

## CLINICAL REASONING

Making Sense of Patient Evaluation

‘Aint no mountain high enough...’



## Sir William Osler, MD

“The good physician treats the disease; the great physician treats the patient who has the disease.”

## Hypotheses Forming

- ∩ Refine
- ∩ Re-rank
- ∩ Rule out
- ∩ Re-Form new hypotheses



## Clinical Reasoning

- ∩ A good way to see if you are clinically reasoning is to stop half way through your assessment and ask yourself,

“What hypotheses have I formed about my patient?”

## Clinical Reasoning

- ∩ The S/E stops when you have gained enough information to determine
  - which structures require physical examination
  - how much examination can be done
- ∩ The O/E should allow you to support or negate your hypotheses formed in the S/E

## Hypothesis Categories

- ∩ Functional limitation and disability (physical or psychological limitations in functional activities and the associated social consequences)
- ∩ Pathobiological mechanisms
- ∩ Source of symptoms or dysfunction

## Hypothesis Categories

- ∩ Contributing Factors
- ∩ Precautions and contraindications
- ∩ Prognosis
- ∩ Management

Jones, 2000

## Dysfunction, Functional Limitation, and Disability

- ∩ Dysfunction - relates to limitations of activities or physical function
- ∩ Psychosocial dysfunction - maladaptive thoughts, beliefs and emotions
- ∩ Other terms - impairments, functional limitations, disability

## Pathobiological Mechanisms

- ∩ Input mechanisms: nociceptive and peripheral neurogenic
- ∩ Processing mechanisms: central neurogenic
- ∩ Output mechanisms: somatic motor, autonomic

## Source of Symptoms or Dysfunction

- ∩ Area of symptoms
- ∩ Behavior symptoms (aggs/eases factors, 24 hr etc.)

## AGGRAVATING FACTORS – BY JOINT

### Lumbar Spine

- ∩ Sit
- ∩ Sit-stand
- ∩ Stand
- ∩ Walk
- ∩ Bend
- ∩  $\frac{1}{2}$  bend
- ∩ Cough/sneeze
- ∩ In/out of car

### SIJ

- ∩ Turning in bed
- ∩ Sex
- ∩ Sit
- ∩ Cross legs
- ∩ Sit-stand
- ∩ One leg stance
- ∩ Heel strike

### Hip

- ∩ Cross legs
- ∩ Sit to stand (especially from low seat)
- ∩ Squat
- ∩ Stairs
- ∩ In/out of car
- ∩ Lying on side
- ∩ Gait (various parts of cycle)

### Knee

- ∩ Sit
- ∩ Squat
- ∩ Walk
- ∩ Pivot
- ∩ Stairs
- ∩ Jump

### Ankle

- ∩ Walk (weight bearing tolerance)
- ∩ Uneven surfaces
- ∩ Stairs
- ∩ Squat
- ∩ Jump

### Cervical spine

- ∩ Look up
- ∩ Down
- ∩ Turn bilaterally
- ∩ Sit
- ∩ Reading

## Shoulder

- ∩ HBH
- ∩ HBB
- ∩ HF
- ∩ Pushing up
- ∩ Lying on side

## Hand

- ∩ Grips
- ∩ Turn doorknob
- ∩ Push up
- ∩ Lift object

## Thoracic spine

- ∩ Deep breath
- ∩ Cough/sneeze
- ∩ Twist for seatbelt
- ∩ Push-pull

## Contributing Factors

- ∩ Environmental
- ∩ Psychosocial
- ∩ Physical
- ∩ Biomechanical Factors

## Precautions and Contraindications to Physical Therapy

- ∩ Dominance of pain mechanisms
- ∩ Severity, irritability, and stability of the disorder
- ∩ Stage of tissue healing
- ∩ Rate of impairment
- ∩ Patient's general health

## Prognosis

- ∩ Mechanical (usually more positive) vs. inflammatory (usually more negative)
- ∩ Irritability of the disorder
- ∩ Presence of normal (adaptive) or abnormal (maladaptive) pain mechanisms
- ∩ Degree of damage or injury

## Prognosis

- ∩ Length of history and progression of the disorder
- ∩ Pre-existing disorders
- ∩ Patient's expectations, personality and lifestyle
- ∩ Current stage of tissue healing and healing potential

## Management

- ∩ Patient's main complaint
- ∩ Site of symptoms
- ∩ Behavior of symptoms
- ∩ Precautionary questions
- ∩ Onset and progression of symptoms
- ∩ Mechanism of injury

## Management

- ∩ Stage of tissue healing
- ∩ Pain mechanism
- ∩ Past treatment
- ∩ Pain threshold/Personality
- ∩ Physical examination

## Management

- ∩ Ongoing management
- ∩ Goals negotiated between PT and patient

## Any Questions?

