Neither of us have financial associations to disclose.
Skit “A Patient In Pain”
What did you notice?
Learning Objectives

- Define chronic pain and Fibromyalgia Syndrome
- Describe examples of trauma and life events that impact pain perception and experience
- Interview a patient with chronic pain and achieve empathy, enhancing insight
- Propose a treatment plan for patient with fibromyalgia that includes three non-opioid options for treatment of chronic pain
What is chronic pain?

Definition: any pain lasting more than 12 weeks

- **Triggers:**
  - Injury
  - Ongoing cause, such as illness
  - No clear cause

- **Associations:**
  - Fatigue
  - Sleep disturbance
  - Decreased appetite, and mood changes
  - Reduced movement, which can reduce flexibility, strength, and stamina. This difficulty in carrying out important and enjoyable activities can lead to disability and despair

(Designed by Freepik from www.freepik.com)
Chronic Pain Prevalence

- “Chronic, recurrent, or long-lasting pain lasting for at least 6 months”
- Chronic pain prevalence 30.7%. Females > males; increased with age
- 50% with chronic pain experienced daily pain
- Average (past 3 months) pain intensity was “severe” for 32%
- Socioeconomic correlates: low household income and unemployment

(Johannes, Le, Zhou, Johnston, & Dworkin, 2010)
Fibromyalgia Syndrome Definition – 1990 Criteria

- Widespread pain >3 months
- Both sides of body, above & below waist; axial pain must be present
- Pain in 11 of 18 tender point sites on digital palpation
- Painful, not tender with digital palpation force of 4kg
- Associated features
Tender Points

- Low levels of self care
- More somatic symptoms
- Increased fatigue
- Pattern of illness behavior/ increased medical care
- Loss of parents
- Abuse

(McBeth, Macfarlane, Benjamin, Morris, & Silman, 1999)
Fibromyalgia Syndrome Definition, 2010 Criteria

1a. Widespread pain index (WPI 0-19) >7 (or 3-6 w/ SS>=9)

- note the number areas in which the patient has had pain over the last week. In how many areas has the patient had pain?

Symptom Severity score (SS 0-12) >5 including:
- Fatigue 0-3
- Waking unrefreshed 0-3
- Cognitive symptoms 0-3
- Other symptoms 0-3

2. Symptoms have been present at a similar level for at least 3 months

3. The patient does not have a disorder that would otherwise explain the pain

(Wolfe, et al. 2010)
Testing

- History and PE are foundational in diagnosis
  - Won’t diagnose if you don’t consider
  - FiRST – Consider other causes for disrupted sleep
- Don’t skimp on your social history!
- No routine lab testing, unless directed by other signs or symptoms
  - Don’t order a test unless you are prepared to explain the answer…
Fibromyalgia Significance

- Prevalence about 2%; women > men (3.4% vs 0.5%)
- Children affected
- Most diagnosed in middle age; prevalence increases with age
- Not a terminal illness:
  - 23 instances of ICD-9 729.1 (Myalgia and myositis, unspecified) on death certificates 1979-1998
  - Mortality similar to general population
- But:
  - 5.5 million ambulatory visits/year
  - Annual direct and indirect costs $5945/person
  - More hospitalizations- 1/3 years

http://www.cdc.gov/arthritis/basics/fibromyalgia.htm
Causes/Risk Factors

- Associations (weak) with disease onset:
  - Stressful or traumatic events, such as car accidents, post-traumatic stress disorder (PTSD)
  - Repetitive injuries
  - Illness (e.g., viral infections)
  - Certain diseases (i.e., lupus, rheumatoid arthritis, chronic fatigue syndrome)
  - Genetic predisposition (?)
  - Obesity

- Abnormal pain processing: React more strongly
- Associations with depression and anxiety

http://www.cdc.gov/arthritis/basics/fibromyalgia.htm
Adverse Childhood Experiences: Prevalence

- **Self-reported childhood experiences of individual ACEs** (general Kaiser population)
  - Emotional abuse (10.6%; ♀ 13.1% / ♂ 7.6%)
  - Physical abuse (28.3%; ♀ 27.0% / ♂ 29.9%)
  - Sexual abuse (20.7%; ♀ 24.7% / ♂ 16.0)

http://traumainformedoregon.org/resources/adverse-childhood-experiences-ace-study/
Interpersonal trauma and somatic symptoms

- 597 urban primary care patients with chronic pain
  - sexual trauma (ST)
  - intimate partner violence (IPV)
- Childhood trauma history (3 + ACE)
- Dependent: somatic symptom severity
- Women reported significantly more severe somatic symptoms than men

(McCall-Hosenfeld, Winter, Heeren, & Liebschultz, 2014)
Interpersonal Trauma and Pain

- 7.3% of chronic back pain sufferers have PTSD
- 7.7% of fibromyalgia sufferers have PTSD
- Relationship between PTSD and chronic pain dependent on type of chronic pain and patient demographics
- “Childhood abuse may be an etiological factor of fibromyalgia” (Brennstuhl, Tarquinio, & Montel, 2015, p. 301)
- Patients with PTSD have a higher rate of pain conditions
- Differences in single-event trauma and complex, long-term trauma?

