Chronic Pain

Chronic Lower Back Pain: Pharmacological and Nonpharmacological Options

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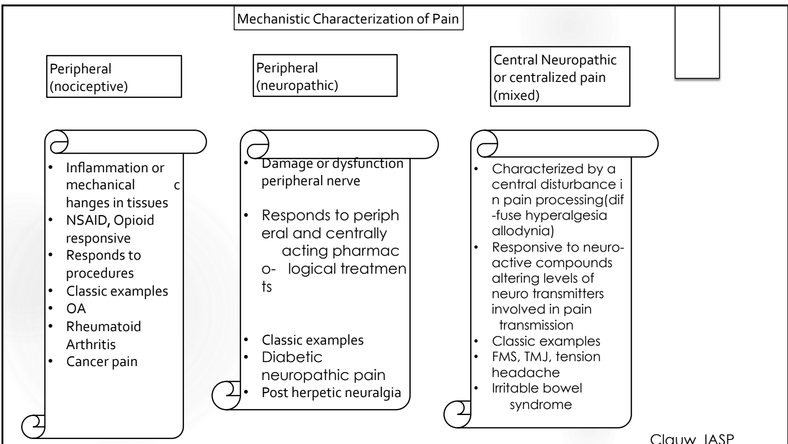
What to accomplish?

Learning Objectives

- To identify the target population
- To orient direction of care
- To give alternatives for non-pharmacological care
- To give alternatives for pharmacological care.

Non-Pharmacological and Pharmacological Therapies for Chronic Lower Back Pain:

- Complementary and Alternative Medicine(CAM)
- Psychosocial
- Medications
- Interventions



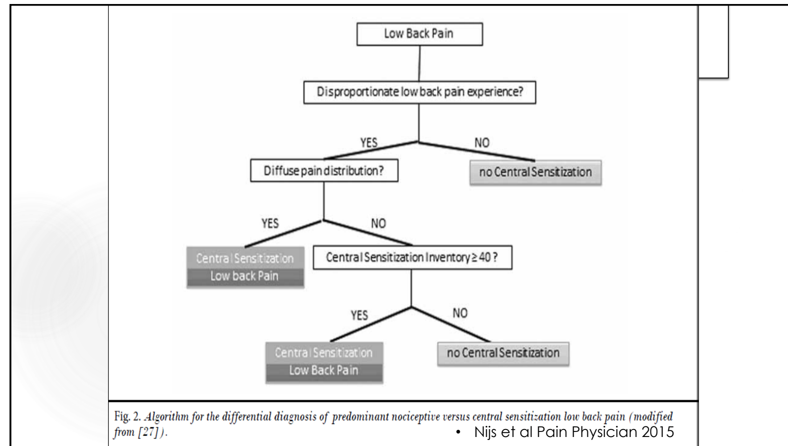
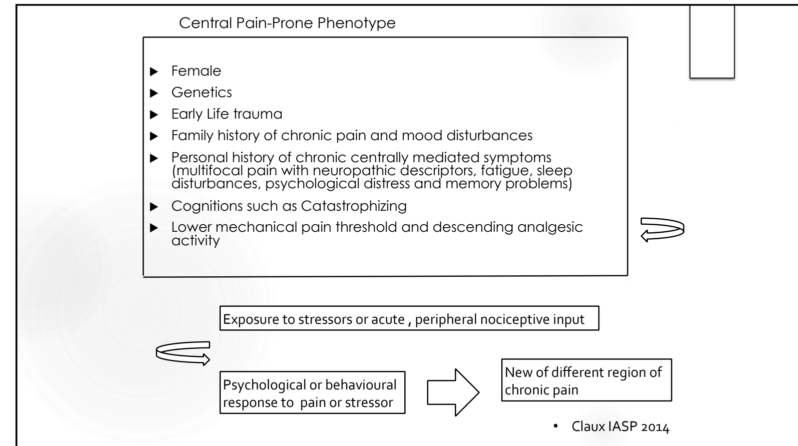


Fig. 2. *Algorithm for the differential diagnosis of predominant nociceptive versus central sensitization low back pain (modified from [27]).*

- Nijs et al Pain Physician 2015



- Claux IASP 2014

Ralph

- Ralph is 37 year old construction worker
- Workers Compensation Board telling him return to work or else
- Trouble making ends meet
- We need a management plan
- Involving Workers in process is a good idea

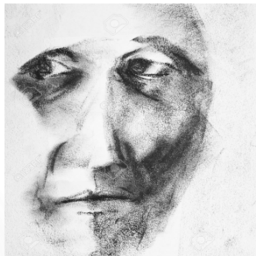
Ralph
Where do we go?

