Agenda

- Qualifications
- Mood Disorder and Pain
- Personality Issues and Pain
- Somatoform Disorder and Pain
- Substance Use and Pain
- Malingering and Pain
- Physical Components of Pain
- Physical Examination

Grand Rounds—Psychiatry/December 2010
American Dr. Morris Bolber and his gang made a fortune from an insurance scam that involved killing 30 poor Italian immigrants in the thirties. Bolber teamed up with the “Philadelphia Witch,” a woman who had poisoned her husband. She provided the names of potential victims. He progressed from contrived “accidents” to death by “natural means”—a canvas bag filled with sand to cause cerebral haemorrhage without leaving a mark.
Qualifications
After
Badairka Kayak
Dundas brothers bring magic to life

Three Dundas brothers are conjuring up lots of fun and entertainment for children and adults with The Big Eazy Magic Ensemble. Jessie, Daniel and Jonathan Ennis are magicians who perform hundreds of tricks for good causes and fundraisers.

They also do gigs for children’s parties, office gatherings, conferences and trade shows.

The three became interested in magic as young boys when their father brought home a magic kit.

Daniel, 13, recalls getting serious about magic when he was eight.

“The first trick I learned that I was really proud of was making a traffic light change colours by using balls. Sometimes it is difficult to make the presentation fit well with the effect. Little kids like this trick.”

Jonathan, 11, has been interested in magic ever since he first saw tricks being performed at friends’ birthday parties.

“It really interested me. I like performing and acting and I like to dazzle people who don’t know how it is being done.”

Jessie, 15, liked learning to do tricks when he was nine but says he perform. “Little kids like the visual tricks and humorous stuff and we use a lot more costumes and visual jokes for them while adult groups like the card tricks.”

Daniel says they have done some kids’ birthday parties and have performed shows for patients in hospitals.

“The first trick I learned that I was really proud of was making a traffic light change colours by using balls. Sometimes it is difficult to make the presentation fit well with the effect. Little kids like this trick.

JANIEL ENNIS

“They really liked it. They couldn’t believe that we could do something impossible like make things disappear. I find it fun to do the impossible.”

“I like doing it for people and seeing how they react. I like making people happy.”
East End Multidisciplinary Pain Management Program

EAST END PAIN CLINIC
A Commitment to Life-Long Pain Management

By: Tina Dealwis

Grand Rounds—Psychiatry/December 2010
Those who do not feel pain seldom think it is felt.

Samuel Johnson
## Types of Pain

<table>
<thead>
<tr>
<th>Two Major Types of Pain</th>
<th>Nociceptive Pain</th>
<th>Neuropathic Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal process of stimuli that damages normal tissues or has the potential to do so if prolonged; usually responsive to nonopioids and/or opioids.</td>
<td></td>
<td>Abnormal processing of sensory input by the peripheral or central nervous system; treatment usually includes adjuvant analgesics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Somatic Pain</th>
<th>Visceral Pain</th>
<th>Centrally Generated Pain</th>
<th>Peripherally Generated Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arises from bone, joint, muscle, skin, or connective tissue. It is usually aching or throbbing in quality and is well localized.</td>
<td>Arises from visceral organs, such as the GI tract and pancreas. This may be subdivided.</td>
<td>Deafferentation pain: Injury to either the peripheral or central nervous system. Examples: Phantom pain may reflect injury to the peripheral nervous system; burning pain below the level of a spinal cord lesion reflects injury to the central nervous system.</td>
<td>Painful polyneuropathies: Pain is felt along the distribution of many peripheral nerves. Examples: diabetic neuropathy, alcohol-nutritional neuropathy, and those associated with Guillain-Barré syndrome.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Painful mononeuropathies: Usually associated with a known peripheral nerve injury, and pain is felt at least partly along the distribution of the damaged nerve. Examples: nerve root compression, nerve entrapment, trigeminal neuralgia.</td>
</tr>
</tbody>
</table>
"The term ‘psychogenic pain’ has been used to define pain that is believed to be caused by or primarily influenced by a psychopathological process. The use of this term is discouraged because it lacks precision and has the potential to stigmatize patients when applied inappropriately. True primary psychological pain disorders are rare” …. Canadian Pain Society

It is a term often applied to a patient who is difficult to like, difficult to discharge, with pain that is difficult to diagnose, and difficult to treat. .....Ennis
IASP Definition of Pain

An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.
In 1970, army surgeon Jeffrey MacDonald was rushed to hospital with superficial stab wounds. His wife and children had all been stabbed and battered to death. MacDonald claimed a gang of hippies had attacked them in their home.