(Fishbain, Pulikal, Lewis, & Gao, 2016; Brennstuhl, Tarquinio, & Montel, 2015; Moeller-Bertram, Keltner, & Strigo, 2012)
# Post Traumatic Stress Disorder

<table>
<thead>
<tr>
<th>Intrusive and distressing memories</th>
<th>Nightmares</th>
<th>Dissociation</th>
<th>Distress associated with triggers</th>
<th>Physiological response to triggers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidance of thoughts or feelings associated with event</td>
<td>Amnesia of event</td>
<td>Negative beliefs and expectations about oneself, others, the world</td>
<td>Distorted cognitions</td>
<td>Persistent negative emotional state</td>
</tr>
<tr>
<td>Lack of interest and participation in events</td>
<td>Detachment or estrangement from others</td>
<td>Inability to experience positive emotions</td>
<td>Irritability or outbursts of anger</td>
<td>Reckless or self-destructive behavior</td>
</tr>
</tbody>
</table>

| Hypervigilance | Exaggerated startle response | Impaired concentration | Sleep disturbance |

(American Psychiatric Association, 2013)
Repercussions of Chronic Pain

- Increased medical bills
- Decreased income
- Lower living standards
- Difficulty with ADL’s
- Decreased ability to engage in enjoyable activities
- Role change
- Emotional distress
- Depression

- Mental exhaustion
- Anxiety
- Fatigue
- Catastrophizing
Pain and PTSD

Characteristics of People Who Lack Pain Resilience

- Negative self-talk
- Lack of social support/isolation
- Emotional activation
- Catastrophizing
- Avoidance of potentially pain-inducing activities

Analogous Symptoms of PTSD

- Negative beliefs/expectations about oneself, others, or the world
- Withdrawal from social support
- Persistent negative emotional state
- Distorted cognitions
- Avoidance of memories, thoughts, or feelings associated with event

(Karoly & Ruehlman, 2006)
Resilience

The personal qualities and skills that allow for an individual’s healthy/successful functioning or adaptation within the context of significant adversity or a disruptive life event.

(Lee et al., 2013)

Picture Credit: Go Your Own Road, Erik Johansson
Resilience

Demographics
- Age
- Gender

Psychological Factors
- Risks
  - Depression*
  - Anxiety*
  - PTSD
  - Negative Affect
- Protective Factors
  - Self Efficacy*
  - Positive Affect*
  - Self Esteem
  - Optimism
  - Life Satisfaction
  - Social Support

(Lee et al., 2013)
Pain Resilience

- Positive self-talk
- Social support
- Sense of control
- Task persistence

- Lack of:
  - Guarding
  - Emotional interference
  - Catastrophizing
  - Disability beliefs
  - Belief in a medical cure
  - Pain-induced fear

(Karoly & Ruehlman, 2006)
Pain Resilience

1. Recognizing individual strength
2. Looking for the positives in life
3. Accepting the pain
4. Learning to accept help

(West, Foster, & Usher, 2012)
Skit: A Patient in Pain (Reprise)
Skit: A Patient in Pain (Reprise)

What did you notice?
TREATMENT OPTIONS

Think outside the pill bottle!
How to Start the Treatment Conversation

- Mind-Body Connection
  - Gate Control Model
  - Biopsychosocial Model
  - Spoon Theory
Taking a Trauma History

- **Empathy: Help your patient feel safe**
  - Reflect the emotion: “You spent a lot of your childhood afraid.”

- **Education: Why you need this information**
  - “We’re learning more about how a person’s life experiences can affect their health, so I wanted to ask you a little about your history. It will help me give you the best care possible.”

- **Containment: Maintain a structure**
  - 15 minute visits: not a therapy session!
  - Set the frame: “I have five questions about your history I would like to ask if that’s all right.”
  - Close the discussion: “Thank you for being so open with me. If you feel like it would be helpful to continue talking to someone about this, we can help you find a therapist.”
Evidence-Based Therapies

- Education and relaxation therapy in a primary care setting
- Aerobic exercise and muscle strengthening exercise
- Cognitive behavioral therapy
- Medications
The Basics

- Multimodal approach centered on self management and non-pharmacologic strategies
- Encourage patient to set goals and normalize life
- Graduated exercise program
  - Aerobic more effective
  - Consider supervised exercise
  - Women may benefit from resistance training (reduced fatigue, tenderness, increased well being)
- Psycho-education and formal counseling
- CBT may help reduce fear of pain and activity
Behavioral Approaches

What can you do in 15 minutes?

