

Pain and Depression

Basil P. Spyropoulos, MD
Psychiatrist/Medical Director
Meriter Hospital Adult Psychiatry
University of Wisconsin Medical School

What is Pain?

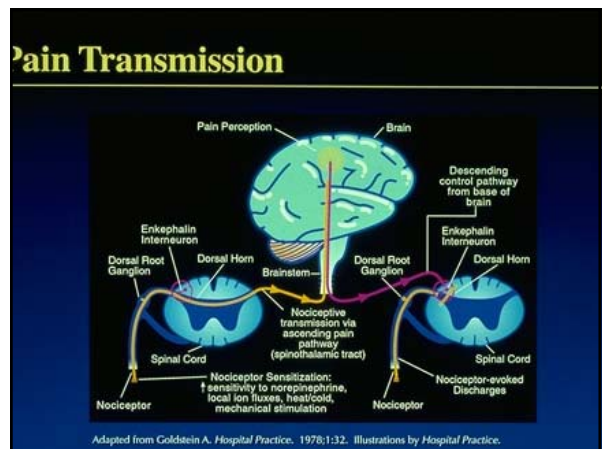
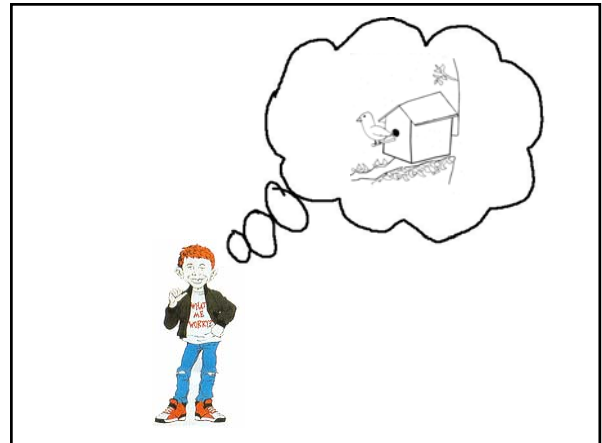
- “An unpleasant sensation occurring in varying degrees of severity as a consequence of injury, disease, or emotional disorder.”
- Highly Complex Process
- Influenced by emotions and environment
- Acute vs. Chronic

Acute pain

- pain lasting less than 3 to 6 months, or pain that is directly related to tissue damage.

Chronic Pain

- Pain, of any cause, that lasts longer than 3 months.



Acute Pain-Treatment

- Analgesics
 - Opiates
 - NSAID's
 - Local anesthetics
 - Allow to heal

Chronic pain

- Affects 1/3 of the population
- Among most common reasons for seeking medical care.
- Pts. Seek care at 5x rate of general pop.
- Various Forms and causes
 - Headache
 - Neurologic Disease
 - Musculoskeletal Disorders
 - Cardiac Disease
 - Cancer
 - Psychiatric conditions

Common Neuropathic Syndromes

- Migraine
- Trigeminal Neuralgia
- Peripheral Neuropathy
- Post-Herpetic Neuralgia
- Multiple Sclerosis
- Spinal cord injury
- Diabetic neuropathy
- Reflex Sympathetic Dystrophy

Musculoskeletal Pain

- Back pain
- Arthritis
- Repetitive Stress Injury
- Fibromyalgia

Why Does Acute Pain Become Chronic?

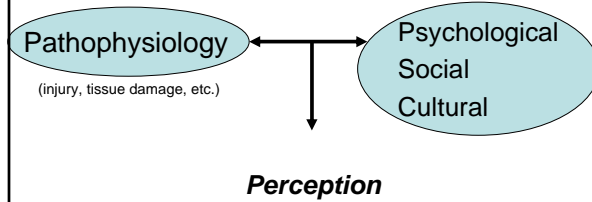
Risk factors for Chronic Pain

- Age > 34
- Weight > 50th percentile
- History of back trauma
- Psychosocial Risk Factors

Psychosocial Risk Factors

- Psychiatric disorders
- Personality traits
 - Passive/avoidant coping style
- Poor social support
- Stressful life events

Dynamics of Pain Perception



Impact of Situation on Pain Perception

Anesthesiologist Henry Knowles Beecher (Harvard). Army medical consultant on the Anzio beachhead.

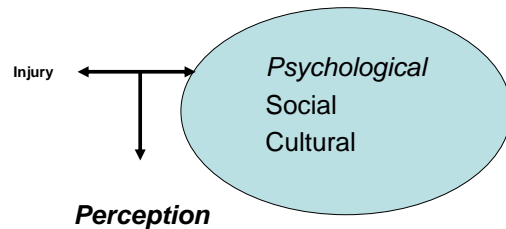
Seriously wounded soldiers complained of pain *much less* than did postoperative patients at Massachusetts General Hospital.

Hypothesis: soldier's pain was alleviated by his survival of combat and the knowledge that he could now spend weeks or months in safety and relative comfort while he recovered.

