

Physical Therapy: When to Start, How Long, and When to Stop

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*Work Related Injuries Workshop
March 25th & 26th, 2019*



Bio

- Graduated Northeastern 2008 with BS Cardiopulmonary Exercise Physiology.
- Worked 8 years as an Exercise Physiologist, earning certificates in Functional Movement Screening, Strength And Conditioning.
- Graduated MCPHS with degree in PA in 2015
- Specialize in Orthopedics Spine with...



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What do I do?

- Evaluate and treat low back pain/neck pain in clinic
- Assist attending MD's in their clinic
- Take care of post-op patients
- First assist Dr. Tannoury in the OR
- Talk patients OUT of surgery
- Keep Tannoury on time



General Spine Facts

- LBP is the 5th most common reason for U.S. office visits, and the 2nd most common symptomatic reason
 - >16 million LBP office visits/year
 - 5% of PCP visits are for LBP
 - Most common reason to see a neurosurgeon or orthopedist
- Up to 84 percent of adults have LBP at some time in their lives, and 28% in the previous 3 months
 - Only 2-5% seek health care or claim disability

General Spine Facts

- Low back patients will...
- 70 % improve within 2 WEEKS
- • 90 % improve within 12 WEEKS
- • 3% do not improve after 12 WEEKS
- • 50 % of low back pain cost is due to these patients



Causes of Back Pain

- Sprained/strained ligaments, tendons, muscles
- Herniated discs
- Spinal Stenosis
- Degenerative disc disease
- Spondylolysis, Spondylolisthesis
- Facets joints arthritis
- Sacroiliac joint
- Osteoporosis (lead to fractures)
- Ankylosing Spondylitis
- Arthritis (osteoarthritis and rheumatoid arthritis)

Causes of Back Pain

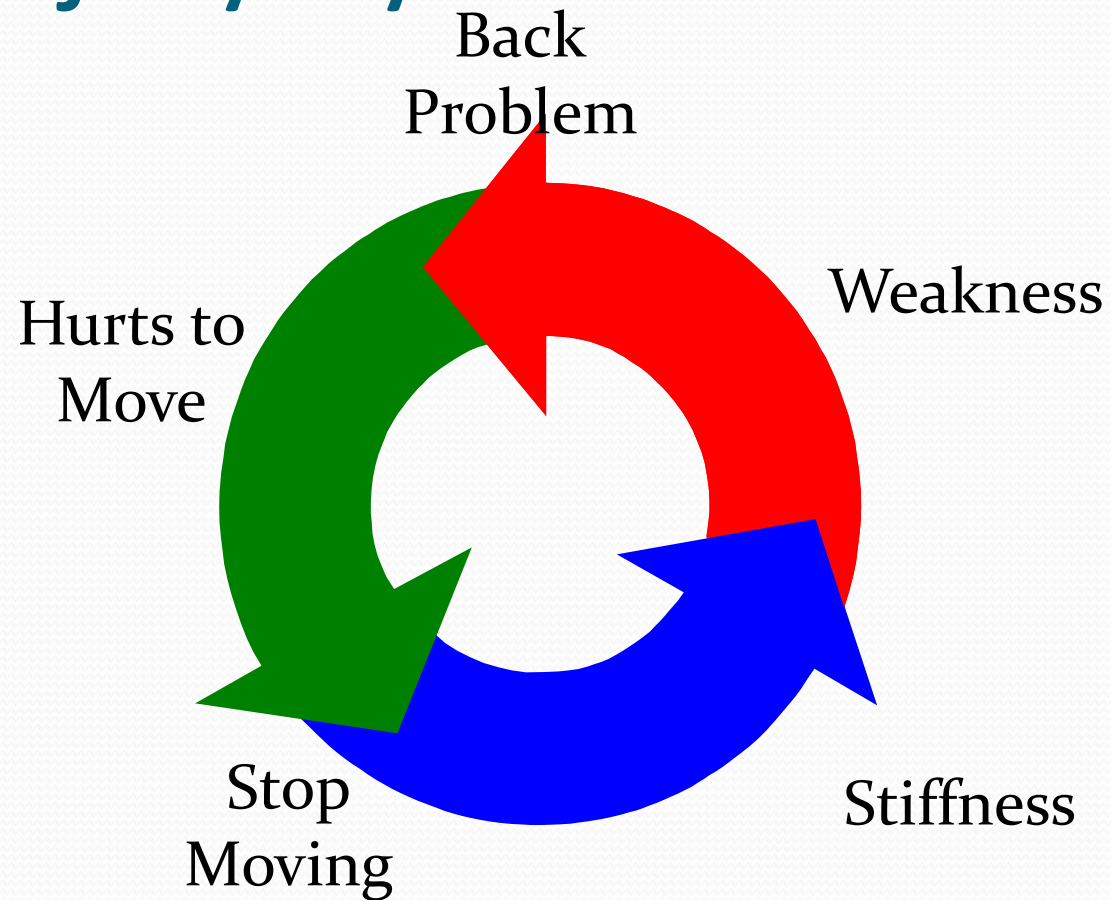
- Deformities (Kyphosis, Lordosis, Scoliosis)
- Fibromyalgia, myofascial pain
- Emotional stress
- Vertebral body fractures
- Infection (osteomyelitis, abscess, archedoditis)
- Osteomalacia
- Cancer
- Referred pain
- 85% PRESENT WITH NONSPECIFIC LBP