Inconsistencies in his story led the police to suspect MacDonald of the murders and when he refused to take a lie detector test, he was charged with murder. After the case was dismissed by the military authorities for lack of evidence, only his ex father-in-law still considered MacDonald guilty. He pursued him through the courts until he received three life sentences in the Supreme Court. Jeffrey MacDonald still protests his innocence.
There is evidence of an increased prevalence of mood disorder and anxiety disorder in the pain patient population.

Depression is the most frequently encountered comorbid disorder and the most well studied.

Prevalence in pain population is 33% for a major depression while it is 8% for the general population.

The diagnosis is made more complex by *symptom contamination*. 

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Symptom Contamination

- Many symptoms associated with depression are associated with chronic illness, including chronic pain
  - Fatigue
  - Poor appetite
  - Deficits in memory and attention
  - Motor retardation

- Requires specialized skill to differentiate between depression and illness
  - The cognitive aspects of depression
  - Self image of depression
  - The phenomenology of depression
Why?

- Neuroanatomical factors
- Neurochemical factors
- Stress diathesis models
- Other factors
Anatomy of Pain
The Spinothalamic Tract
Pain Mood Connection
Pain Mood Connection (Limbic Structures)
Functional Neuroanatomy of Pain
an Association Between Pain and Affect

Nociceptive Input

S1, S2, PCC

S1 = primary sensory cortex
S2 = secondary sensory cortex
PCC = posterior cingulate cortex
PPC = posterior parietal cortex
IC = insular cortex
ACC = anterior cingulate cortex
PFC = Prefrontal cortex

Nociceptive Sensations

S1, S2, PCC

PPC, IC

Immediate Pain Unpleasantness

ACC

Perceived Intrusions or Threat

Autonomic arousal

RF, HYP, SMA, AMYG

Second Order Appraisal

PFC

Secondary Pain Affect

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Components of Pain

- Sensory Discriminative
  - Intensity, location and quality
    - The sensory aspect of pain...the ouch

- Affective Motivational
  - Limbic Involvement
    - The upset associated with pain

- Cognitive Evaluative
  - Thoughts associated with the experience of pain
    - The appraisal of pain–what to do
Neurochemical (Serotonin) and Depression

- 5-HT reduction has been associated with depression
  - Postmortem studies of 5HT and 5-HIAA in CSF, particularly in suicidal patients
    - reduced 5-HT transporter binding sites and 5-HT uptake in platelets of patients
  - reduced uptake of serotonin treats depression
Neurochemical (NE) and Depression

- Reduced NE/metabolites in plasma and urine

- Up regulated receptors with increased density postmortem suggesting reduced availability

- Increase in NE is associated with improved mood
NE/5–HT and Pain

- Associated with descending modulating fibers
- From cerebral peduncle that inhibit pain related activity in the dorsal horn
- This pathway uses 5–HT/NE as neurotransmitters
- Depletion of 5HT leads to increased painful response to shock
- Intact NE system required for 5–HT medicated analgesia
- Evidence that pain increases the turn–over of 5–HT
NE/5-HT and Pain

Diagram showing the interaction between norepinephrine (NE) and serotonin (5-HT) in the context of pain processing. The diagram illustrates the pathways from afferent nerve fibers in the spinal cord to the brain through the dorsal horn and thalamus, involving neurotransmitters like norepinephrine, serotonin, GABA, and neuropeptides. The descending pathway from the brainstem to the spinal cord modulates pain sensation.
Three Phases of Pain

- 3 phase process

PHASE 1

- a painful sensation stimulates a cascade of neuroendocrine and autonomic activity resulting in ‘negative affect’, avoidance and hypervigilance.

