Identifying and Overcoming Psychosocial Barriers from Work-Related Musculoskeletal Disorders

David A. Hoyle, DPT, MA, OCS, Vice President, WorkStrategies, Select Medical

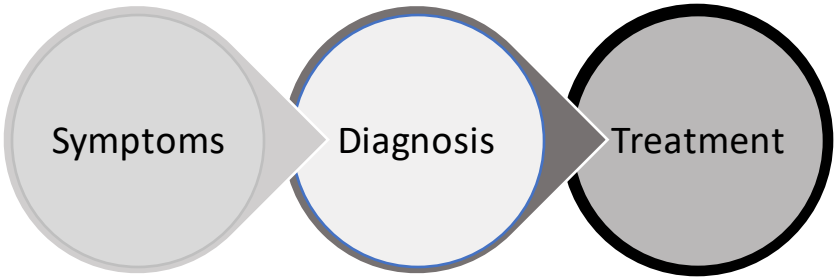
Robyn Lewis, PT, CEAS, Regional Director, WorkStrategies, Select Medical

Learning objectives

- **The learner will:**
  - Understand the need for a shift from a bioanatomic/biomedical to biopsychosocial model in the management of work-related musculoskeletal disorders covered under workers' compensation.
  - Be familiar with psychosocial barriers to recovery from musculoskeletal disorders that often complicate the recovery of individuals from work-related musculoskeletal disorders.
  - Understand steps that individual stakeholders involved in claims management from healthcare providers to claims managers can take to minimize the effect of psychosocial barriers on an individual’s recovery.

What is the Biomedical Model

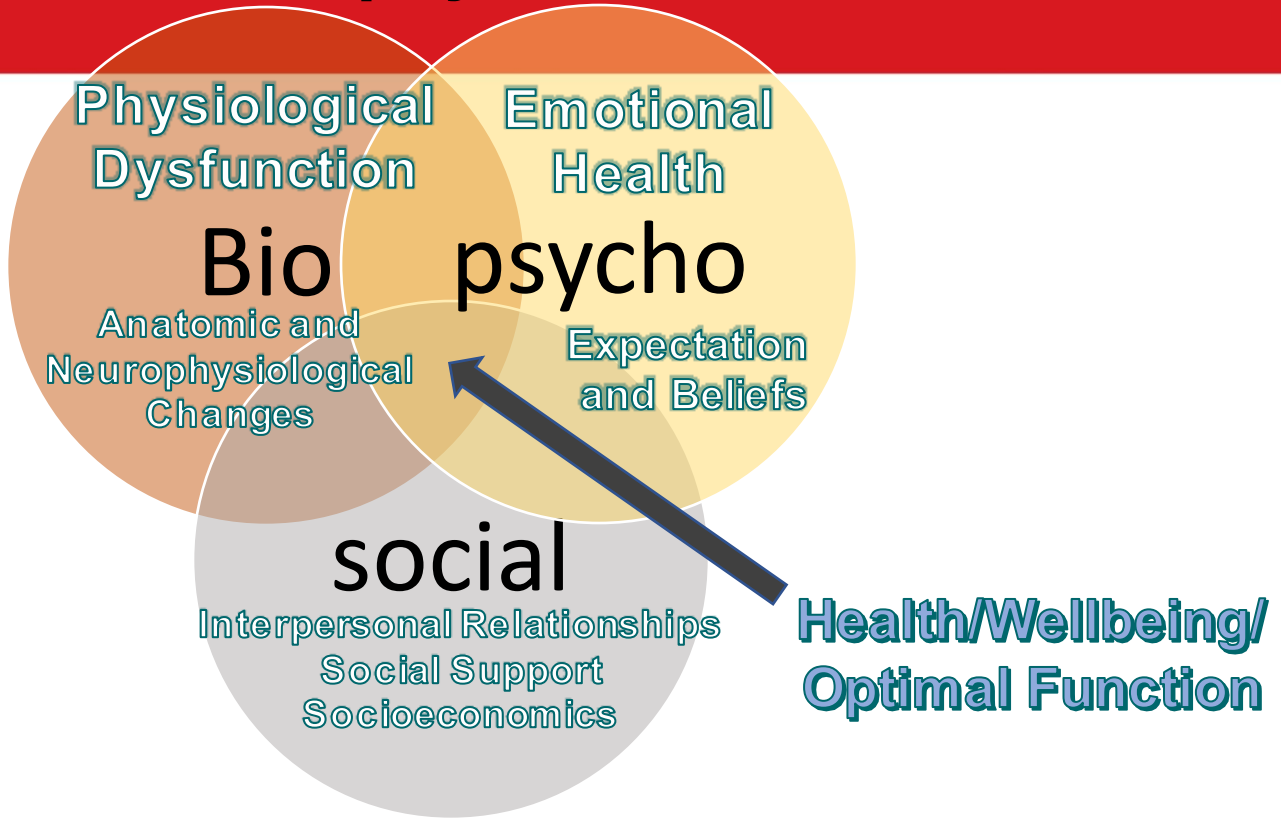
- **Seeks to identify and diagnose pathology/disease/tissue damage**
- **Seeks to cure the pathology**
  - Predicated that health issues are based on dysfunction of a body system and correction of the specific dysfunction will lead to improved symptoms.