Causes of Back Pain

- Poor body mechanics
- Stressful living & work habits
- Age related
- General physical fitness decline
 - Loss of flexibility
 - Loss of strength
- Work Accidents

Back Injury Cycle



Acute LBP. What to do next

- Re-assurance. 90% approve in 3 months with proper treatment. Without red flag symptoms.
- MOVE. Continue exercise. Walk
- Heat/Ice
- NSAIDS
- Start Physical Therapy / Home Exercise Program
 - Learn proper exercise routine
 - Start therapy EARLY! Greatly reduces chronic LBP
- Do NOT:
 - Bed rest – leads to weakness and de-conditioning
 - BED REST IS BAD FOR YOU HEALTH
 - Focus on injury/accident
 - Opioids



Why no imaging?

- Without red flag symptoms (cancer, cauda equina, infection, fracture, neurological weakness), there is no initial change in treatment.
 - Less than 3% of total patients
- Most Americans have asymptomatic degenerative changes, spondylolisthesis, disc herniations
 - Upwards of 65% have abnormal disc pathology in patients with no pain
- Physical therapy and conservative care are mainstay of treatment ~ 3 months



How we take care of our back

- Body Mechanics
- Proper Lifting Techniques
- Maintain and improve safe postures
- Keep physically fit
- Stretch and exercise
- Stress management
- Sleep mechanics

Proper Mechanics: Hip Hinge



Hip hinge



Hip hinge training,
correct neutral spine



Hip hinge not correct, spine
is rounded, not in good
neutral position

COURTESY SHARRON STEEVES, PHYSIO FITNESS

Proper Mechanics: Lifting



Sitting Posture





Goals of exercise treatment

- Functional improvement is main goal of treatment
 - Increasing strength, flexibility, endurance and balance
 - Strength training best
- Pain reduction
 - Difficult getting zero pain after 3 months
- Preventative care from further injury
- Safe return to work
 - Work hardening programs



When its not enough

- After 3 months of PT/HEP/Lifestyle modifications with no improvement or new neurological weakness
 - X-ray/CT/MRI to discuss further treatment plan
 - Injections, Nerve Blocks
 - Diagnostic vs Therapeutic. Not a fix
 - Assist in retuning to exercise routine.
 - Surgery
 - Discuss other forms of conservative care
 - Yoga, chiropractic care, Tai Chi, Acupuncture, Meditation, massage therapy
 - All of shown helpful in management of chronic LBP



What's best?

- Multidisciplinary approach
 - Patient education about condition
 - What to expect
 - Physical therapy/exercise routine
 - Cognitive Behavioral Therapy
 - Associated anxiety/depression/socioeconomic stressors
 - Avoiding aggravating factors
 - Pain programs as needed

Take home point

- There are 1440 minutes per day...



- Take 30 minutes to MOVE and recondition your body.

If not..





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References

- Scott NA, Moga C, Harstall C. Managing low back pain in the primary care setting: the know-do gap. *Pain Res Manag*.2010;15(6):392-400.
- Linton SJ, Maher CG, Van Zundert J. Low back pain: basic mechanisms, treatment, and management. In: Tracey I (ed). *Pain 2012:Refresher Courses, 14th World Congress on Pain*. Seattle, WA: IASP Press; 2012.
- Dagenais S, Caro J, Haldeman S. A systematic review of low back pain cost of illness studies in the United States and internationally. *Spine J*. 2008;8(1):8-20.
- Manchikanti L, Abdi S, Atluri S, et al. An update of comprehensive evidence-based guidelines for interventional techniques in chronic spinal pain. Part II: guidance and recommendations. *Pain Physician*. 2013;16:S49-S283.
- Linton SJ, Hellsing AL, Andersson D. A controlled study of the effects of an early intervention on the acute musculoskeletal pain problems. *Pain*. 1993; 54: 353-359.
- Linton SJ, Hellsing AL, Andersson D. A controlled study of the effects of an early intervention on the acute musculoskeletal pain problems. *Pain*. 1993; 54: 353-359.