

# Low Back Pain: Non-Surgical Approaches

---

NEELWANT SANDHU, M.D.

CLINICAL ASSOCIATE PROFESSOR

DEPT OF REHABILITATION MEDICINE

NOVEMBER 14, 2022

# Disclosures/Disclaimers

- No Financial Disclosures
- This is a general overview, and not individualized medical advice
- A spine physician can help for your specific back condition

# Background



- Low Back Pain (LBP) is common
  - 80% of adults will experience at least once in their lifetime \*
- Most new-onset/acute LBP *improve* on their own (regardless of treatment)\*\*
- Some may need short term medical management
- In many cases, pain does not go away completely, and becomes recurrent or chronic
  - Can still improve pain, mobility, quality of life
- Majority of back pain and related symptoms do not require surgery

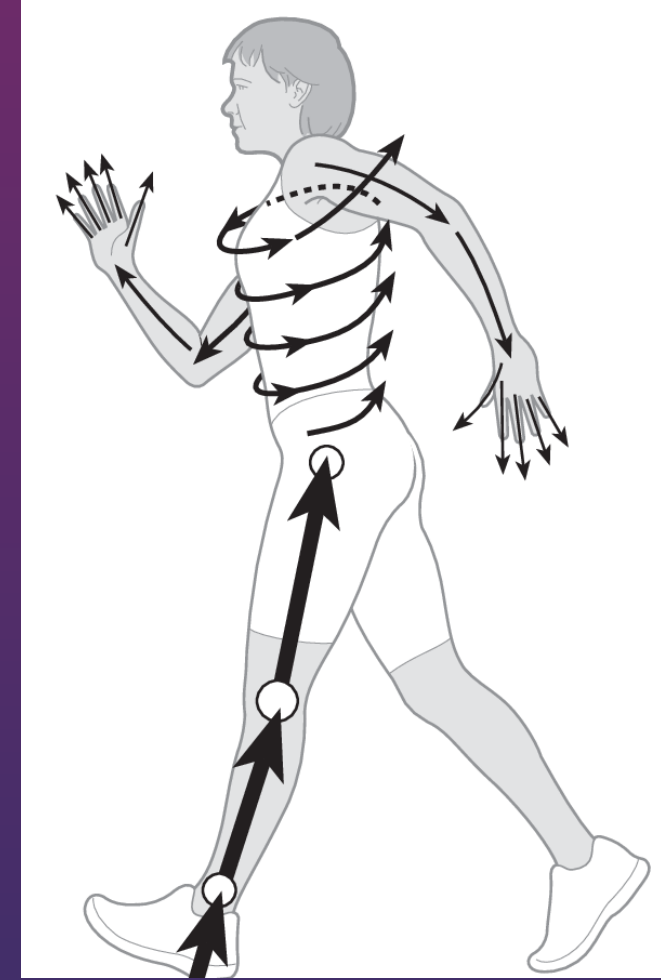
\*Rubin DI. Epidemiology and risk factors for spine pain. *Neurol Clin.* 2007;25(2):353–371

\*\*UMHS. Acute low back pain

\*\*\*ICSI. Adult low back pain; 2006. [http://www.icsi.org/low\\_back\\_pain/adult\\_low\\_back\\_pain\\_\\_8.html](http://www.icsi.org/low_back_pain/adult_low_back_pain__8.html).

# BACKGROUND (cont.)

- GOALS OF TREATMENT
  - Aim is to treat the back beyond just the “pain”
  - Back/Spine serves essential function
    - – facilitates motion/function
  - Help improve health, happiness and independence



<https://www.semanticscholar.org/paper/The-neutral-spine-principle.-Wallden/fbeca1eb8f67f2646a446fccfd9c6bf852039d0f/figure/3>  
<https://sjcc.org/programs/adults-seniors/senior-fitness-classes/>

# Overview of Patient Assessment:

- Obtain a detailed history of pain & associated symptoms
- Review of general medical history
- Detailed physical examination – spine and peripheral structures
- Review of prior diagnostic tests
- Review response to prior treatments
- Understand the individual, not just the symptoms, exam and diagnosis.
  - Patient-specific needs, goals, challenges, responsibilities, etc.
  - How does it affect the person and their well-being?