- Develop plan of care and set goals
- Physical rehabilitation with functional goals
- Interventional trigger points
- Complementary
- Pharmacological Interventional
- Interdisciplinary team or specialized pain clinic
- Self care management plan

Ralph

- ***Education*** - we defined a plan over time, initial evaluation was completed over four –five visits. It is the most critical part. We've defined history, physical examination. I use this time to reinforces the advice for Ralph.

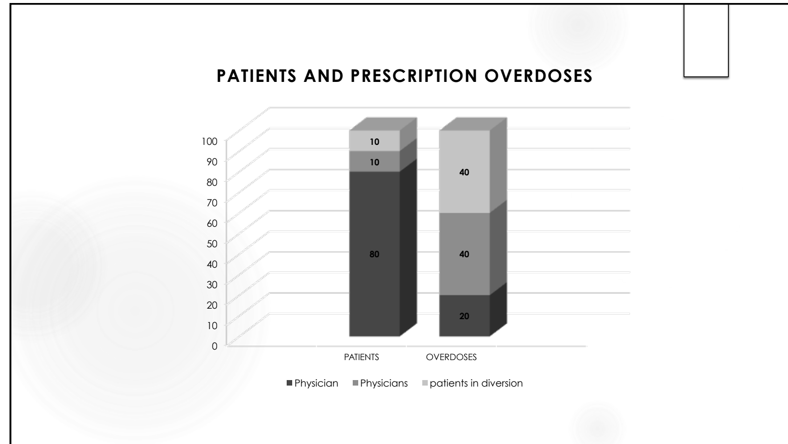
- ***Sleep*** is a critical next step.
- Arrange for Aquatic program they have at the Swimming Place



Are you sad?
No In pain I need Percocet.

Advice for Ralph (chronic lower back pain)

- Reassure- there is no evidence of serious damage or disease
- Avoid labelling as injury, degeneration or wear and tear
- Reassure about the natural history, providing you stay active but with accurate info about recurrent symptoms and how to deal with them
- Risk of developing opioid addiction ranges 3/10,000 to underdetermined.
- Scales



Advice for Ralph (chronic lower back pain)

- Advise the use of simple safe treatments for control symptoms
- Encourage stay active, continuing daily activities as normally as possible, and staying at work. This gives the most rapid and complete recovery and less risk of recurrent problems.
- Avoid saying ' let pain be your guide'
- Encourage taking responsibility for their own continued management.
- Not saying no Opioids but we are not there yet.

Ralph interaction

Hsien et al Spine 2002 showed
- Joint manipulation
- Myofascial therapy
- Back to School education

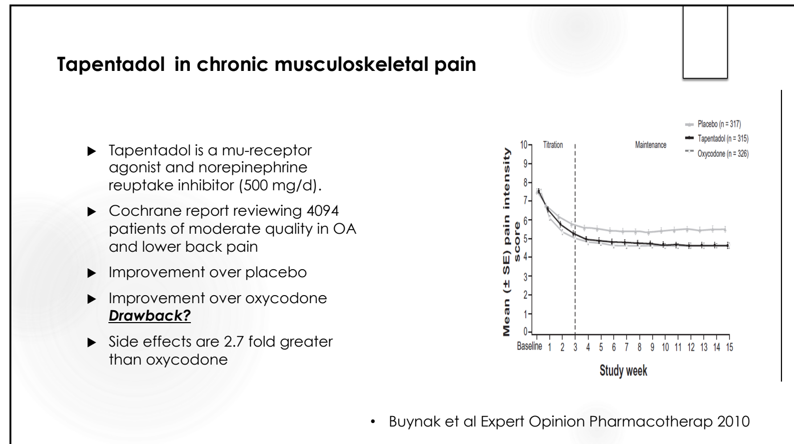
⇒ Together they produce Much improved results over either independently