Psychosocial Risk Factors

- "Psychosocial problems pose more important risk factors for chronic, recurring back pain than biomedical symptoms"

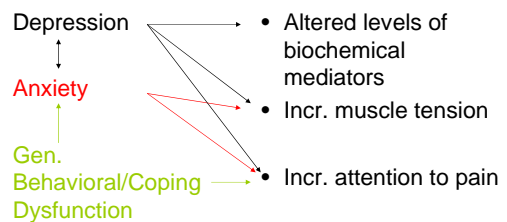
Royal College of General Practitioners guidelines for managing acute low back pain (1987)



Psychological Factors

- Depression
- Anxiety
- Personality/General Coping style

Effect of Psychological State on Pain Perception



Effect of Psychological State on Pain Perception: Anxiety

Psychopathophysiology

- Sustained neck/scalp muscle contraction
- Clenched teeth

Somatoform Pain Sx

- Neckache
- Tension Headache
- Ear Pain
- TMJ pain

Depressive Symptoms

- Fatigue
- Sleep disturbance
- Appetite disturbance
- Decreased Interest
- Irritability
- Hopelessness
- Sadness

Comorbidity of Pain and Depression

- Primary Care settings;
 - 22% experience persistent pain
 - Chronic pain pts. Have 4x likelihood of depression or anxiety

Depression in Chronic pain

- Most common emotional response to CP
- Up to 50% meet criteria for Major Depression
- Underdiagnosed

Comorbidity, Con't

- Poorer outcomes in seriously ill patients who also have comorbid pain and depression
- Depressed pts with pain have longer depressive episodes
- Increased risk of suicide

Suicide Risk

- White
- 35-64 years old
- Workman's Comp. → **2-3x Risk**

Comorbidity of Pain and Depression

- WHO: >75% of depressed primary care patients have pain related sx
 - Stomach pain
 - Headache
 - Neck/back pain
 - Diffuse pain

Types of Pain in Depressed Pts.

- Headache and backache most common
- Among pain patients, HA and back pain sufferers most likely to have depression

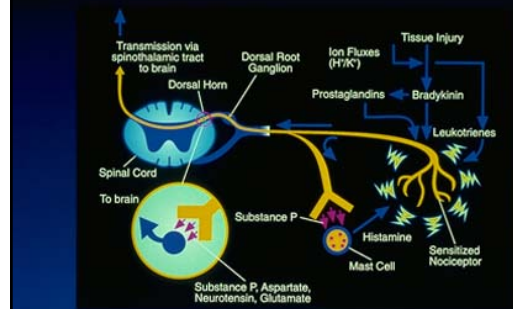
Comorbidity, Con't

- Psychiatric Hospital Settings
 - (Paul Brousse Hosp. Villejuif, FR)
- 92% of depressed pts with pain complaints
76% with multiple pain complaints
Corruble et al, 2000
- *Pain causes depression as often as depression causes pain*

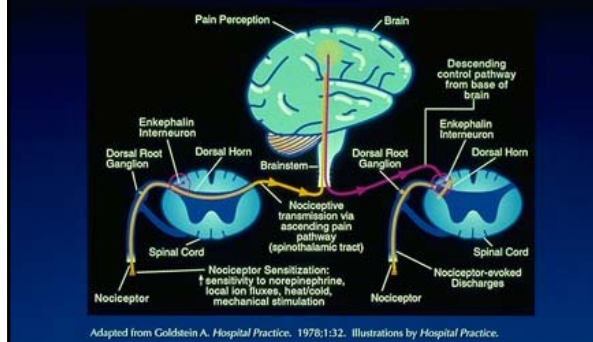
Explanation of Comorbidity

- Pain stimulus transmission and depression involve common brain structures
 - Serotonergic neurons (raphe nucleus)
 - Noradrenergic neurons (locus ceruleus)

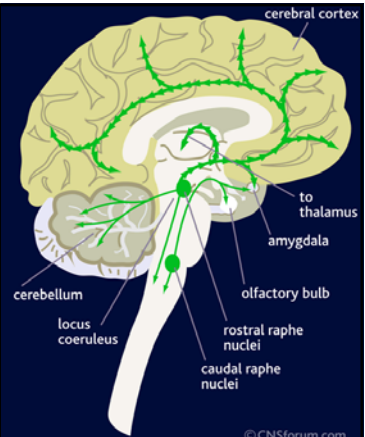
Pain Neurochemistry

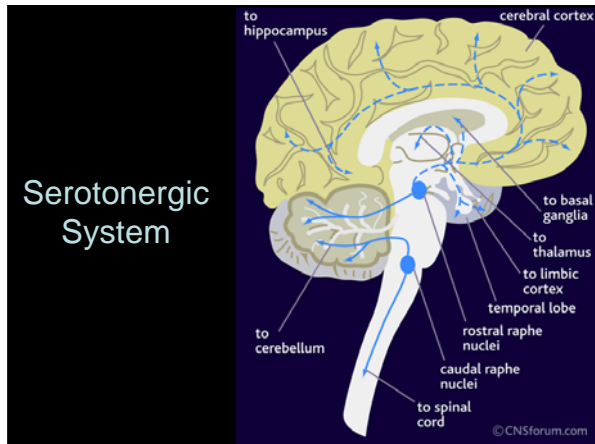


Pain Transmission



Noradrenergic System





Treatment of Chronic Pain

Opiates
Muscle relaxants

(Or avoid/reduce)

Treatment of Chronic Pain

- Treat co-morbid conditions
 - Depression
 - Anxiety
- Antidepressants
 - Serotonergic agents
 - Combined serotonergic/noradrenergic agents
- Non-Pharmacologic interventions

Treatment of Chronic Pain

- Combat immobility
 - Exercise
 - Physical Therapy
- Weight loss
- Treat substance abuse
- Biofeedback/Hypnosis
- Relaxation
- Acupuncture
- Improve social support

Treatment of Chronic Pain

- Active Problem solving
 - Offer hope of improvement
 - Overcome resistance / fear
 - "It's in your head"
 - Overcome unrealistic expectations
 - Cope with pain-related stress