- This is the sensory–discriminative component of pain
Phase 2

The ‘secondary pain response’ or affective-cognitive, is triggered by the primary response. This results in wide areas of brain involvement.

The affective motivational component of pain is stimulated and in turn stimulates the cognitive evaluative responses that gives attribution and meaning to the pain experience leading to a recalibration of the primary response in an iterative loop.

Thoughts, feeling and associations of pain merge with sensation, forming a new awareness of the multifaceted pain state.
Three Phases Of Pain

Phase 3

The third component (or phase) is based on the patient’s baseline mood, separate from pain.

The patient’s mood depends on genetic and environmental factors (stress diathesis) that can amplify/mute the emotional response to a painful stimulus.

In vulnerable patients with CNCP, this amplification of affective output in response to a painful stimulus can result in permanent changes in the central nervous system, leading to an increased risk for the development of co-morbid psychiatric disorders such as depression.
Depression and Pain
Depression and Pain

- Been demonstrated that patients diagnosed with idiopathic pain have reduced CSF 5-HIAA

- Some evidence that pain increases turnover of serotonin.

- Tricyclics treat depression and pain
Other Factors

- the psychological impact of disability

- decline in quality of life, and the loss of valued social roles and relationships

- Medication side effects may be a contributing factor
Other risk factors for psychopathology in patients with chronic pain include

- Poor psychological status
- Work dissatisfaction
- Employment status (unemployment)
- History of Abuse
  - It is associated with an increase risk of psychopathology and an increase risk of chronic pain independent of psychopathology
Chicken or the Egg

- Which comes first, pain then depression or depression then pain
- There is evidence that the relationship goes both ways
In the case of primary depression in a population of patients with a MD, 50% report somatic complaints.

In a study involving thirty–seven primary care clinics, two thirds of patients being treated with antidepressants presented with pain.

After eight years of depression, patients whose primary presentation did not include painful symptoms are two times more likely to develop a painful condition compared to a non–depressed group of patients.
Why a Psychiatrist

- The combination of pain and mood disorder is potentially lethal.

- The presence of a mood disorder is associated with a general negative effect on a pain patient’s health status.

- The role of the psychiatrist is clear in this area:
  - This specialty group has specific expertise to diagnose and treat mood disorders in the presence of physical illness.
Real doctors who killed in the 19th century include the American Edward William Pritchard. Before poisoning his mother-in-law and first wife with antimony, he insured a servant girl who then died mysteriously. He was the last person to be publicly hanged (1865) in Glasgow.
Personality
Engels ‘Pain Prone Patient’ (1959)

He was addressing the presentation of pain in patients without evidence of a physical stimuli. He recognized the role psychological factors could play.

In the Pain Prone Patient, pain is used as a defense mechanism to manage stress and relationships.

Engel outlines the ‘risk factors’ for developing this personality type.
- Hx of suffering and defeat, unfulfilled aggressive drive, unable to tolerate success
- Insufficient evidence to support this model
Research has demonstrated that there is no support for the concept of a *pain prone personality*.
Higher prevalence of personality disorder reported in the pain patient population with reports of prevalence ranging from 31–81%

NESARC puts the rate in the general population (U.S.) at 14.8%
Personality Disorder

- Stress Diathesis Model

- Marginally adaptive copers weaken under the stress of pain, disease/injury, and disability

- Personality disorder manifests

- With treatment, traits remain but the full-blown disorder, remits
Personality Disorder

- Issue related to Dx of PD in pain patients
- ICD10 criteria

There must be evidence that the deviation is stable and of long duration, having its onset in late childhood or adolescence.

Most studies do not take into account pre-morbid function. The dx is made from the point of contact and the addition of collateral data.
Psychiatrists have the expertise to assess and manage personality disorders.
Dr John Bodkin Adams, a general practitioner from Eastbourne and forger of prescriptions, who possibly provided the role model for another mass murderer, Dr. Shipman (they had a colleague in common), also admitted at his trial in 1957 to “easing the passing” of some of the old ladies (possibly up to 400) who died under his care (he was mentioned in 132 of the wills).
Somatoform Disorders

I think I might be a hypochondriac.

