

Management of Low Back Injuries Utilizing Physical Therapy

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Objectives:

- Discuss low back pain
- Present indications and contra-indications for physical therapy
- Present different treatments
- Present a major change in low back injury management and prevention

Low Back Pain

- 85% of Americans will experience disabling back pain in their life
- 66% will have a reoccurrence of their pain
- Back Strain: #1 musculoskeletal cause of work injury
- Annual cost: \$80+ Billion

Low Back Pain used to be considered a self-limited disorder, but...

- Research supports:
 - Early motion with minimal rest is most effective
 - Minimizing temporary disability is critical
 - Early intervention is effective: PT, DC, manipulation
- It is often recurrent: a series (3-4) of incidences
 - Treatment should focus on:
 - Education in self treatment strategies
 - Prevention on Future Incidences

Typical Sources of Low Back Pain

- Muscle/ligament strain, spasm or inflammation
- Disc bulge (derangement) or herniation?

- Disc degeneration (DDD)
- Arthritis (DJD)

- Facet joint dysfunction
- Sacroiliac (SI) joint
- Spondylosis/Spondylolisthesis

BUT...

A multi-disciplinary review of
25 years of research
concluded...

We don't really know what causes
back pain!!!

So...

Find your favorite artist!

Who do you send to PT?

- 2 days to 1 week post-trauma
- negative neurological exam
- referred and/or localized symptoms, or

- chronic pain related to position or activity
- functional deficits: pain and disability
- recurrent episodes of back/neck pain/strain

Contraindications to Physical Therapy

- Positive neurological signs
- Fractures
- Constant symptoms unrelated to position (frequently night pain)

Do post-op patients need PT?

- Many do not
 - Walking program
 - Home exercises
 - Gradual progression in activity
- Those that do need PT:
 - Heavy physical demand jobs
 - Secondary gain (workers' comp)/red flags
 - First year episodic back pain
 - Unilateral hip/gluteal pain

Interventions:

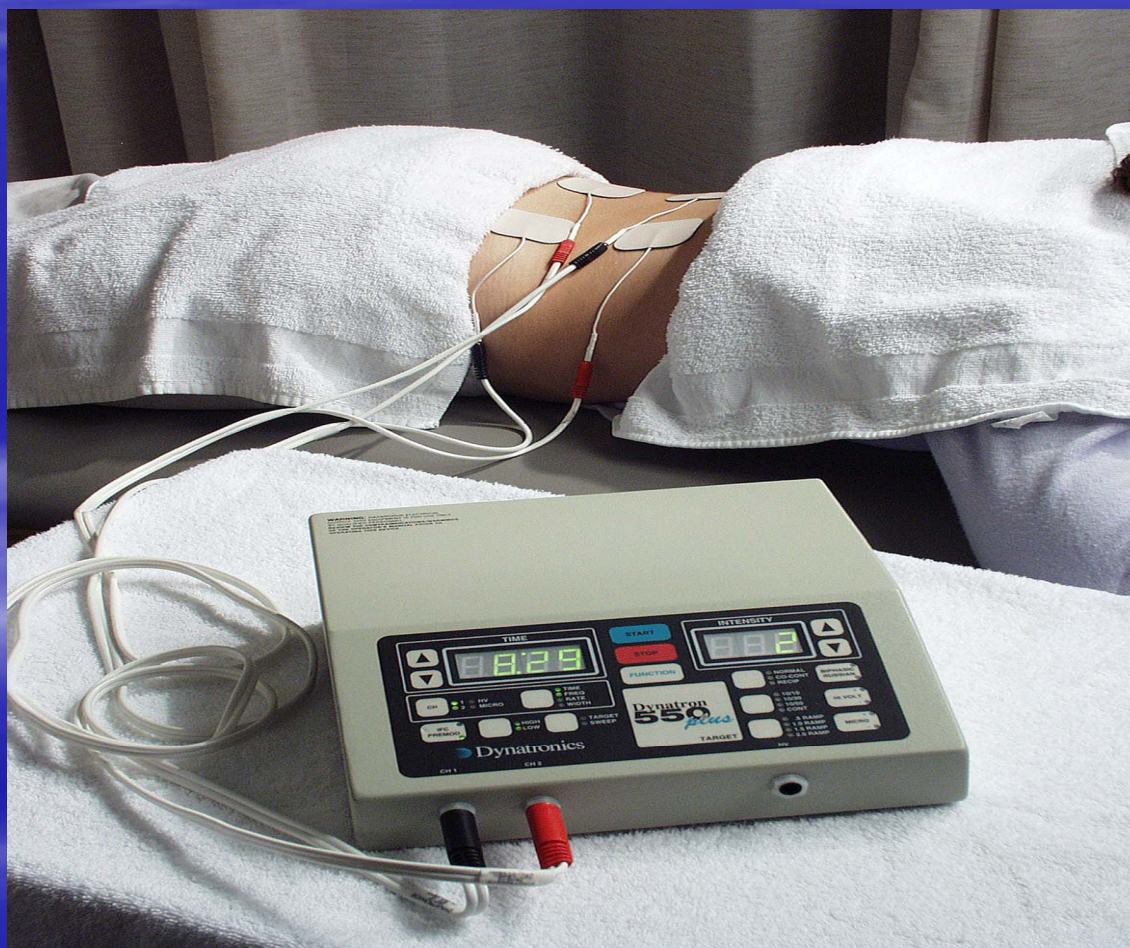
- Manipulation/mobilization
 - Segmental approach
 - SI joints; pelvic alignment
 - Rule of the artery: chiropractic
 - Rule of the nerve: osteopathic
 - Rule of motion: physical therapy
 - Muscle energy and direct techniques

