

CHRONIC PAIN: PREVENTING IATROGENIC DISABILITY

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Definition of Pain

A Personal, Subjective, Unpleasant Experience Involving, Sensations and Perceptions which may or may not be a result of Tissue Damage or Physical Injury. Its Expression may be influenced by Psychosocial, Ethnocultural, Genetic, Biochemical, Religious, and other factors.

Aronoff-1985

PAIN

No Direct Relationship Between

Tissue Damage
and
Severity of Pain

Beecher (1959)

Chronic Pain Behavior

Factors Influencing Chronic Pain Behavior

Probabilities of outcome
Development History and Past Experience
Ethno-cultural Influences
Premorbid Psychological Health or (Pathology)
Secondary Gain
Environmental Reinforcers

Emotional Factors Assoc. With Chronic Pain Syndromes

- Depression
- Pain Prone Disorder
- Somatization Disorder
- Conversion Disorder
- Hypochondriasis
- Atypical Somatoform Disorder
- Psychological Factors Affecting Physical Conditions
- Psychogenic Pain
- Malingering
- Schizophrenia

DEPRESSION

GROWING EVIDENCE SHOWS THAT DEPRESSION:

- ✗Lowers Pain Tolerance
- ✗Increases Analgesic Requirements
- ✗Adds to Debilitating Effects of Pain

Merskey, H.

Medication

■ **TRICYCLIC ANTIDEPRESSANTS**

- Pain
- Insomnia
- Depression

Chronic Pain

“Many pain patients lose their symptoms when given antidepressant medication”

Ward, et al 1979

Somatization : Not DSM - IV

- somatic symptoms, **NO** pathophysiologic basis
- **common** reflection of emotional stressors
- explains symptoms, but **NO physical** condition
- Barsky, et. al. JAMA, Dec 27, 1995
Vol 274, No. 24, 1931-34

Somatization

- **Explains** much of the Non-Specific Pain in the Low Back, Neck, Hand, and Chest
- **Explains** many of the situations in which physical or “organic” factors fail to explain “disabling” symptoms
- **Confuses** Return to Work Risk Assessment, Both for the Individual, and for Groups (scientific studies)

DISABILITY

MAGNITUDE OF THE PROBLEM

- **Low Back Injuries in the U.S - 2% of industrial workers, higher with heavy work**
- **25% of long term cases account for 87% of the cost**
- **Lengthy period of disability is negative predictor of return to work**

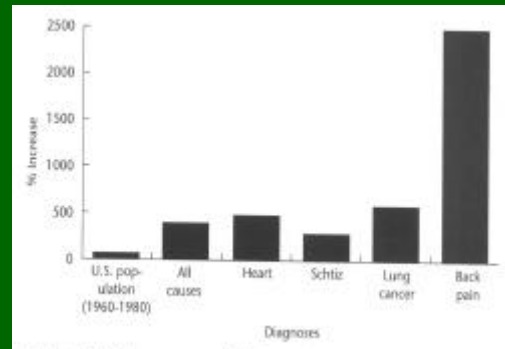
CHRONIC DISABILITY AND THE WORKPLACE

Back Pain is the #2 reason for job absenteeism after the common cold;

2% of U.S Industrial work force suffers from back pain each year;

Only about 5% of the people awarded SSDI ever return to work by their fifth year follow up visit.

US SS Disability: 1957-76



“WORK INJURIES”

DISABILITY FOR BACK PAIN IS INCREASING AT 14X THE POPULATION GROWTH

E.T. WYMAN

APPROACH TO THE PROBLEM OF LBP

LBP

Deyo Suggests that:

Since backache is an extremely common sx & since its pathophysiology & pathoanatomy is usually obscure, we should avoid the term back injury (which implies major anatomical disruptions)

APPROACH TO THE PROBLEM OF LBP

LBP

Most episodes of back pain occurring on the job are labeled “Back Injuries” although a discrete precipitating event is often elusive & a specific cause or lesion to account for LBP cannot be determined.

Back Pain and Heavy Work Waddell, *The Back Pain Revolution*

- Some early, poor quality studies suggested that heavy manual work is associated with more degenerative changes in the spine. **Better, recent studies do not show any consistent effect.**
- There is conflicting evidence that people in heavy manual jobs report slightly more back pain. Bigos et al (1996) did not find any scientifically acceptable studies on this fundamental point.

Back Pain and Heavy Work

Waddell, *The Back Pain Revolution*,
1998, page 93

- People in heavy manual jobs report more low back injuries.
- Back pain does have a greater impact on people in heavy manual jobs. They are more likely to stay off work and they stay off longer. This may, however, be largely the effect of their back pain rather than the cause. It may also reflect medical advice.