Examples of a Biomedical Approach

- Depression- SSRIs- block reabsorption of serotonin into neuron increasing availability in the brain.
- Pre-diabetic- Metformin- increases sensitivity of tissues to insulin
- Disc herniation- NSAIDs, Cortisone Injections, Discectomy
- Knee arthritis- NSAIDs, knee replacement

What is the Biopsychosocial Model



Examples of a Biopsychosocial Approach

- **Depression-**
  - Psychotherapy
  - Exercise
  - Purposeful, planned joyful activity
  - Mindfulness
- **Pre-diabetes**
  - Motivational interviewing
  - Lifestyle changes
    - Diet counseling
    - Exercise
    - Weight loss
- **Disc herniation-**
  - Education
    - Natural recovery/outcomes
    - Pain neurophysiology
  - Activity modification
    - Encourage movement
- **Knee arthritis**
  - Education
  - Exercise therapy
  - Weight loss

Musculoskeletal Pain and Workers' Compensation

- Claims leaders ranked psychosocial issues as the No. 1 barrier to successful claim outcomes, according to Chicago-based managed care solutions provider Rising Medical Solutions' 2016 Workers' Compensation Benchmarking Study.

Red FLAGS

- **Serious disease**
  - History of cancer
  - Night sweats
  - Unexplained weight loss
  - Pins/needles, numbness, weakness
- **Comorbidities**
- **Failure of treatment**

Blue FLAGS- Perceived Work Features

- That management is unhelpful
- Of working under a perceived time pressure
- Of lack of social support from colleagues
- Of a stringent inflexible environment
- Needed care is being withheld to save money

- Dissatisfaction with job
- High demand/low control work environment
- Perceived Injustice

Black FLAGS
Not Matters of Perception

- Organizational issues
- No transitional work
- Hours/shift patterns
- Qualification criteria for compensation (i.e. inactivity)
- Rehab policy deters gradual reintegration to work
- Physically demanding work

- Financial incentives
- Lack of contact with the workplace
- Duration of sickness absence (>6 months, almost guaranteed not to return to same job)
- Iatrogenic harm (unnecessary imaging, etc.)
- Authorization delay causing care delay

Yellow FLAGS

- Patients perception of injury and coping style.
- Fear of movement, anger, low self efficacy, depression, anxiety.

Yellow FLAGS

- **Psychological distress (e.g. depression, anger, bereavement, frustration)**
  - 52% pts w/ CLBP are depressed
  - Can be screened reliably by 3 item questionnaire (BMJ 2005)
  - Most depression after injury is transient, when it doesn't resolve with healing is when it can cause delays in case resolution.
- **Failure to answer patients' and families' worries about the nature of the injury and its implications**
  - This also can be facilitated by communication between the case manager, physician, and physical therapist
  - Patient centered approach to care and education
  - Kaiser Permanente 4 Habits Model