# Formulate a diagnosis

- Often, the diagnosis may be not straightforward
  - Discussion about the possible causes of pain is essential
- There can be multiple factors/structures involved causing the symptoms
- Important: Rule out more concerning things that need timely attention
  - Tumor, Infection, Cancer, Fracture, Significant/Progressive Neurologic injury
- Imaging/studies, if needed
  - Lower threshold in individuals >60 years of age
  - Interpret with caution

# Degenerative MRI findings are common in individuals without LBP

**Comment:** The following findings are so common in people without low back pain that while we report their presence, they must be interpreted with caution and in the context of the clinical situation. (Reference –Jarvik et al, Spine 2001)

**Findings:** (prevalence in patients without low back pain), Disk degeneration (decreased T2 signal, height loss, bulge) (91%), Disk T2—signal loss (83%), Disk height loss (56%), Disk bulge (64%), Disk protrusion (32%), Annular tear (38%)



# Treatment/Management Plan

- Determine if non-surgical or surgical treatment is appropriate or necessary (or both)
- Prioritize well-researched treatments when possible (data sometimes scarce)
- Avoid use of unnecessary treatments or those with known/significant adverse effects
- Shared healthcare decision-making with the patient yields better results



# Treatment & Goals

- ACUTE/SUBACUTE: <6-12 weeks
  - Control Pain
  - Control Inflammation
  - Activity within tolerance
  - Gently restore mechanics/function
  - Education: diagnosis/management
- CHRONIC PAIN (>12 weeks)
  - Encourage appropriate activity
  - Reinforce education/understanding
  - Restore function back to prior levels
  - Address concerns/barriers

# Treatments

- Rest, activity modifications
- Oral Medications
- Modalities – TENS, etc.
- Manual therapy
- Bracing
- Exercise
- Physical Therapy
- Injections
- Manipulation
- Acupuncture
- Psychological Approach
- Pain clinic
- Surgery

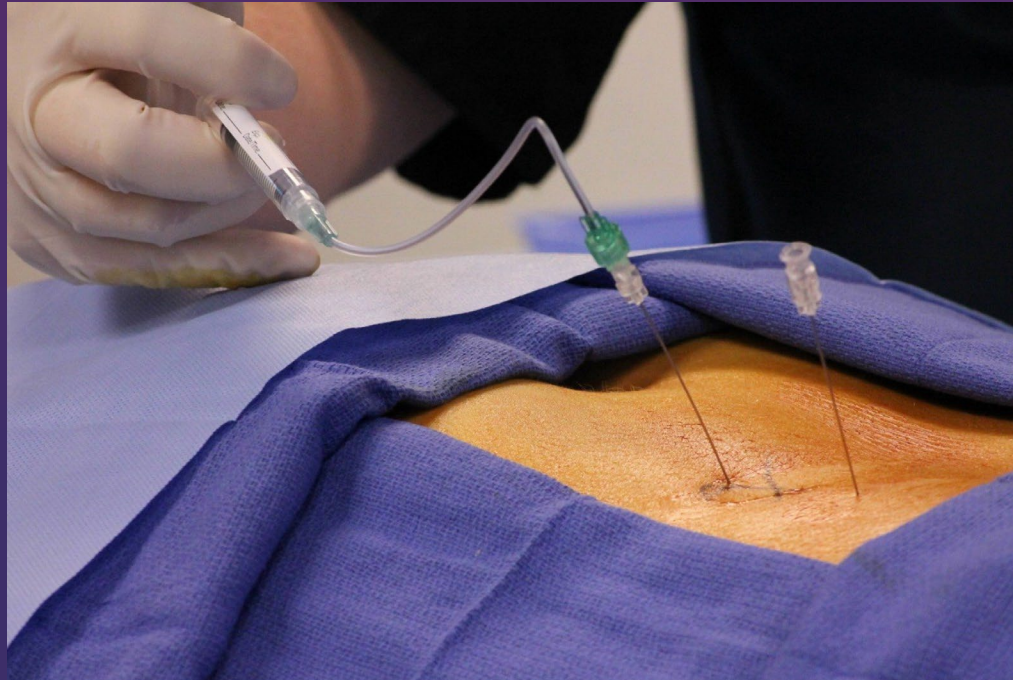


# Various Medications Considered

- WEIGHING OUT PROS/CONS IS NEEDED
  - NSAIDs
  - Tylenol
  - Muscle relaxants
  - Gabapentin
  - Oral Steroids
  - Opioids (rare)



