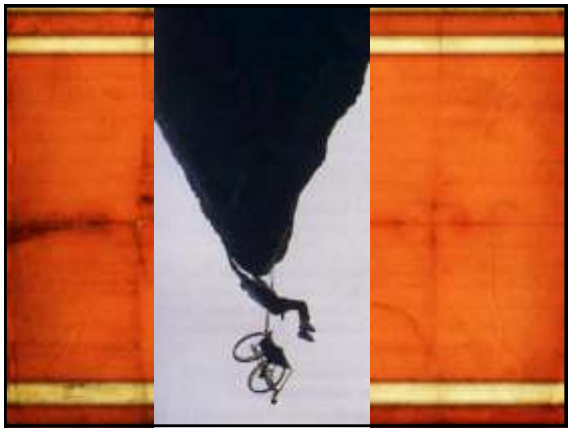
'Wake me when this makes sense'



Today's Objectives

- Selection of techniques
- Order of efficacy of techniques
- Ground the theory in reality
- Application of techniques
- How do you do what you should do

Quote from Maitland

Manipulative physiotherapy is not only a matter of learning and applying techniques. It is a matter of knowing WHEN and HOW to use WHICH technique, how to ADAPT the technique to a particular situation of the patient.

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Sequence of Selecting Techniques

- Also known as the order of efficacy.
- Determines which technique is used when.
- Indicates the progression from one technique to the next.

Lumbar Region

Unilateral Symptoms

- Rotation = PA (CVP)
- Upper Lumbar
  - Transverse
  - Traction
- Lower Lumbar
  - Traction
  - Longitudinal

Bilateral Symptoms

- PA (CVP)
- Rotation
- Upper Lumbar
  - Transverse
  - Traction
- Lower Lumbar
  - Traction
  - Longitudinal

Selection of Techniques

- 'Cause and effect' rule is used.
- Based on current knowledge of the pathological disorder and structures of the vertebral column.
- Diagnosis – closely related to the history.
- History – signs and symptoms.

Aspects of Knowledge of Pathology

- Movements and the related range/pain response.
- Pain-sensitive Structures and their patterns.
- The pathological disorders and injury.

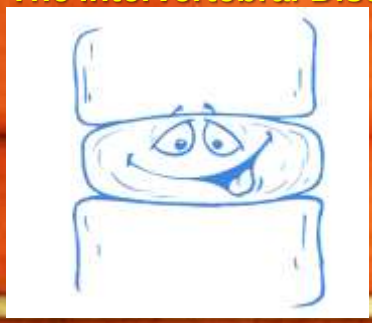
Movements

- Range of movement of the spine and each segment.
- Differentiation from top-down or bottom-up movement should be considered.
- Range/pain response to movement must be considered.
  - Stretching or compression.
  - Point in the range pain occurs.
  - Local or referred pain provoked.

Pain-sensitive Structures and Their Response

- Joint structures.
  - Intervertebral disc, ligaments, facet joints, bones, blood vessels, tendons, muscles fascia and aponeuroses.
- Pain-sensitive structures
  - In the CANAL and the IV FORAMEN
  - The dura, nerve root sleeves, nerve roots and their rootlets.

The Intervertebral Disc



Herniating IV Disc

- Herniating nuclear material causes a bulge in the annulus
- If spinal stenosis is present symptoms may travel down the leg
- Pain and pins and needles are common.
- Level of pain determined by the level of irritation.
- Distal pain usually not greater than the central pain.

Dura and Nerve Roots

- Dural signs - distal pain is not greater than the central pain.
- Root sleeve pain - referred to foot
- Pins and needles present
- Nerve root - symptoms in the distal part of the dermatome.
- Testing structures that cause pain can differentiate causes of the pain - disc versus nerve root irritation.

Stability Issues

- Stability of the disorder has an influence on the intensity of assessment and treatment.
- No clear sign patterns of pain for old herniated disc/nerve root situations.
- Relationship between structures must be considered.
- Joint structure involvement - 'through range' and 'end range' pain described.

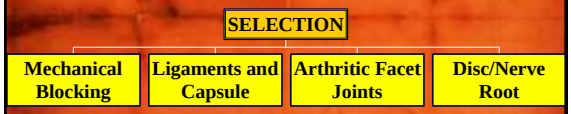
Diagnosis

- PRIMARY, ALL PREVADING, NEVER CEASING guide to selection of technique.
- Pathological and mechanical changes present.
- Manner of presentation of symptoms and abnormalities of movement.

History of Signs and Symptoms

- Onset and progress of the disorder throughout its history.
- Stage of the disorder at the time when the patient seeks treatment.
- Degree of stability of the disorder at the time when he seeks treatment.

Aspects of Pain That Influence Selection



Selection of the Technique

- Decide whether you want to mobilize or manipulate.
- Identify the direction of the movement.
- Identify the position in which the directed movement would be performed.
- Identify the manner of the technique.
- Consider the duration of the treatment.

Group 1 – PAIN

- Patients have severe pain limiting movement.
- Accessory movements in the part of the range that is completely pain free.
- Positioned in a painless position and large amplitude movements used.
- The rhythm should be smooth and slow.
- Physiological movements should not provoke symptoms.
- Progress into a controlled degree of discomfort.

Pain-Motion Sequence

- Pain before restriction of motion
  - Indicative of an active and often acute lesion such as a sprain or strain
  - Treat with protection, rest, ice, compression, elevation as indicated
  - Mobilization is contraindicated

Pain-Motion Sequence

- Pain at the point of restricted motion
  - Indicative of sub-acute stage of recovery
  - Continue modalities with cautious and progressive movement and mobilization as indicated

Pain-Motion Sequence

- Restriction of motion before pain
  - Indicative of chronic dysfunction and lack of recovery
  - Modalities as needed and motion and mobilization are indicated

Pain-Motion Sequence

- Pain without restriction
  - Usually indicative of impingement type syndromes
  - Can occur with tumors and/or vascular disorders
  - Exercise and modalities are the treatment of choice for impingement syndromes

Group 3 – STIFFNESS

- Stiffness limits normal function - not pain.
- Use two kinds of stretching movements - alternating from one side to the other.
- Physiological movement with end range stretching.
- Followed by Accessory movements in the same direction.

Group 2 – PAIN with STIFFNESS

- Largest and most challenging group to treat.
- Movement will be stiff and will elicit pain.
- Need to identify the dominant factor - pain or stiffness.
- Graphically portrayed by movement diagrams.
- Initially only accessory *or* physiological movements are used - not both.
- Decide on whether to use accessory or physiological movements.

Group 4 – MOMENTARY PAIN

- Pain occurs unexpectedly as a sudden jab.
- Always associated with movement.
- Technique selection depends on the movements which elicited pain.
- Identify the combined movement that causes pain and treat using the appropriate accessory movement.
- Technique is nearly always a strong grade IV followed by gentle grade III movements.

Group 5 – Arthritic Facet Joint

- Pain through-range occurs.
- Treated in the same way as for Group 1 - Pain.
- Decision should be made as to whether to treat this type of pain as a normal orthopedic joint or as a spinal problem.
- If treating by mobilization this may not succeed and manipulation may be required at the faulty level.

Disc or Nerve Root

- If severe enough surgery may be indicated.
- Less severe symptoms do not prevent light work.
- Chronic remnants of nerve-root symptoms.
- Position of ease may be necessary and movements should provide ease as well.
- Select appropriate technique according to the order of efficacy.

Any Questions?