Occupational Musculoskeletal Disorders

Norton M. Hadler MD

- 2nd Edition, 1999 (Lippincott)
- “Based on a rich epidemiology and on cross-sectional and longitudinal studies testing the hazardousness of a wide range of ergonomic exposures, it is clear that physical exposures account for very little, if at all, for the likelihood that a worker with a regional musculoskeletal illness will seek Workers’ Compensation. (p 266)

Neck and Back Pain

Alf L. Nachemson 2000, Lippincott

“Most studies of the association of occupational factors and low back pain are cross-sectional and thereby give insufficient or inconclusive evidence.”

“The impact of occupation on low back pain and neck pain exists but is modest, except for extreme working situations for a prolonged period without the possibility of changing work tasks.” (p 118)

Acute Low Back Pain

Treatment by Activity Restriction ?

- US Government (DHHS) AHCPR: 1994
- 10, 317 articles evaluated
- “No literature”, No Science
8 with “some useful information”
- Restrictions: Perhaps for < 90 days
“No benefits apparent beyond 3 months”
Table 3: “Guidelines” differ by sex.

AHCPR: Restrictions

Symptoms:	Men	Women
Severe	20 lbs	20 lbs
Moderate	20 lbs	20 lbs
Mild	60 lbs	35 lbs
None	80 lbs	40 lbs

Blatantly Sexist “Lifting Guidelines”

- Some men are 58 inches tall and weigh 98 pounds.
- Some women are 76 inches tall, weigh 250 pounds, and look like linebackers.
- Also, what about the construction worker with 2 days of back pain, lifts 100 pounds daily, “guideline: say you can now only lift 80, so you’re terminated.”



Treatment:Activity Restriction ?

- AHCPR “No literature”, (Consensus)
Perhaps for < 90 days
“No benefits apparent beyond 3 months”
Table 3: “Guidelines” differ by sex.
Text doesn’t explain, but “staff insertion”,
based on NIOSH data.
In cadavers the force to produce Fracture
differs by sex,
yet LBP is usually “soft tissue” pain

Randomized Studies: “Activity Better than Rest”

- Studies published since AHCPR (1994)
- *Spine* 1994; 19: 2033-2037
- *NEJM* 1995; 332:351-5
- *Spine* 1995; 20: 473-7
- *BMJ* 1999; 319 (7205): 279-283

NEJM 1995; 332; 351-355

- Malmivaara, Employees of Helsinki, Finland
- **Acute LBP**, Rx @ city’s Occup. Health center
- Randomized to:
Rest for 2 days 67 patients Bed
Extension exercises 52 patients
Ordinary Activity 67 patients
- @ 3 & 12 weeks, Ordinary Activity did the best
- Statistically significant ↓ in pain intensity, duration of pain, lumbar flexion, days absent from work, subjective ability to work, and Oswestry disability index

Magnetic Resonance Imaging of the Lumbar Spine in People Without Back Pain

Maureen C. Jensen, M.D. et al.

Source: The New England Journal of Medicine, Vol 331, No. 2, July 14, 1994.
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CHRONIC BACK PAIN

**It is the exception rather than the rule
that chronic back pain can be
attributable to definable disease ...**

SPECIFIC BACK PAIN-IASP

- Disk herniation
- Spondylolisthesis, usually in the young
- Spinal stenosis, usually in the elderly
- Vertebral fx, tumors, infections, inflammatory diseases
- Definite instability exceeding 4-5 mm on flexion-extension

OCCUPATIONAL STUDIES

Premorbid Psychopathology
Puts Worker at Risk for Injury
and may Adversely Influence
Outcome

Aronoff

Characteristics

Patient Characteristics making them prone to
involvement in Disabling Injury:

- Low Self-Esteem in a dependent person
- Inability to deal competently with stress
- Demanding job
- Tension at home

PATIENTS AT RISK

PATIENTS AT RISK FOR POOR OUTCOME
AND PROLONGED DISABILITY

1. DISABILITY COMP.
2. LEGAL PROCEEDINGS
3. JOB DISSATISFACTION
4. UNFAVORABLE SUPERVISOR RATING
5. LIMITED EDUCATION
6. SOCIOECONOMIC VARIABLES

(Devo-Spine 2:1, 1987)

Back Pain & Psychosocial Factors

AHCPR: #95-0642 (1994), p 91

- “Social, economic, and psychological factors have been reported to be more important than physical factors in affecting the symptoms, response to treatment, and *long term outcomes* of patients with chronic low back problems. There are indications that such nonphysical factors may affect clinical outcomes for patients with acute low back symptoms.”