Or you might have a big brain tumour that makes you think you're a hypochondriac!
The prevalence of co morbidity of somatoform disorders in chronic pain patient populations rages from 0–53%.

In one sample of patients 32% were dx with somatoform disorder and 2% with conversion.

Evidence has suggested that high pain intensity is associated with somatization and hypochondriasis.
Somatoform Disorder

- These patients are a challenge for nonpsychiatrist physicians.
- They often are sent to a multitude of specialists for their array of symptoms.
- This is as a result of a desire to do due diligence, the inexperience of physicians in making the dx, the reluctance of both parties to consider psychological factors as playing a significant roll in the presentation.
- This becomes a very expensive process that does little to help the patient.
Somatoform Disorder

- The psychiatrist is the only specialist physician with specific expertise to
  - `diagnose and treat somatoform disorders`

- This is a very important diagnosis to make even if the only outcome is harm reduction
  - Reduction of medications
  - Reduction in utilization of health care
  - Reduction in invasive interventions
Substance Use and Pain

Cocaine
Toothache Drops
Instantaneous Cure!
Price 15 Cents.
Prepared by the
Lloyd Manufacturing Co.
219 Hudson Ave., Albany, N.Y.
For sale by all Druggists.
(Registered March 1885.) See other side.
Lifetime rate in the pain population is 23%-41% while it is 16.7% for the general population

Many of these patients will be on long term opioids resulting in tolerance and risk of dependence
Substance Dependence

Criteria for Substance Dependence

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

1. Tolerance, as defined by either of the following:
   a. a need for markedly increased amounts of the substance to achieve intoxication or desired effect
   b. markedly diminished effect with continued use of the same amount of the substance

2. Withdrawal, as manifested by either of the following:
   a. the characteristic withdrawal syndrome for the substance (refer to Criteria A and B of the criteria sets for Withdrawal from specific substances)
   b. the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms

3. The substance is often taken in larger amounts or over a longer period than was intended

4. There is a persistent desire or unsuccessful efforts to cut down or control substance use

5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects

6. Important social, occupational, or recreational activities are given up or reduced because of substance use

7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)

Specify if:

With Physiological Dependence: evidence of tolerance or withdrawal (i.e., either Item 1 or 2 is present)
Without Physiological Dependence: no evidence of tolerance or withdrawal (i.e., neither Item 1 nor 2 is present)
Criteria for Substance Abuse

A. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period:

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household)

2. Recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use)

3. Recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct)

4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication, physical fights)

B. The symptoms have never met the criteria for Substance Dependence for this class of substance.
Substance Abuse

- There is some evidence to suggest that substance abuse predates the onset of chronic pain in patients who go on to have substance use issues.

- Substance abuse is often associated with high risk behaviour resulting in trauma.

- A history of abuse is a risk factor for substance abuse in this population.
Substance Abuse

- Iatrogenic factors
  - Increase in prevalence of addiction
  - Increase in deaths related to opioid use

- *Canadian Guideline for Safe and Effective Use of Opioids*
  - Physician prescription are a significant source of abused opioids
  - Psychoactive effect is dose related
Opioids
### Table B-4.1 Evidence of Opioid Efficacy

<table>
<thead>
<tr>
<th>Examples of CNCP conditions for which opioids were shown to be effective in placebo-controlled trials*</th>
<th>Examples of CNCP conditions that have NOT been studied in placebo-controlled trials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tramadol only</td>
<td>Weak or strong opioid</td>
</tr>
</tbody>
</table>
| Fibromyalgia | • Diabetic neuropathy  
• Peripheral neuropathy  
• Postherpetic neuralgia  
• Phantom limb pain  
• Spinal cord injury with pain below the level of injury  
• Lumbar radiculopathy  
• Osteoarthritis  
• Rheumatoid arthritis  
• Low-back pain  
• Neck pain |
| | • Headache  
• Irritable bowel syndrome  
• Pelvic pain  
• Temporomandibular joint dysfunction  
• Atypical facial pain  
• Non-cardiac chest pain  
• Lyme disease  
• Whiplash  
• Repetitive strain Injury |

*A limitation of these trials was that the duration of opioid therapy was a maximum of three months.*
Depression is common among opiate-dependent patients and has been associated with worse prognosis. Depression bears a complex relationship to opiate dependence and may represent an independent disorder or may be engendered by psychosocial stress or toxic and withdrawal effects of drugs.