- Refer to pain clinics
- Refer to mental health providers who specialize in pain
- Mindfulness
- Relaxation
- Pacing
Mindfulness

Paying attention with flexibility, openness, and curiosity

1. Noticing
2. Letting go of thoughts
3. Letting feelings be
Relaxation

- Deep Breathing
- Progressive Muscle Relaxation
- Body Scans
- Guided Imagery
Pacing

- Spoon Theory: Christine Miserandino
Good morning! Here’s to another brand new day!
In your hands are 15 spoons.
Each spoon represents the energy needed to complete a part of your daily routine.
Once you’re out of spoons, you’re out of energy. But don’t worry,
Tomorrow always brings more spoons.

This is the spoon theory, an everyday reality for those who live with a chronic illness.

UNDERSTANDING CHRONIC ILLNESS THROUGH THE Spoon Theory

So, how would you like to use your spoons today?

- get out of bed
- take a shower
- visit your doctor
- grocery shopping
- call your parents
- manage meds
- walk your dog
- take kids to school
- get dressed
- make dinner
- socialize
- go to work

original ‘Spoon Theory’ written by Christine Misereando

For more information please visit www.MollysFund.org

Molly’s Fund
fighting lupus
Smart Phone & Tablet Apps

- 65% appear to have no health care provider involvement in their development
- Lack of evidence-based care
- Patients may find them useful, but recommend with caution

(Wallace & Dhingra, 2014)
WHEN ALL ELSE FAILS...
Pharmacotherapy and Other Options

- Guide therapy by symptoms
- Be alert to co-morbid conditions
- Look up information on product
- Start with commonly used or medications specifically approved for the condition
- Consider Drug-Drug interactions, as well as risks with QT and serotonin related symptoms
- When stopping, most should be tapered
Pharmacotherapy and Other Options

**Analgesics**

- Acetaminophen within safe dosing
- **NSAIDS** at lowest dose, shortest time
  - OTC Products
  - Remember NSAID Classes
- Opioids last choice, only with moderate to severe pain unresponsive to other treatment – should be rare!
Pharmacotherapy and Other Options

Other Categories:

- Muscle Relaxants
- Antidepressants
  - Tricyclic Antidepressants
  - Serotonin-Norepinephrine Reuptake Inhibitors
  - Selective Serotonin Reuptake Inhibitors
- Antiepileptic Meds

See Resource list
A = consistent, good-quality patient-oriented evidence  
B = inconsistent or limited-quality patient-oriented evidence  
C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series.

<table>
<thead>
<tr>
<th>CLINICAL RECOMMENDATION</th>
<th>EVIDENCE RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A combination of the 2010 diagnostic criteria from the American College of Rheumatology, symptom scores, and presence of chronic widespread pain with fatigue and sleep symptoms should be used to diagnose fibromyalgia.</td>
<td>C</td>
</tr>
<tr>
<td>Patients with fibromyalgia should be evaluated for comorbid functional pain syndromes and mood disorders.</td>
<td>C</td>
</tr>
<tr>
<td>Aerobic exercise (20 to 30 minutes two or three days per week) improves pain symptoms and fatigue in patients with fibromyalgia.</td>
<td>A</td>
</tr>
<tr>
<td>Tricyclic antidepressants, serotonin-norepinephrine reuptake inhibitors, and cyclobenzaprine (Flexeril) have the strongest evidence of benefit for improvements in pain, sleep, and quality of life in patients with fibromyalgia. Tricyclic antidepressants and serotonin-norepinephrine reuptake inhibitors improve symptoms of fatigue.</td>
<td>A</td>
</tr>
<tr>
<td>Antiepileptics may provide benefits for pain, sleep, and quality of life in patients with fibromyalgia.</td>
<td>C</td>
</tr>
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</table>
Role Play

- Triad
  - Patient: Think of a patient with chronic pain or fibromyalgia who you have struggled with. You’ll be playing this patient.
  - Provider: Interview your patient, looking for trauma history and pain perception.
  - Observer: Notice when the provider connects empathically with the patient, when the patient appears to feel heard or seen.
Taking a Trauma History - Review:

- **Empathy: Help your patient feel safe**
  - Reflect the emotion: “You spent a lot of your childhood afraid.”

- **Education: Why you need this information**
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Resilience in Pain- To Summarize:

- Chronic Pain, including Fibromyalgia Syndrome, is common and has significant personal and societal consequences- and wear on health care providers.
- Awareness that there is often a history of trauma associated with chronic pain can enhance empathy and open doors for additional therapeutic modalities.
- Enhancing patient resilience is an important ingredient to symptom control.
- Most care for chronic pain patients is well within the realm of a primary care provider, together with behavioral health specialists.