Massage Techniques in Physical Therapy

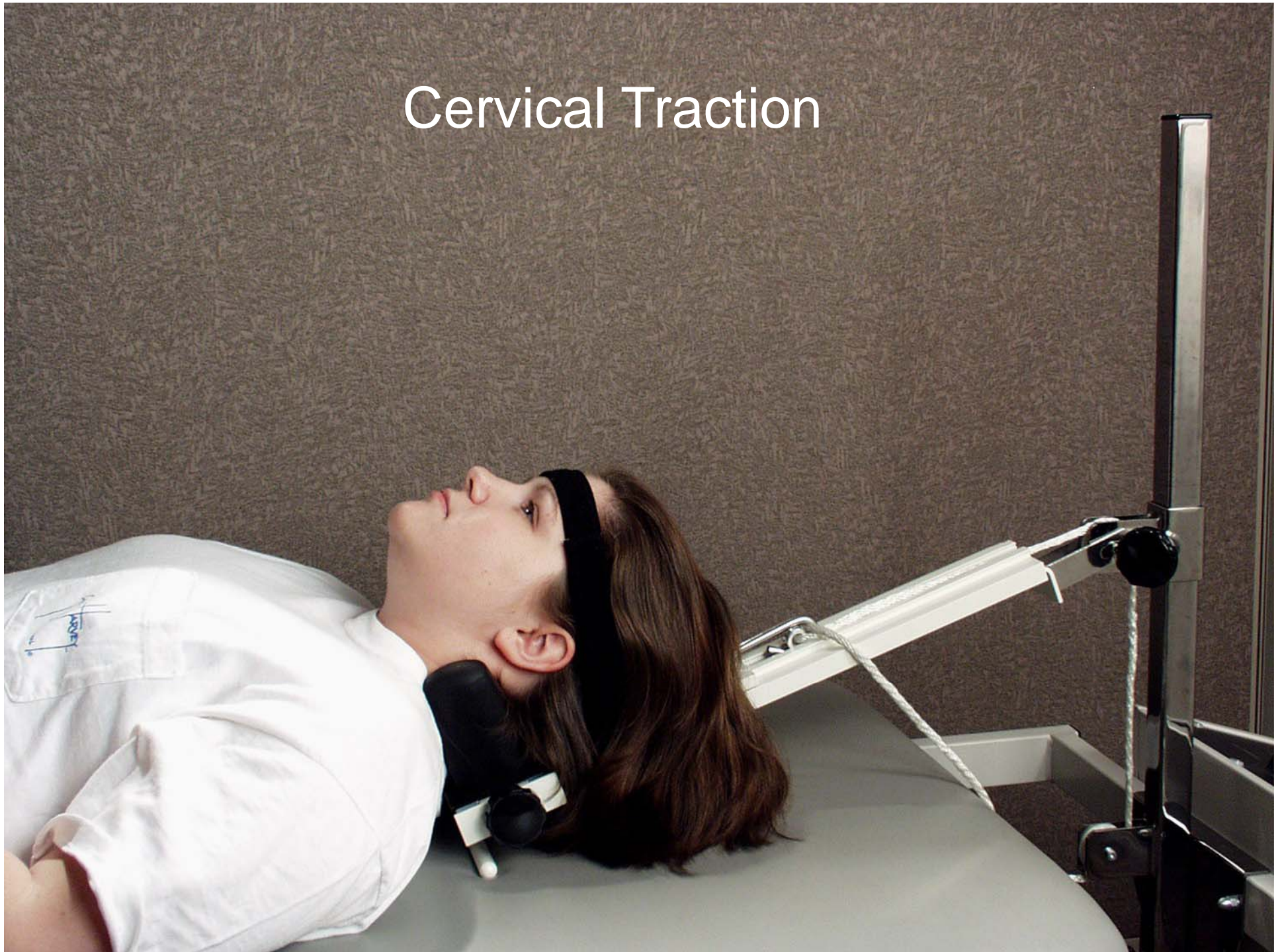
- Traditional massage
- Myofascial release
- Counterstrain/trigger point therapies
- Rolfing/cross-friction

Modalities

E-stim, Ultrasound



Cervical Traction



Pelvic traction/decompression



Exercise!



McKenzie Approach

A photograph of a man from the waist up, shirtless, performing a McKenzie back extension exercise. He is leaning forward with his hands on a dark surface, and his torso is arched backward, showing the spine's curvature. The background is a plain, light-colored wall.

- Categorizes back pain as
 - Postural
 - Dysfunction
 - Disc Derangement
- Looks at back pain pattern changes with repetitive movement
- Centralization vs. Peripheralization
- Stresses patient's self treatment

Cardio-vascular Exercise



STRENGTHENING: A focus on the back!

- Paraspinals & Multifidi
- Quadratus lumborum
- Abdominals: Rectus
- Obliques
- Latissimus Dorsi & Trapezius
- Gluteus Maximus



Injury Prevention Paradigm Shift

- Use your legs, don't use your back!...
 - Keep your back straight!...
 - Don't lift with you back!...
-
- **RESULTS IN WEAK BACK MUSCLES,
SO USE YOUR BACK REGULARLY
AND IT WILL BE STRONG WHEN YOU
NEED IT...**
-
- If you DON'T use it, you'll lose it!

Modern Injury Prevention Concepts

- Regular dynamic paraspinal exercise
- Whole Body Lifting Techniques
- Work Intensity Modulation
 - reduce loads and forces
- Body Mechanics
 - Avoid rotation and reduce horizontal distance

Conclusions:

- Low Back Pain is Recurrent, not Self-limiting
- Treatment should include:
 - Early motion
 - Active exercises
 - Education in self treatment
 - Strategies to prevent future occurrences