Yellow FLAGS

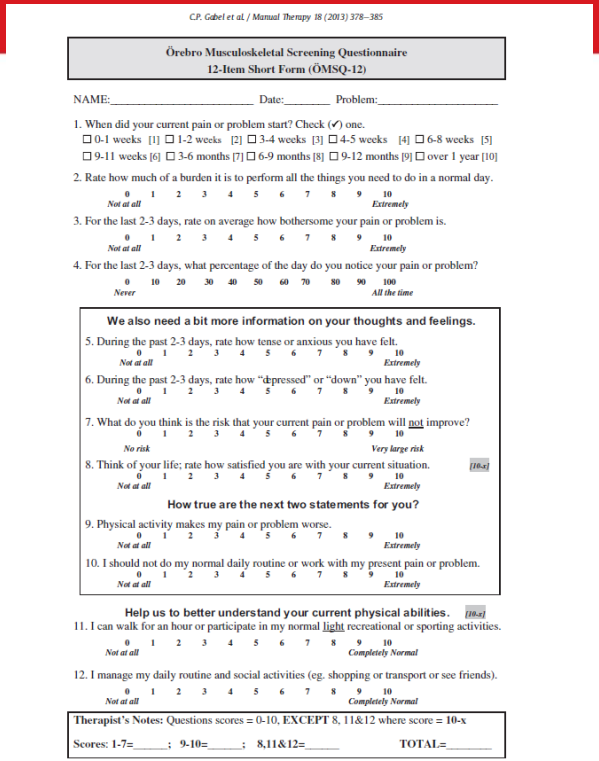
- **Kinesiophobia**
  - Also known as fear avoidance beliefs
  - The belief that movement causes damage and delays healing
  - Leads to a counterproductive belief of need for rest, and rest is the answer to controlling pain levels.
- **Perceived inconsistencies and ambiguities in information about the injury and its implications**
- **Unhelpful coping strategies (rest for pain relief, withdrawal, isolation)**

Yellow FLAGS

- **Pain catastrophizing: exaggerated negative orientation towards pain, imagining worst possible outcomes.**
- **Associated with increased risk of developing persistent pain and disability.**
- **For the normative database described above, in the subsample of patients who scored above 30 (75th percentile) on the PCS;**
  - 70% remained unemployed one year post injury
  - 70% described themselves as totally disabled for occupationally related activities

Orebro

- Low, moderate or high risk
- 57-72 is moderate
- High risk are at increased risk of delayed recovery or poor outcome including disability. Need psychosocially informed care in addition to traditional techniques



C.P. Gabel et al. / Manual Therapy 18 (2013) 378–385

Örebro Musculoskeletal Screening Questionnaire
12-Item Short Form (ÖMSQ-12)

NAME:_____ Date:_____ Problem:_____

1. When did your current pain or problem start? Check (✓) one.
☐ 0-1 weeks [1] ☐ 1-2 weeks [2] ☐ 3-4 weeks [3] ☐ 4-5 weeks [4] ☐ 6-8 weeks [5]
☐ 9-11 weeks [6] ☐ 3-6 months [7] ☐ 6-9 months [8] ☐ 9-12 months [9] ☐ over 1 year [10]

2. Rate how much of a burden it is to perform all the things you need to do in a normal day.
0 1 2 3 4 5 6 7 8 9 10
Not at all *Extremely*

3. For the last 2-3 days, rate on average how bothersome your pain or problem is.
0 1 2 3 4 5 6 7 8 9 10
Not at all *Extremely*

4. For the last 2-3 days, what percentage of the day do you notice your pain or problem?
0 10 20 30 40 50 60 70 80 90 100
Never *All the time*

We also need a bit more information on your thoughts and feelings.

5. During the past 2-3 days, rate how tense or anxious you have felt.
0 1 2 3 4 5 6 7 8 9 10
Not at all *Extremely*

6. During the past 2-3 days, rate how "depressed" or "down" you have felt.
0 1 2 3 4 5 6 7 8 9 10
Not at all *Extremely*

7. What do you think is the risk that your current pain or problem will not improve?
0 1 2 3 4 5 6 7 8 9 10
No risk *Very large risk*

8. Think of your life; rate how satisfied you are with your current situation. [10-x]
0 1 2 3 4 5 6 7 8 9 10
Not at all *Extremely*

How true are the next two statements for you?

9. Physical activity makes my pain or problem worse.
0 1 2 3 4 5 6 7 8 9 10
Not at all *Extremely*

10. I should not do my normal daily routine or work with my present pain or problem.
0 1 2 3 4 5 6 7 8 9 10
Not at all *Extremely*

Help us to better understand your current physical abilities. [10-x]

11. I can walk for an hour or participate in my normal light recreational or sporting activities.
0 1 2 3 4 5 6 7 8 9 10
Not at all *Completely Normal*

