


VI) The Nerve Root Patient



The Science: Treatment-Based Classification System – p799

1. Manipulation
2. Direction Preference – e.g. McKenzie
3. Stabilization

Matched treatment superior to evidence-based tx

- Non-specific LBP pts are heterogenous
 - Manipulation
 - Directional Preference Exercise – e.g. McKenzie
 - Stabilization Exercise

Laboeuf-Yde, Fritz, Brennan



1. Manipulation Classification

- **Recent onset** of pain <16 days
- No pain distal to the knee
- Low fear avoidance beliefs score
- Segmental **hypomobility**
- Proper classification improves the probability of improvement from 45% to 95%.



Flynn T, Fritz, J, et al. A Spine 2002.

84% chance of improving by the 4th manipulation session if -

- Decreased pain immediately after visit one
- Decreased pain reported at visit two
- Decreased disability reported at visit two
- Common reaction (local pain or fatigue lasting 24 hours) or no reaction to first treatment
- All of the criteria had to be present.

Axen

Only a 30% chance of being recovered by the 4th visit if -

- No immediate improvement immediately after visit one
- No decreased pain at visit two
- No decreased disability reported at visit two
- An uncommon reaction (local pain or fatigue lasting more than 24 hours; new radiating pain, other reactions) to the first treatment
- All of the criteria had to be present.

Axen

2. Directional Preference Classification

- Centralization w/ motion testing (i.e. flexion or extension)
- Peripheralization in opposite direction as centralization
- Strong preference for sitting or walking
- Fritz, Brennan



Directional Preference Treatment Superior to Evidence-based

- 95% of **matched** pts improved
- 56% of **evidence-based** care group improved
- 75% of **opposite direction** group were not improved or were worse

Long

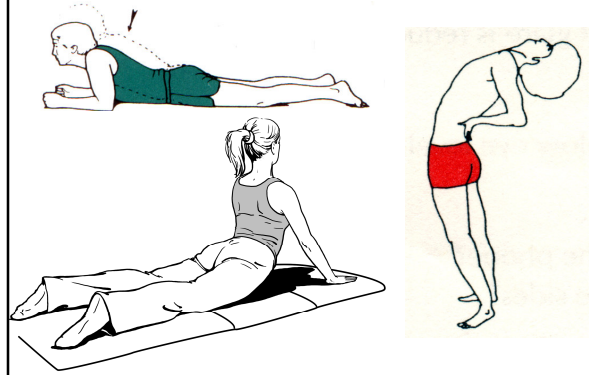
The McKenzie Approach

- “If you adopt certain positions or perform certain movements that cause your back to ‘go out’, then if we understand the problem fully we can identify other movements and other positions that, if practiced and adopted, can reverse the process. You put it out - you put it back in.”

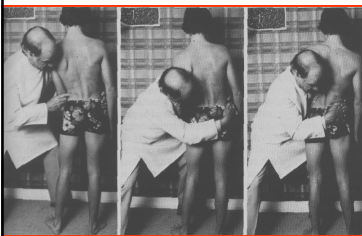


McKenzie R. The McKenzie Institute

McKenzie Extension - Ch 15



Side Glides



- When an antalgic shift is present
- Generally, correct frontal plane lateral shift prior to Rx'ing extension

Self-Treatment of Side Shift



3. Stabilization Classification

- Positive prone instability test
- Aberrant motions present (e.g. instability catch, reversal of L rhythm)
- Avg. SLR > 91°
- **≥ 3 past episodes**
- If $\frac{3}{4}$ present positive LR (likelihood ratio) 4.0
 - 95% CI (confidence interval)
 - The LR represents the change in odds favoring success given a positive diagnostic test result.



[Hicks GE, Fritz JM, Dellitto A, McGill SM. Arch Phys Med Rehabil. 2005.](#)
Brennan. Spine, 2006

Treatment hierarchy

- **Directional Preference** signs always take precedence over **Manipulation** or **Stabilization** signs
- Treat Directional Preference first since we must **CENTRALIZE** the symptoms
- Failure to centralize the symptoms is an indication for Medrol dose pack, imaging, & epidurals

As Directional Preference patient improves (↓ leg symptoms):

- **Manipulation** (e.g. *acute, stiff*) patients can be treated with manipulation
- **Stabilization** (e.g. *recurrent, abnormal movement patterns*) patients can be treated with stabilization

Questions

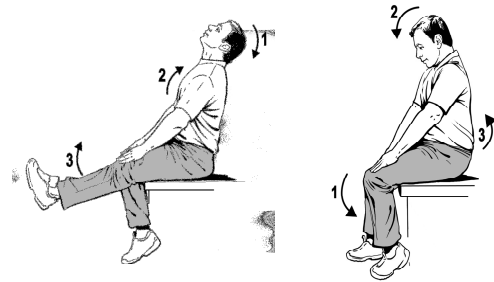
- *McKenzie* – Are extension exercises Rx'd even if no centralization?

Butler's Neuromobilization – Ch 20

- Subacute-chronic patient
- Often mis-diagnosed w/ hamstring injury



Butler's Neuromobilization



What about traction?

- Peripheralization with extension or a well SLR may predict a favorable response to traction in addition to specific exercise

Fritz, Spine, 2007.