Tomanova et al J Phys Ther Sci 2015. 4-7 weeks on subacute pain Infinity project

⇒ Focus on stabilization and strengthening of the trunk, dorsal spine an abdominal muscles with improvement of pain, mobility and global improvement

Andrews et al Pain 2015

⇒ High level of over activity leading to pain and avoidance; failure to pace or use other techniques



Antibiotics

- Albert et al Eur Spine J 2013
  - Double blind randomized control trial
  - Chronic power back pain and vertebral edema
  - Modic I changes on MRI of lower lumbar spine with documented disc henrination
  - 100 day course of amoxicillin-clavulanate brought about
  - Much controversy !!!

Central Sensitization Syndrome clinical evidence:

High Level

- Pressure Algometry – assessment of trigger points.
- Education
- Aerobic Exercise- mild aerobic exercise is helpful in relieving pain and fatigue.
- Cognitive behavioural therapy –used best in combination with stretching and medications.
- Acupuncture.

1. Chung et al Pain Physician 2013; 2.Kuijperset al Eur Spine J 2011; 3. van Middelkoop et al Eur Spine J 2011; 4.Rubinsteinet al Eur Spine J 2010; 5. Goldenberg et al JAMA 2004

Central Sensitization Syndrome clinical evidence:

High Level

- Acupuncture probably all types.
- Spinal Manipulation-depends on the study either high or low
- Cognitive Behavioural Therapy
- Aquatic Exercise

1. Chung et al Pain Physician 2013; 2.Kuijperset al Eur Spine J 2011; 3. van Middelkoop et al Eur Spine J 2011; 4.Rubinstein et al Eur Spine J 2010; 5. Goldenberg et al JAMA 2004 6. Baeno-Beato et al 2014.

Central Sensitization Syndrome clinical evidence:

High Level

- Medications-
  - Tricyclic Antidepressants :
    - Amitriptyline- <125 mg OD (half in elderly)
    - Nortriptyline – 25-50 mg po hs.
    - Desipramine - <125mg po hs.
    - Cyclobenzaprine – 15-20 mg po hs; ?10 mg po tid; titrate slowly is the key.

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Central Sensitization Syndrome clinical evidence:

HIGH LEVEL

- **Dual Reuptake Inhibitors** such as
  - Venlafaxine XR- <= 150 mg po am
  - Duloxetine 30-90 mg po od

  Anticonvulsants(alpha-2-delta ligands anticonsulsants)
  - Pregabalin – 75% improvement in the elderly in RTC. Dose less 300 mg é 24 hrs
  - Gabapentin varying doses.

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Central Sensitization Syndrome clinical evidence:

Modest Level

- Massage- anxiety reducing, improves sleep.
- Muscle strength training- graded training is beneficial
- Mediation
- Tai chi, Qi Qong
- Jamu(traditional Malay medicine)
- Ayurvedic(traditional Indian medicine)

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Central Sensitization Syndrome clinical evidence:

Modest Level

- Tramadol
- Older less selective SSRIs or NRIs
- Gamma hydroxybuterate
- Low dose naloxone
- Cannabanoids
- Buprenorphine
- Methadone

1. Chung et al Pain Physician 2013; 2.Kuijperset al Eur Spine J 2011; 3. van Middelkoop et al Eur Spine J 2011; 4.Rubinsteinet al Eur Spine J 2010; 5. Goldenberg et al JAMA 2004 6, Blinderman J Opioid Manag 2009

Central Sensitization Syndrome clinical evidence:

Modest Level

- Curcumin (Tumeric)
- Bromelain (pineapple family)
- Devil's Claw
- White Willow Bark

1. Chung et al Pain Physician 2013; 2.Kuijperset al Eur Spine J 2011; 3. van Middelkoop et al Eur Spine J 2011; 4.Rubinsteinet al Eur Spine J 2010; 5. Goldenberg et al JAMA 2004

Central Sensitization Syndrome clinical evidence:

LOW LEVEL

- Healing touch
- Herbal and mineral remedies
- Reiki (universal life energy, Japan)
- Biofeedback

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Central Sensitization Syndrome clinical evidence:

LOW LEVEL

- Opioids even tramadol
- Benzodiazepines and Z-drugs
- Corticosteroids
- NSAIDs

1. Chung et al Pain Physician 2013; 2.Kuijperset al Eur Spine J 2011; 3. van Middelkoop et al Eur Spine J 2011; 4.Rubinsteinet al Eur Spine J 2010; 5. Goldenberg et al JAMA 2004

Drugs for Pain Based on Underlying Mechanisms

Peripheral		Neuropathic	
Non-Inflammatory	Inflammatory	Peripheral	Central
Opioids	Opioids	Opioids	
NSAIDs acetaminophen	NSAIDs acetaminophen		
	Immunosuppressants		
		Alpha-2-delta Ligand anticonvulsants	Alpha-2-delta Ligands anticonvulsant
Tricyclics SNRIs		Tricyclics SNRIs	Tricyclics SNRIs

- Claux IASP 2014

LLS Intervention Techniques

GOOD EVIDENCE

- Diagnostic lumbar facet joint nerve blocks and diagnostic sacroiliac intraarticular injections is good with 75% to 100% pain relief
- Disc herniation or radiculitis for caudal, interlaminar, and transforaminal epidural injections
- Therapeutic facet joint interventions with conventional radiofrequency

Manchikanti et al Pain Physician 2013

LLS Interventional Techniques

Fair Evidence

- Axial or discogenic pain without disc herniation, radiculitis or facet joint pain with caudal, and interlaminar epidural injections
- Spinal stenosis with caudal, interlaminar, and transforaminal epidural injections;
- Post surgery syndrome with caudal epidural injections
- Lumbar facet joint nerve blocks
- Spinal cord stimulation (SCS) in managing patients with failed back surgery syndrome

Manchikanti et al Pain Physician 2013

Ralph

- Failed were are headed to an Opioid
- We discuss literature tells us 50-99 mg per day MED or total dose 1830 mg MED provides no increased risk
- 200 MED per day where we at.

Lang and Turner J of Pain 2015

Recommendations:

- Do not routinely obtain imaging or other diagnostic tests for nslbp
- Perform diagnostic testing and imaging when LBP severe or progressive neurological deficits are present or when serious underlying conditions are suspected on Hx/PE
- Evaluate persistent LBP with S/SX radiculopathy or spinal stenosis with MRI or CT scan if candidates for surgery or epidural steroid injection

Recommendations:

- Provide patients with evidence based information on LBP regarding course, remaining active, and effective self care options
- Use proven medications in conjunction with back information and self care. Aim toward self care

Scales used to evaluate Ralph:

- Phaq-9 for depression
  - http://phqscreeners.com/pdfs/02_phq-9/english.pdf
- Phaq-9 for scoring
  - http://www.phqscreeners.com/instructions/instructions.pdf
- Brief Pain Inventory
  - http://www.npcrc.org/files/news/briefpain_short.pdf
- Brief Pain Inventory scoring system
  - http://www.mdanderson.org/education-and-research/departments-programs-and-labs/departments-and-divisions/symptom-research/symptom-assessment-tools/BPI_UserGuide.pdf
- SOAPP-R for addictions and pain
  - http://nationalpaincentre.mcmaster.ca/documents/soapp_r_sample_watermark.pdf
- SOAPP-R scoring
  - https://www.painedu.org/soapp/SOAPP_Scoring_Instructions_V1.pdf
- COMM for addictions and pain for opioid use
  - http://www.etsu.edu/com/cme/documents/kptt2012/7-COMM_Final_SAMPLE.pdf
- COMM scoring
  - http://www.etsu.edu/com/cme/documents/kptt2012/7-COMM_Final_SAMPLE.pdf
- CUDIT for cannabis addictions
  - http://bpac.org.nz/BPJ/2010/June/docs/addiction_CUDIT-R.pdf
- CUDIT R for cannabis
  - http://www.otago.ac.nz/nationaladdictioncentre/pdfs/manuscriptcuditrevised.pdf