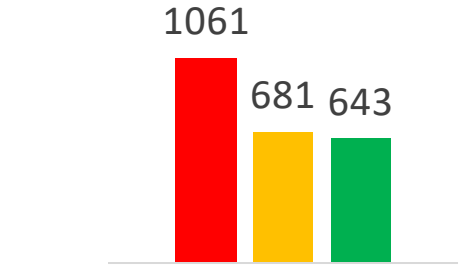
12. I manage my daily routine and social activities (eg. shopping or transport or see friends).
0 1 2 3 4 5 6 7 8 9 10
Not at all *Completely Normal*

Therapist's Notes: Questions scores = 0-10, **EXCEPT** 8, 11&12 where score = **10-x**

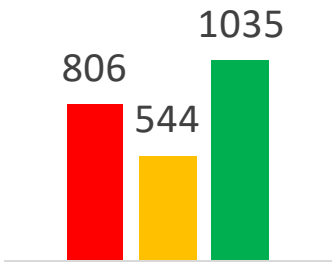
Scores: 1-7=_____; 9-10=_____; 8,11&12=_____ TOTAL=_____

Fig. 2. The short-form Örebro Musculoskeletal Screening Questionnaire (ÖMSQ-12).

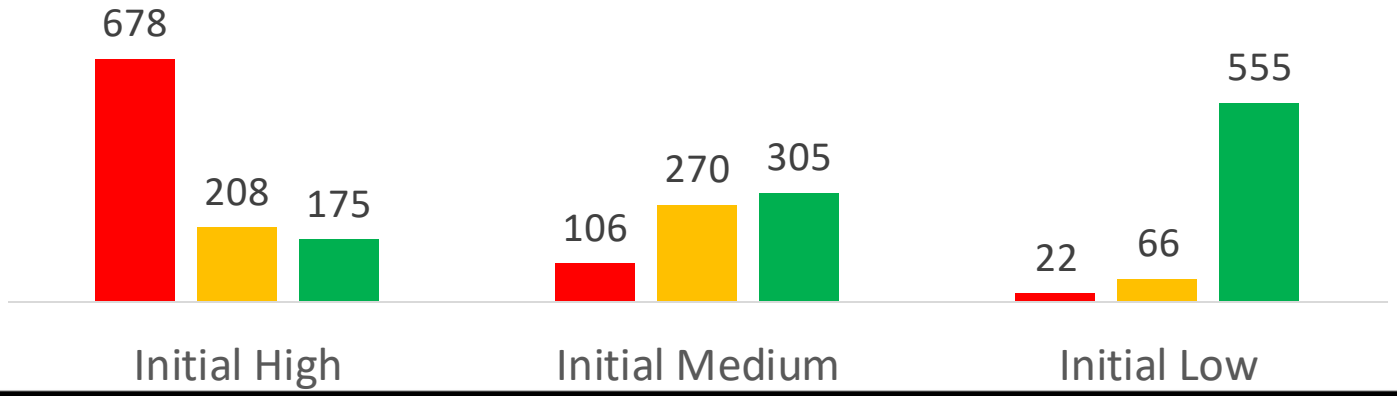
Initial and Final Risk (Orebro) Classification- Low Back Pain ONLY