Primary treatments for opiate dependence (e.g., methadone or buprenorphine maintenance or residential treatment) are associated with substantial improvements in depression.

Studies of antidepressant medications have produced mixed results, some positive but more negative. It is not clear what accounts for these differences.

Fewer studies have examined psychosocial or behavioral interventions, but some of these also show promise.

The data suggest a stepped model of care in which depression is evaluated and observed during the outset of treatment for opiate dependence and if it does not improve, specific psychosocial interventions or antidepressant medications tried.
In General – medium for pain/small for function

Opioids were compared to placebos in 47 randomized trials. The effect size for improvement in pain was medium (0.58 95% confidence interval [CI]: 0.48 to 0.67, extracted from 47 RCTs). For functional outcomes, the effect size was small (0.34 95% CI: 0.25 to 0.43, extracted)

Nociceptive Pain/OA–medium for pain/small for function

The meta–analysis of 31 randomized trials of opioids for nociceptive pain showed a medium effect size for pain relief outcomes (0.60 95% CI: 0.49 to 0.72, extracted from 31 trials), and small for functional outcomes (0.38 95% CI: 0.26 to 0.49, extracted from 21 trials)
Neuropathic Pain—medium for pain and small for function

The meta-analysis of 13 randomized trials of opioids for neuropathic pain showed a medium effect size for pain relief outcomes (0.56 95% CI: 0.38 to 0.73, extracted from 13 trials), and small for functional outcomes (0.24 95% CI: 0.09 to 0.39, extracted from 7 trials)

Widespread Non-Articular Pain—no good evidence

There are no randomized trials of strong opioids for fibromyalgia. There are two randomized trials of the weak opioid, tramadol for fibromyalgia. They showed small benefits in reducing pain. No good evidence for function
Dr Michael Swango ("Dr Poison"), one of America's most prolific serial killers, also killed several people in Africa in the 1990s, yet the medical establishment seemed unable to believe a doctor could be such a monster. He was sentenced to life imprisonment.
Cannabinoids

*CMAJ 2010.* Smoked cannabis for chronic neuropathic pain: a randomized controlled trial.

Mark A. Ware, MBBS, Tongtong Wang, PhD, Stan Shapiro, PhD, Ann Robinson, RN, Thierry Ducruet, MSc, Thao Huynh, MD, Ann Gamsa, PhD, Gary J. Bennett, PhD and Jean-Paul Collet, MD PhD

A single inhalation of 25 mg of 9.4% tetrahydrocannabinol herbal cannabis three times daily for five days reduced the intensity of pain, improved sleep and was well tolerated. Further long-term safety and efficacy studies are indicated.
Rationale for Cannabis-Derived Drugs

- A Canadian survey of patients with neuropathic pain found that 73% suffer from inadequate pain control (Gilron & Bailey, Can J Anaesth, 2003)

- While there are some effective treatments for neuropathic pain of peripheral origin there are relatively few treatments for central neuropathic pain

- An estimated 15% of people with MS use cannabis for symptom relief (Clark et al., Neurol, 2004)
Cannabinoids and Pain Pathways

- Thalamus
- Periaqueductal grey
- Rostral ventromedial medulla
- Dorsal horn of spinal cord
- Peripheral terminals of primary afferent neurons

