid collagen fibres to each other & to surrounding structures → adhesion formation, extensive scarring, soft tissue tightness and contracture → ↓ mobility & causes pain
- To & fro movement of massage
 - Prevention of adhesion
 - mechanically breaks down adhesion → facilitates free movement of adherent structure.

THERAPEUTIC USES

MUSCLE SPASM & PAIN



- Spasm: Sudden stiffening + by pain or injury, protective (helps to prevent further damage) → by restricting movement
- Contracted state of muscle is maintained for long periods → itself becomes cause for pain → capillary constriction which reduces blood flow → limitation of flow of nutrients & oxygen to area & retention of waste product.
- More spasm leads to more ischaemic pain & less flexible tissue
- Massage: ↓ pain by
 - + of sensory nerve endings & production of mild pain, massage blocks pathway of pain in accordance with the Melzack & Wall's theory of pain gate
 - Mechanical movement of massage stretches individual fibres of soft tissue & ↓ their tension
 - ↓ metabolic waste products → Noxious to tissue & irritate free nerve endings
 - ↑ blood flow → ↓ anoxic condition → danger of ↑ tissue damage
 - + peripheral sensory receptors → effect on general level of excitation & inhibition in region of anterior horn cells → ↓ tone of muscles

THERAPEUTIC USES

OEDEMA



- Accumulation of tissue fluid in extracellular space
- Why: Delayed healing, pain, ↓ mobility with subsequent compromised functional use of afflicted
- How: Mechanical effect of forcing fluid into the drainage channels.
- Supplemented: Active exercises, elastic bandages & elevation to offer better and sustained effects

THERAPEUTIC USES

ENHANCEMENT OF CIRCULATION



- Vasodilatation → facilitates the exchange of nutritive elements into paralysed extremities
- Important substitute for muscle activity in conditions when body parts cannot be moved:
 - Mechanical compression & relaxation of massage creates a pumping effect & improves the lymphatic & venous drainage → Hastens absorption of fluid & ↓ stagnation

THERAPEUTIC USES

MOBILIZE SECRETION IN LUNGS



- ↑ & viscid secretions are source of problem
- Gaseous exchange of part distal to block, becomes restricted & gradually that segment of lung collapses
- Produce a jarring effect lung tissue → mechanical energy transmitted to lung tissue through chest walls. → leads to loosening up of viscid secretions → moves the sputum up in the bronchial tree → coughing

THERAPEUTIC USES

GENERAL & LOCAL RELAXATION



- Touch as a means of communication & its importance in imparting a sense of well-being & confidence



THERAPEUTIC USES

OTHERS

- OBESITY
- AIDS
- CANCER
- HYPERTENSION

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