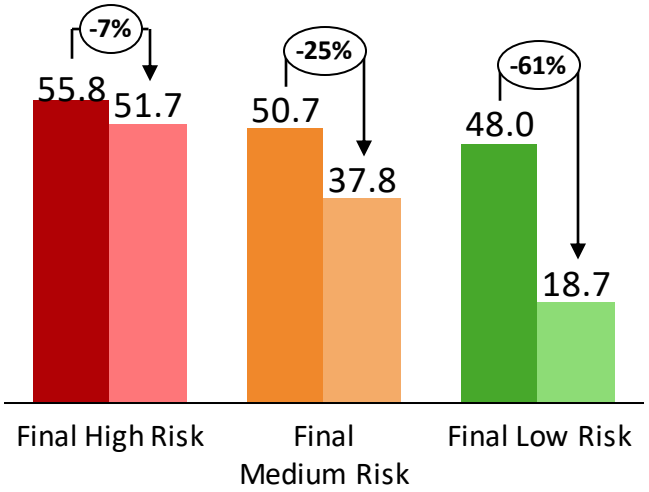
Initial Risk Category

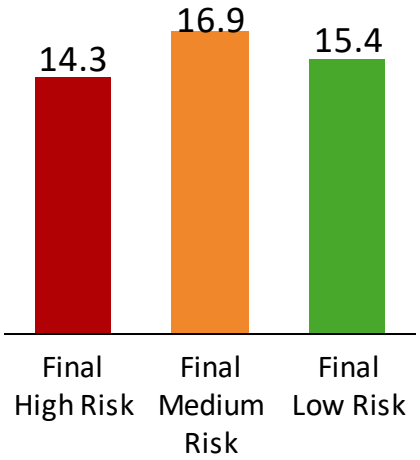


Final Risk Category



Initial High Risk MDQ Patients

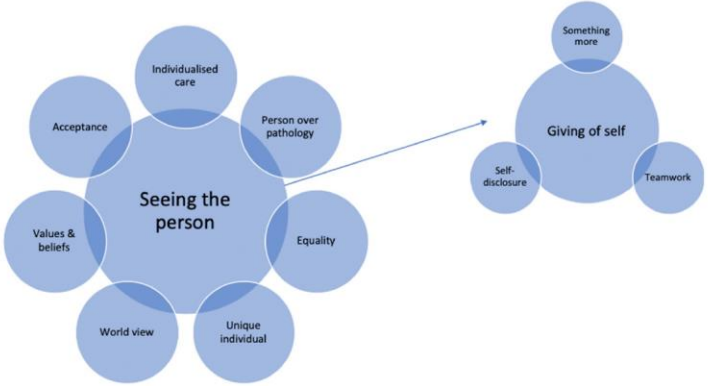


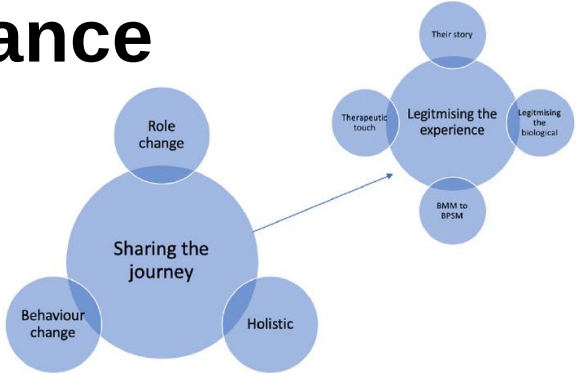


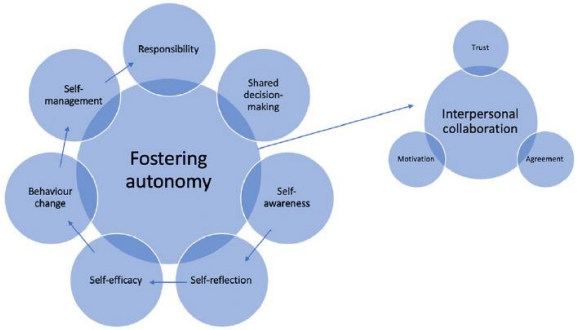
Therapeutic Alliance

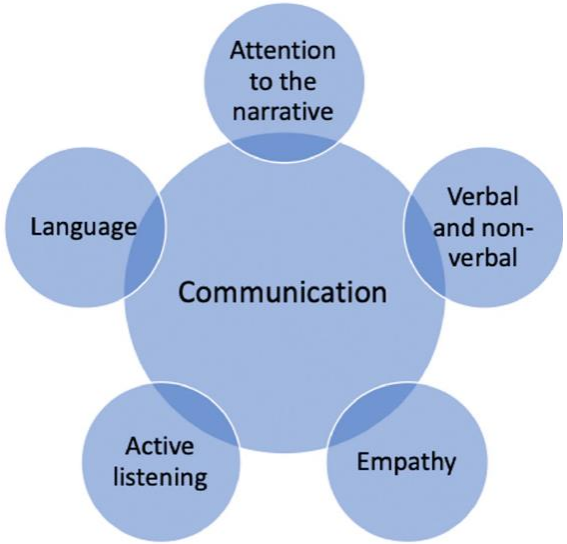
WORKSTRATEGIES
Keeping America on the Job!

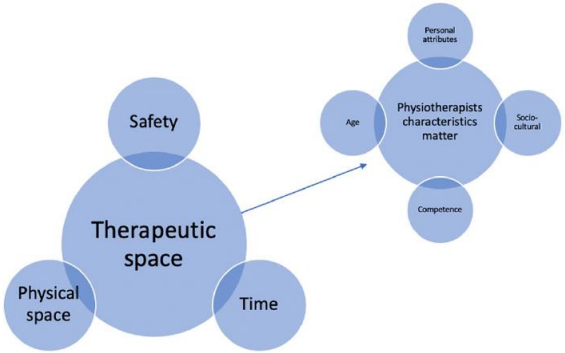
Therapeutic Alliance











Examples of barriers to therapeutic alliance

Employer- non-verbal signs of frustration at time of report of injury.