Possible sites of action:
- Endocannabinoids
- Dorsal root ganglion

Adapted from Di Marzo 2001
## Cannabinoids in MS

<table>
<thead>
<tr>
<th>Study</th>
<th>Treatment</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petro et al (1981)</td>
<td>oral THC, placebo</td>
<td>reduced spasticity</td>
</tr>
<tr>
<td>Clifford (1983)</td>
<td>oral THC, placebo</td>
<td>improved coordination</td>
</tr>
<tr>
<td>Ungerleidere et al (1987)</td>
<td>oral THC, placebo</td>
<td>reduced spasticity</td>
</tr>
<tr>
<td>Meinick et al (1989)</td>
<td>cigarette smoke marijuana</td>
<td>reduced spasticity and ataxia</td>
</tr>
<tr>
<td>Greenberg et al (1994)</td>
<td>cigarette smoke THC, placebo</td>
<td>impaired balance, posture</td>
</tr>
<tr>
<td>Martyn et al (1995)</td>
<td>oral nabilone, placebo</td>
<td>improved well-being, spasms, nocturia</td>
</tr>
<tr>
<td>Schon et al (1999)</td>
<td>oral THC, cigarette smoke</td>
<td>reduced nystagmus amplitude</td>
</tr>
<tr>
<td>Hamann et al (1999)</td>
<td>oral nabilone</td>
<td>complete pain relief</td>
</tr>
<tr>
<td>Killestein et al (2002)</td>
<td>oral THC, plant extract, placebo</td>
<td>worse or no improvement</td>
</tr>
<tr>
<td>Zajicek et al (2003)</td>
<td>oral THC, cannador, placebo</td>
<td>no effect on spasticity</td>
</tr>
<tr>
<td>Svendsen et al (2004)</td>
<td>oral THC, placebo</td>
<td>decrease pain intensity</td>
</tr>
<tr>
<td>Vaney et al (2004)</td>
<td>oral cannador, placebo</td>
<td>no improvement in spasticity</td>
</tr>
</tbody>
</table>
### Rx Cannabinoid Profile Summary

<table>
<thead>
<tr>
<th>Product</th>
<th>Sativex Bayer/GW</th>
<th>Marinol Solvay</th>
<th>Cesamet Valeant</th>
<th>Medical Marijuana Health Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Composition</strong></td>
<td>THC and CBD extracts terpenes flavanoids</td>
<td>Synthetic THC (dronabinol)</td>
<td>Synthetic THC analog (nabilone)</td>
<td>~60 cannabinoids terpenes flavanoids</td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td>Buccal spray – 27mg/ml THC, 25mg/ml CBD Self-titration</td>
<td>Oral – 2.5mg, 5mg, 10mg BID</td>
<td>Oral – 0.5mg, 1mg BID</td>
<td>Smoked or ingested – 12.5% THC No dosing guidelines</td>
</tr>
<tr>
<td><strong>Indications</strong></td>
<td>Adjunctive treatment for symptomatic relief of multiple sclerosis neuropathic pain</td>
<td>Antiemetic in cancer chemotherapy Appetite stimulant in AIDS-related anorexia</td>
<td>Antiemetic in cancer chemotherapy</td>
<td>Anticonvulsant Severe pain in arthritis Specific symptoms in multiple sclerosis, spinal cord injury/disease, cancer and AIDS</td>
</tr>
<tr>
<td><strong>Schedule</strong></td>
<td>Narcotic</td>
<td>Narcotic</td>
<td>Narcotic</td>
<td>Schedule II</td>
</tr>
<tr>
<td><strong>Evicence</strong></td>
<td>RCT: Pain, spasticity in MS</td>
<td>RCT: Pain and spasticity in MS</td>
<td>No RCT in MS</td>
<td>No RCT in MS</td>
</tr>
<tr>
<td><strong>Adverse Events</strong></td>
<td>Dizziness Dry mouth Euphoric mood Fatigue Nausea</td>
<td>Dizziness Drowsiness Nausea Psychological high</td>
<td>Depression Drowsiness Dry mouth Psychological high Vertigo</td>
<td>Risk of lung disease Drowsiness Psychological high</td>
</tr>
</tbody>
</table>
Patients were more likely to use cannabis for symptom relief if

- they had a history of abdominal surgery (29/48 (60%) vs. 24/74 (32%); p=0.002),

- chronic analgesic use 29/41 (71%) vs. 25/81 (31%)

- alternative/complimentary medicine use 36/66 (55%) vs. 18/56 (32%)

- a lower IBDQ (QOL) score
Cannabinoids

- Significant research evidence now exists for the involvement of this eCB system in major psychiatric disorders.