Back Pain & Psychosocial Factors Royal College of GP's, 1996

- “Psychological, social, and economic factors play an important role in chronic low back pain and disability.”
- “Psychosocial factors are important at a much earlier stage than previously believed.”
- “Psychosocial factors influence a patient's response to treatment and rehabilitation.”
- “Psychosocial features are more important risk factors for chronicity than biomedical symptoms and signs”

“Many physicians believe that
the causes of prolonged disability
are multifactorial and may
include musculoskeletal,
ergonomic, and psychosocial
factors”

Millender LH, An Approach to Work -Related
Disorders of the Upper Extremity ←
JAAOS Vol 4, #3, 1996, p134 - 142

“As in other studies, patients with long-standing disability who were angry, frustrated, depressed, and involved in litigation rarely returned to work.”

Millender LH, An Approach to Work -Related Disorders of the Upper Extremity
JAAOS Vol 4, #3, 1996, p134 - 142

Even Psychiatric Conditions have “Psychosocial Factors”

- “Diagnosis cannot be equated directly with impairment.”
- “The extent of impairment and prognosis depend upon the stage of the illness, the severity of the past and current episodes, and the specifics of the situation. **How an individual** manages his or her illness and **copies** with life demands are **better measures** of impairment than **diagnostic labels** or numbers and kinds of **symptoms**”

The Guides Newsletter, May/June 1998, page 2
Psychiatric Assessment in Injury and Disability

Key Concept

Impairment % is not a factor in “Can Joe do this particular job?”

- No correlation between impairment % for Worker’s Comp injury and whether or not the individual is **working**
- Examples: Spine injury rated by the Injury Model (DRE system)
- Category I “Complaints or Symptoms” = 0 %, yet many do **NOT** work
- Category VII “Paraplegia” = > 75 %, yet many **work despite** considerable handicaps

Surgical Outcome

EFFECT OF COMPENSATION IN SURGICAL OUTCOME

1. Patients receiving compensation for back injuries are less likely to improve after Disc surgery than patients not receiving compensation
2. Compensation patients reported 1/3 as many excellent results (ie no residual sx’s & working with impairment) 4x more poor results

Consumer Reports: Sep 95, pages 620-1

- “About the only consistent findings to emerge from years of research are **psychological**: People who are depressed, have jobs they don’t like, and stand to get worker’s compensation as long as their backs hurt are the ones whose episodes of acute back pain are most likely to drag out into **chronic disability**”

CHRONIC DISABILITY & THE WORK PLACE

In Sweden, Volvo corporation employees are 1/6 of the national workforce; people stay employed most of their lives; job satisfaction is important;

In U.S, the average length of stay on the job is 3 years; workers feel no attachment; no paternalism by employers;

Rehabilitation

Can Rehabilitation Succeed Despite Financial Disincentives?

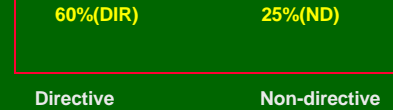
Catchlove & Cohen (PAIN-14:1982) used Directive RTW approach for patients on W.C.

Rx Contract

“You Will Return to Work within 1-2 months”

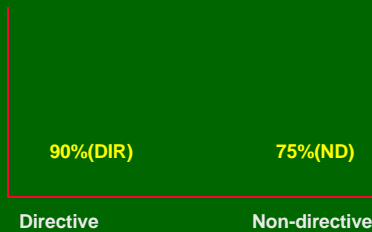
PAIN REHAB-2

Return to Work
1-2 Months.
Post Rx



PAIN REHAB-3

9 mos. Post Rx
Still Working



PAIN REHAB-4

DIRECTIVE GROUP ALSO:

1. Fewer Compensation Benefits
2. Fewer Pain Rx's

Effect of Discharge Rec's on Outcome (Spine 19#18, 1994)

- 1438 consecutive pts surveyed. Control gp, pain was accepted as reason for work restriction; study gp, it was not.
- RESULTS: the absolute # of pts who returned to unrestricted work doubled in the study gp.
- CONCLUSION: Probability of successful RTW(nl) increased with rec of RTWU

Activity Restrictions ?

Royal College of General Practitioners

- “Graded reactivation over a short period of days or a few weeks, combined with behavioral management of pain, makes little difference to the rate of initial recovery of pain and disability, but leads to less chronic disability and work loss.”
- “Advice to return to normal work within a planned short time may lead to shorter periods of work loss and less time off work.”

