What are the indications and contraindications for common Physiotherapy treatments and modalities?

Doctors often recommend physiotherapy treatments such as traction, manual therapy, ultrasound and interferential therapy to their patients. These treatments have specific purposes and uses. They are extremely beneficial when correctly applied but can be potentially harmful if used incorrectly. Physiotherapists should apply them discriminately to achieve the best outcome for the patient.

**TRACTION**

**Indications**
- Nerve root compression, disc herniation that responded with decreased pain to manual traction
- Where joint stiffness, torsional and compressive stresses are found e.g. spondylosis, spinal stenosis

**Contraindications**
- Active inflammatory (rheumatoid) or infective arthritis
- Signs and symptoms of cauda equina, spinal cord lesions
- Signs of vertebral artery disease
- Joint and ligament instability, fracture/dislocation
- Increased pain with traction or manual therapy
- Active bone disease or malignancy
- Non-mechanical causes of pain
MANUAL THERAPY

Indications
- Mechanical joint pain provoked by movement
- Joint movement restriction and/or mal-alignment
- Spondylosis, disc lesions, nerve root compression with accompanying joint stiffness and mal-alignment
- Muscle imbalance and tightness

Contraindications
- same as above

ULTRASOUND

Ultrasound promotes increased blood flow, tissue healing, muscle relaxation and scar tissue breakdown.

Indications
- Soft tissue lesions e.g. muscle strains, tendinopathy, ligament sprains, muscle spasm, tension and tightness
- Areas of swelling and chronic inflammation

Contraindications
- Patients with reduced sensation to pain and/or heat
- Pregnancy (direct exposure to abdomen)
- Local malignancy
- Local acute infection
- Direct application to the eye, brain, spinal cord, heart, reproductive organs, epiphyseal regions in children
- Over areas of thrombosis or other vascular abnormalities
INTERFERENTIAL THERAPY

Interferential therapy is a modality that applies currents at around 4000 Hz through the affected area of a patient. Four electrodes are placed in such a way that allows two currents to cross each other and penetrate deep within a joint or body area.

Indications
- Pain relief / anaesthetic effect by stimulating the release of endorphins and blocking the transmission of pain impulses (pain gate mechanism).
- Increase in blood flow to promote tissue healing and reduce swelling/ inflammation
- Muscle stimulation to activate weak muscles and overcome muscle inhibition caused by the injury

Contraindications
- Patients with pacemakers
- Near the low back or abdomen of pregnant women
- Local malignancy

By PHYSIONIQUE – Physiotherapy & Rehabilitation Centre, Singapore