# Spinal Injections

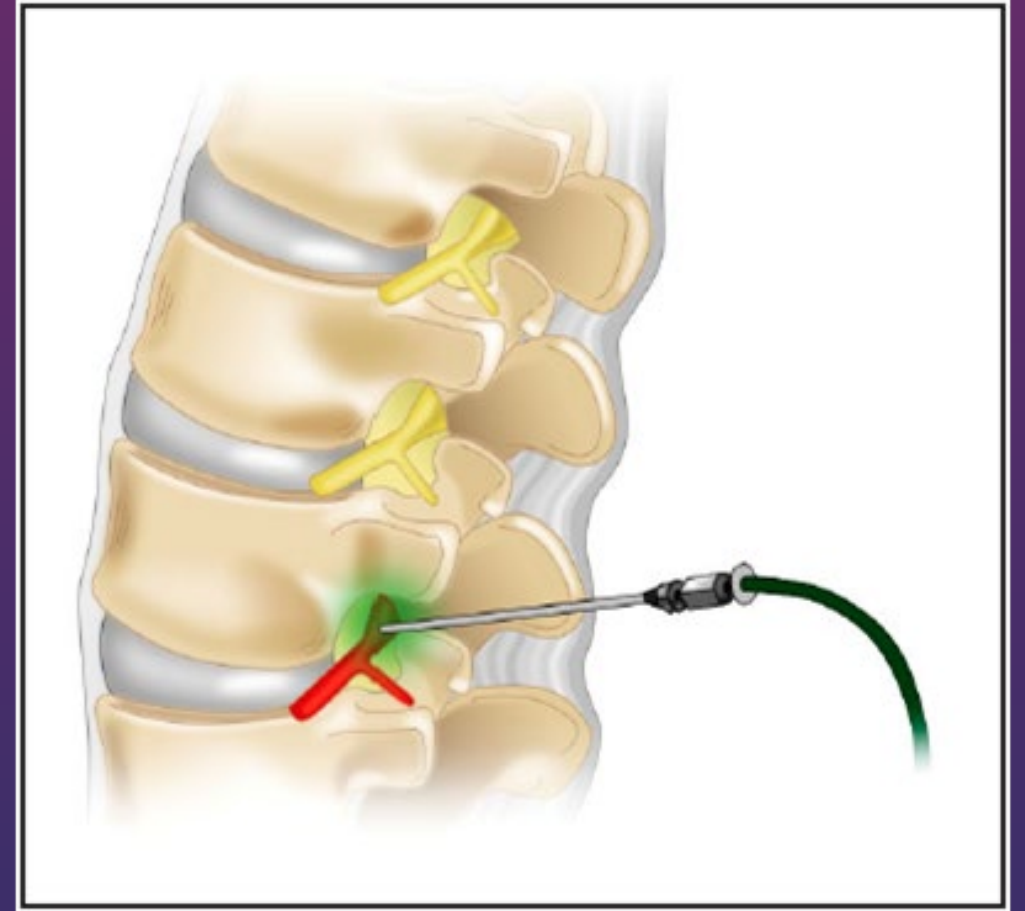


[https://spinegrouporlando.com/nonsurgical\\_care/injection.html](https://spinegrouporlando.com/nonsurgical_care/injection.html)