Canadian Medical Association Policy Summary

- “The Physician’s Role in Helping Patients Return to Work After Illness or Injury”

CMAJ 1997; 156 (5): 680A-F

“Prolonged absence from one’s normal roles, including absence from the workplace, is detrimental to a person’s mental, physical, and social well being. Physicians should therefore encourage a patient’s return to function and work as soon as possible...”:

BUMC Report

BUMC 1982-83 MEDICAL PANEL REPORT

111 Consecutive LBP referred by OWCP

All with predetermined disability avg. 4.92 years

Only **13** significant OBJ. impairment warranting total disability - **1/2** PHYS,

1/2 PSYC.

Of the **88%** found not totally disabled, only **5%** had RTW at least part time

(Strang, 1982)

Chronic Disability

THE CHRONIC DISABILITY SYNDROME

- Individuals capable of Work but choosing to be Disabled
- Absence of Motivation to Recover
- Negative Attitude regarding return to work

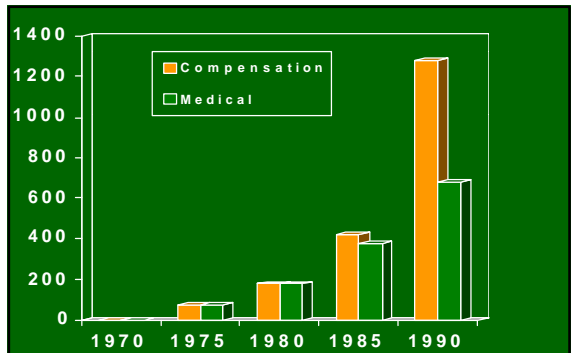


Fig. 5. Disability Costs in the United States as a percentage of 1970 levels

“WORK INJURIES”

NEED TO INCREASE PHYSICAL CAPACITY THROUGH RECONDITIONING AND HAVE PATIENT RESUME PHYSICAL DEMANDS.

INSIGHTS FROM THE CANCER POPULATION

- UNRELIEVED PAIN IS ASSOCIATED WITH: 1) INCREASED MORBIDITY 2) PSYCHOSOCIAL DISTRESS
- EFFECTIVE ANALGESIA CAN REVERSE THESE AND IMPROVE QUALITY OF LIFE

INSIGHTS FROM THE CANCER POPULATION

- MANAGEMENT PROBLEMS RELATED TO TOLERANCE OR PHYSICAL DEPENDENCE ARE RARE
- ADDICTION IS RARE WITHOUT PRIOR HX OF SUBSTANCE ABUSE

Clinical Issues in Long-Term Opioid Treatment

- OPIOID RESPONSIVENESS
- THERAPEUTIC EFFICACY
- DRUG MISUSE
- DRUG ABUSE
- TOLERANCE
- DEPENDENCE
- ADDICTION

ADVERSE OUTCOMES

- RISK OF MAJOR ORGAN TOXICITY: NOT SUPPORTED BY STUDIES
- SIDE EFFECTS: CONSTIPATION>COGNITIVE DYSFUNCTION

DEPENDENCE AND ADDICTION

- PHYSICAL DEPENDENCE IS A PHYSIOLOGICAL PROCESS
- ADDICTION IS A PSYCHOLOGICAL AND BEHAVIORAL PROCESS WHICH INVOLVES:a)loss of control over drug use, b) compulsive drug use, and c) continued use despite harm

PSEUDOADDICTION

- WEISSMAN & HADDOX(1989)
- “in the setting of under treated pain, some patients develop aberrant behaviors that may be quite similar to those associated with addiction. When pain is relieved, the behaviors cease and opioids and other drugs are used responsibly.”

ADDICTION STUDIES

- CONCLUDE THAT CP PATIENTS HAVE LOW RISK OF ADDICTION DESPITE CHRONIC OPIOID USAGE

RISK OF ADDICTION

- 3-16% of gen. population (higher % reflects incidence of ETOHism and poss cross tolerance)
- In vulnerable pts addiction may be delayed (Savage)
- Important to assess risk factors

RISK FACTORS FOR ADDICTION

- Personal past hx of substance problems
- family hx of SP
- evaluate co-morbid anxiety, depression, personality disorders, environmental stressors

DRUG ABUSE

“We don’t have strong medicines that don’t have abuse potential. What we have to do is walk the balance between helping the greater good, knowing that there are always some people who will divert drugs”

Haddox (3/01)

CLINICAL STUDIES SUGGEST

- THERE IS A SUBGROUP OF CP PTS WHO CAN BE RX WITH CHRONIC OPIOIDS. ON THESE THEY REMAIN FUNCTIONAL AND PRODUCTIVE. WITHOUT ADEQUATE ANALGESIA PAIN BECOMES AN IMPAIRMENT AND COMPROMISES THE QUALITY OF THEIR LIVES. (Aronoff, 1992)

WORK, DRIVING & USE OF OPIOIDS

- Are patients at increased risk for MVA’s or work injuries?
- Should they be restricted?
- Do they need special monitoring?
- Are you at risk if they have a MVA or work injury?