Claims Manager- expressing that more therapy is pending "Utilization Review".

Physician- Rushed history resulting in patient feeling they aren't being heard.

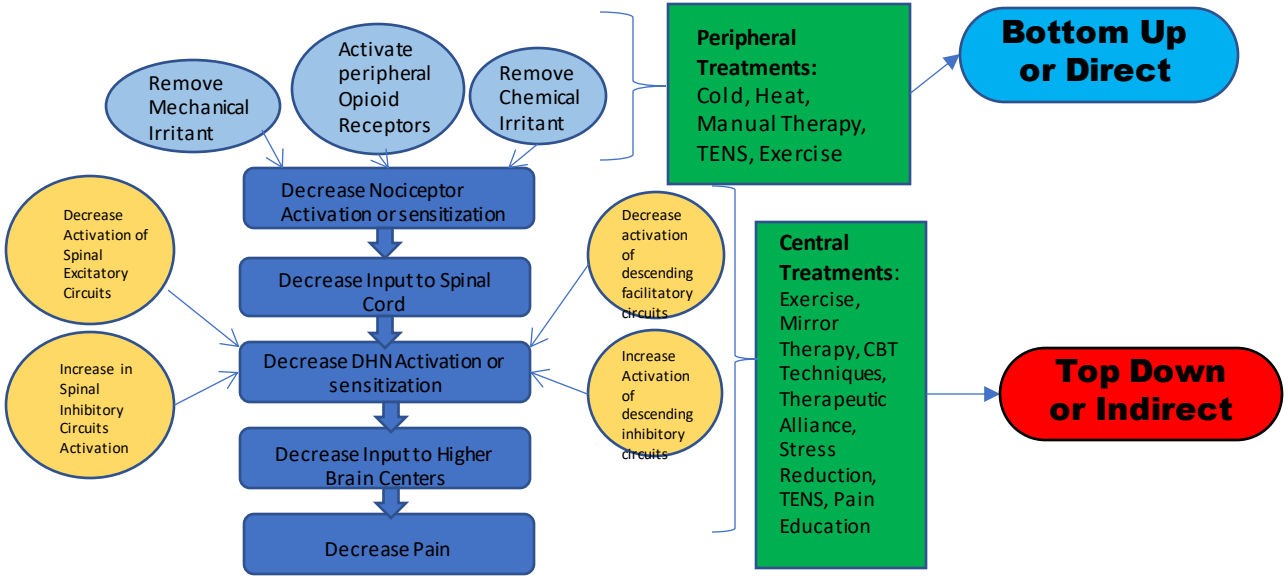
Physical Therapist- Not summarizing findings and including the patient on treatment planning including expected length of recovery.

Therapeutic Alliance Benefits

BMC Health Serv Res. 2017 Review of the literature

Physical/Occupational Therapy Treatment Options for High Risk Cases
WORKSTRATEGIES®
Keeping America on the Job!

How Do Rehab Professionals Impact Pain?



Adapted with permission from Sluka, *Mechanisms and Management of Pain for the Physical Therapist*, 2016.

Pain Assessment: Determine the Dominant Pain Mechanism

- **Nociceptive pain:** treat injured area, protect against aggravation, educate with biomechanics and anatomy to explain pain.
- **Peripheral neuropathic pain:** follows peripheral nerve pattern, protect nerve, nerve glides, decrease pressure on nerve, educate via nerve anatomy to explain pain.
- **Central sensitization:** heightened central pain mechanism, need to decrease sensitivity of nervous system and education on pain neuroscience and benefits of safe movement.

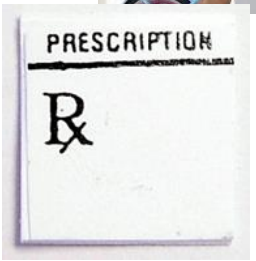
Use Evidence Based Treatments

Treatment	NNT Value	Side Effects
Gabapentin	7.2	Fever, dizziness, fatigue, tremors, diplopia
Strong Opioids	4.3	Sedation, dizziness, vomiting, constipation, respiratory depression, addiction
Amitryptiline	3.6	Drowsiness, dizziness, dry mouth, constipation, weight gain, trouble urinating
Graded Motor Imagery*	2	None
Therapeutic Neuroscience Education*	3	None

NNT = (Number needed to treat):
how many individuals that have to receive a dose of the treatment for one to have a 50% reduction in pain.