- This system regulates neurotransmitters and immune systems.

- Risk of schizophrenia goes up 2 fold in people who frequently smoke cannabis.
  - Thought to relate to COMT-gene polymorphism. Involved in dopamine metabolism. In this population, risk increases 5 times.
  - Abuse-associated with poor outcome.
Patients with Bipolar Disorder are at the highest risk of any psychiatric patient group for substance use. Cannabis use is associated with manic episodes.

Some evidence for use of cannabinoids and mood disorder. Better evidence for long-term cannabinoid use and the precipitation of an anxiety disorder independent of other substances used.

Cannabinoid abuse is associated with cognitive deficits especially in visuospatial function; impulsivity, inattention and hyperactivity; schizophreniform psychosis and depressive symptoms.
Not just opioids

- ETOH
- Cocaine
- other
Important role for psychiatry in pain management given that opioids and cannabinoids are part of the treatment armamentarium.

Psychiatrist are the only group of specialists with specific expertise in the management of the negative consequences of these substances.
Psychiatrists are the only group of specialists who have the opportunity to engage in specific training for the management of substance dependence/abuse.
Dr. Thomas Neill Cream, the London “Prostitute Poisoner” was the first male serial killer to be hanged in Britain (1892). He also killed three women in America.
Malingering
Malingering

- Listed as a DSM IV dx
- Important in medical legal cases involving pain and suffering
- Although it is a DSM dx, are psychiatrists good at identifying ‘liars’?
- Ekman and Sullivan demonstrated that psychiatrists are not good at catching liars
- Resort to the use of scales (eg. The REY, TOMM)
The Physical Medicine Components of Chronic Pain

- Some understanding from undergraduate training
- Can develop independent skills in this area
- Can work closely with physical medicine specialists
  - Psychiatry
  - Neurology
  - Anaesthesia
  - Family Physician
Sam Sheppard’s mother and mother-in-law died, it seemed from suicide, and he was sued after two surgical deaths. His second wife obtained a restraining order because of his threats to kill her. In 1954 Dr Sam Sheppard (of “The Fugitive” fame) was convicted of killing his wife by 35 blows to her head.
Physical Examination
In order to assess pain, physical examination plays an important roll.
  ◦ Not touching where it hurts is similar to not asking a depressed patient how they feel

The physical examination can play an important role in the psychiatric examination
  ◦ It is a behavioural assessment

Research literature has demonstrate that physical examination skills are poor amongst psychiatrists even though part of the assessment process is to consider physical disorders in the differential diagnosis.
Waddell, *et al.* (1980) described five categories of signs:

- **Tenderness tests:** superficial and diffuse tenderness and/or nonanatomic tenderness
- **Simulation tests:** these are based on movements which produce pain, without actually causing that movement, such as axial loading and pain on simulated rotation
- **Distraction tests:** positive tests are rechecked when the patient's attention is distracted, such as a *straight leg raise* test
- **Regional disturbances:** regional weakness or sensory changes which deviate from accepted neuroanatomy
- **Overreaction:** subjective signs regarding the patient's demeanor and reaction to testing
3 or more is considered clinically significant

These signs have been used to label patients as malingering

The only finding associated with Waddell signs is poor outcome (Fishbaine)

Is associated with elevations on the depression, hysteria, and hypochondriasis scales of the MMPI
Dr Jean-Paul Marat, one of the most bloodthirsty intellectuals behind the French revolution, was a trail blazer in political serial killing “by proxy.” Marat wrote: “In order to ensure public tranquility, 200 000 heads must be cut off.” His pamphlets warning of plots to assassinate all good citizens in their beds led to massacres not only of aristocrats but of the inmates of jails (nearly 1200), prison hospitals, and mental asylums. Marat's assassination in 1793 made him a martyr in the public's eyes, and all over France streets and towns were named after him.
Bibliography

- Download at
  http://www.eastendpainprogram.com
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