Effects of Opioids on Driving Ability in Pts with CP-1

- Penalties for driving while under the Influence of a medication determined to affect driving ability are often the same as driving while under the influence of ETOH regardless of whether the medication was prescribed by an MD.

Chapman, APS Bulletin, 1/01

Effects of Opioids on Driving Ability in Pts with CP-3

- Two important factors to consider:
 1. period of time since the last dose
 2. duration of time since the pt started opioid therapy

Bruera et al, *Pain*, 39,13-16,1989

WORK, DRIVING AND USE OF OPIOIDS

- Emerging research suggesting that pts on stable doses of opioids with a normal mental status are not at increased risk for MVA's or work injuries
- monitor concurrent meds (incl OTC) especially those centrally acting
- monitor reaction time (Aronoff test) and mental status
- caution when opioids are increased

Malingering

- Not rare, especially in workers' compensation, LTD and personal injury population.
- Distinguish from factitious disorder
- Confirmation of malingering gen depends on intentional or inadvertent surveillance
- By definition, malingering is not a disease but a volitional deception.

MOTIVATION

MAY BE CONNECTING LINK
BETWEEN
IMPAIRMENT & DISABILITY

Preventing Disability from CP

- Encourage Return to Work ASAP
- Resume Normal Activities
- C/O Chronic Pain Without Objective Findings is not a reason for Disability
- Work Limitations/Restrictions should be based on Objective Findings
- Psychiatric Disability based on Impairment

Preventing Disab.-Cognitive Beliefs

- Correct cognitive distortions:
 1. Hurt means harm
 2. There MUST be a cure for my pain
 3. Rest and inactivity make pain better
 4. I cannot work if I have pain
 5. I will RTW when I am 100%
- Not everything that should be done has been done

Physician's Influence on Pt's Beliefs

- “You’ll just have to learn to live with the pain” interpreted as “It’s in your head”. (Pt feels helpless, hopeless, misunderstood or angry). This may lead to more pain and disability behaviors to convince people that there really is something wrong.

Physician's Influence on Patient's Beliefs

- Over solicitous Physicians: want to please the pt....too many dx tests, procedures, poly-pharmacy, keep pts out of work because of feeling sorry for them. Believe they are pt advocates but unwittingly reinforce iatrogenic disability

Preventing Iatrogenic Disability

- Adequate Evaluation-Biopsychosocial model
- Attempt to validate veracity of subj. complaints (especially in forensic context)
- Principles of Behavioral/Rehabilitation Medicine to prevent chronicity
- Avoid medicalization of all suffering

For Patients to RTW

- They must believe:
 - 1.It is in their best interest
 - 2.Reinjury is unlikely
 - 3.They will not be fired or laid off
- Some will require a Functional Restoration approach to rx.

Basic Requirements for Utility in the Assessment of Physical Disability

Leonard N. Matheson, PhD.

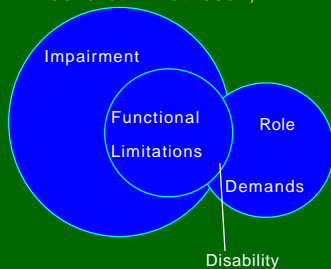


Figure 1. Disability lies at the interface between functional limitations and role demands

Return to Work

QUESTIONS TO BE ANSWERED IN FINAL REPORT

- Has Maximum Recovery/Rehabilitation been reached?
- Can Patient return to previous job? If not, are there transferable skills?

If so, he should be referred to agency for job placement. If not referral should be made for vocational rehabilitation.

Return to Work

QUESTIONS TO BE ANSWERED IN FINAL REPORT

- **If Functional Diagnosis is positive for work functioning, but patient refuses to return to gainful employment, document disincentives for return to work.**

Disability in the Chronic Low Back Pain Patient May Be Iatrogenic

John D. Loeser and Mark Sullivan

For each ailment that doctors cure with medication (as I am told they do occasionally succeed in doing) they produce 10 others in healthy individuals by inoculating them with the pathogenic agent a thousand times more virulent than all the microbes - the idea they are ill.

Marcel Proust, *Gueumante's Way*

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