Aerobic Exercise

- Just as effective as medications for depression (Cochrane 2013)
- Pain relief with activity in 50% VO2 max or HR around 100-105bpm for >10min. (Hoffman, Shepinski 2004)
- Doesn't have to be body-part specific
- Exercise induced analgesia – endorphins
- Decreases stress
- Improved sleep

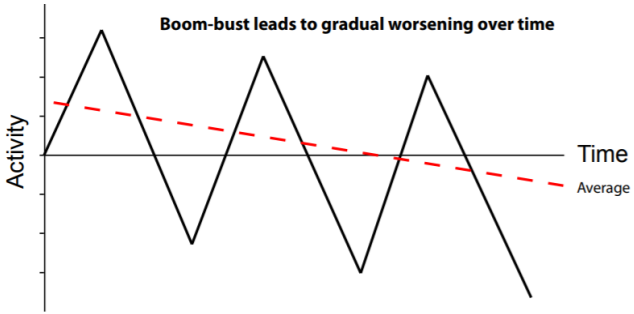


Problem Solving:
Ergonomic and Activity Modification Strategies

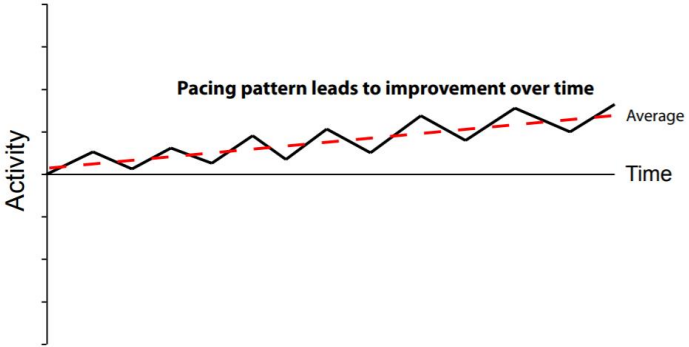
- Tools or Assistive Devices to assist with performing ADLs
- Different techniques that take less energy or put less stress on injured area than current techniques
- Keeping people functional with what they have can decrease impact of depression and disuse

Pacing:
Retraining the brain…

BOOM-BUST



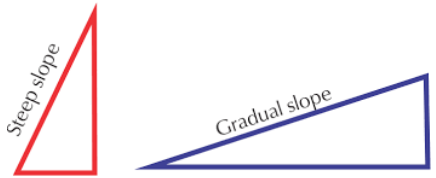
PACING



Graded Exposure

- The activities a patient avoids determine the focus of treatment
- Patient identifies activities that they are highly fearful of performing
- Activities are incorporated into the therapy program

Start at low level in comfortable position to begin the activity or perform steps or prep work at low level of fear Activity is increased to mildly increase fear and performed until fear subsides…



Employer Strategies

- **Connectedness:**
  - Keep the injured worker engaged with the work environment.
- **Communication:**
  - Injured worker is a valued member of the team and are expected to recover and return.
- **Collaboration:**
  - Provide for productive and fulfilling transitional work assignments
  - Understand the negative consequences of worklessness – poor health outcomes, increased risk of mental health conditions, decreased life expectancy

Financial, mental, emotional support

Claim Management Strategies

- Identification of high risk claims
- Training of claims management teams
- Selectively adding resources to identified high risk claims
- Choose healthcare providers that understand the biopsychosocial approach and the benefits of active vs. passive treatment
- Communication with injured worker and entire team
- Collaboration

Summary

To best manage the complex workers' compensation case

- **Identify risk stratification early and/or high pain levels**
- **Understand the flags that will affect the course of recovery, and use your position to try and influence the environments that the worker cannot control**
- **Understand and appreciate pain processes and psychosocial influences that occur and influence a claimant's behavior**
- **Adjust care to match pain mechanism and coping skills and keep injured workers functioning to the best of their ability while they heal**
- **For high risk patients, keep communication open with the entire care team, everyone communicating the same messages to the injured worker is important**

Thank you!