# Spinal injections

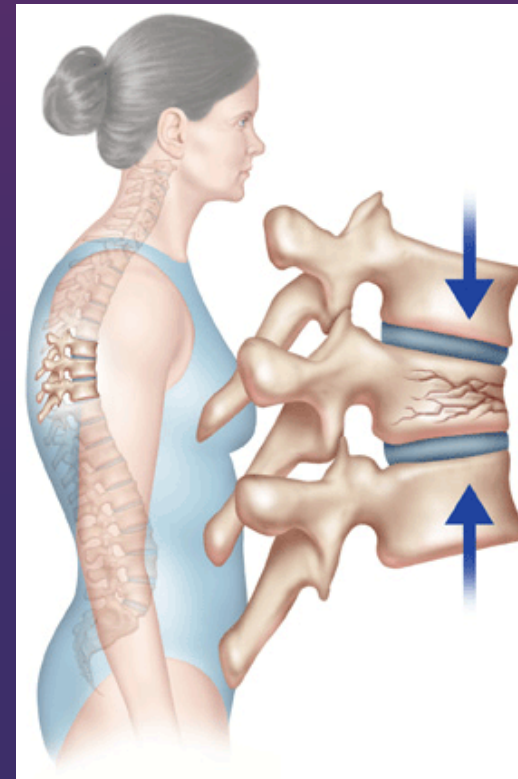
- DISC HERNIATIONS with sciatica
  - Leg pain – most benefit, ?duration
  - Back pain (?)
- SPINAL STENOSIS
- ARTHRITIS
  - Facet injections
  - Radiofrequency Ablation
- SPONDYLOLISTHESIS



<https://asiamedicalspecialists.hk/en/health-info/3/%27Slipped-Disc%27-FAQs>

# Compression Fractures

- Special consideration for bracing in the aging population
- Bracing
  - Comfort, facilitate recovery
  - Progressive Worsening
- MRI
- Serial Xrays
- Pain control, mobility with limits





# Exercise for the lumbar spine?

- No perfect exercise – it is individualized
  - Acute/Subacute pain: not much help (sx usu improve regardless)
  - Chronic pain: helps to some degree + has other impt benefits\*
    - One of the first line treatments for chronic back pain
- Role of exercise and physical therapy is frequently undervalued
  - Exercises with Core strengthening with general conditioning favored
- Often is useful to pair with a professional to help achieve optimal results (e.g. PT), in the setting of a painful spine condition
- Understand that Exercise alone may not “cure” the back condition
- Important part of a multi-faceted approach

# Exercise, continued.

- Many other benefits to exercise:
- --increases strength, flexibility, endurance, muscle mass, and has cardiovascular benefits.
- --improves comfort and anxiety surrounding back pain, improves mood and sleep quality.



# Exercise

- Many variations of exercises as tolerated are safe (for most individuals):
  - McKinzie, Yoga, Pilates, Tai Chi, etc.
- ...there is no strong recommendation for any one particular type of exercise
- ...precautions/restrictions based on medical history (osteoporosis, etc)
- ...whatever makes your back feel better
- ...one exercise might work for one person, but not the other
- ...there is a strong recommendation to engage in some sort of routine exercise

# Risk Factors (for LBP)

- Genetics (non-modifiable)
- Obesity
- Tobacco use
- Sedentary Lifestyle
- Vigorous Activity Lifestyle
- Other concurrent MSK or medical conditions

# Address Psychosocial Factors

- SOME FACTORS ASSOCIATED WITH POORER OUTCOMES in LBP
  - Depression
  - Anxiety
  - Anger
  - PTSD
  - Stress
  - Insomnia

# Take Home Points

- Many back conditions are inevitable, cannot be prevented – but usually not harmful
- Understanding the person and their needs is essential
  - Clinician must take time to explore and listen
  - Is the patient functioning like they want to and need to?
- Multi-faceted approach works best – be cautious of someone who offers one magical tx
- Pay attention to red flags – fortunately uncommon
- Never too early to see a specialist to help understand your spine better
- Goal is Management, often not cure – whether it is non-operative or surgical
- Our spines are dynamic and changing – may need to adjust along the way
- Can see any one of us and we will help guide your spine care

# Low Back Pain & Sciatica: Non-Surgical Approaches

---

NEELWANT SANDHU, M.D.  
CLINICAL ASSOCIATE PROFESSOR  
DEPT OF REHABILITATION MEDICINE

NOVEMBER 14, 2022

# THANK YOU!