Non-Pharmacological Approaches to Chronic Pain

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Learning Objectives.

Define
Define the scope of Chronic Pain

Examine
Examine the dangers of opioid medications

Introduce
Introduce different pain management modalities

Explore
Explore the evidence behind non-pharmacological approaches to chronic pain

Practice
Practice a few techniques
20% of Adults in America have Chronic Pain
What Is Chronic Pain?

- Pain that lasts more than 3 months
- Pain that last longer than the etiology suggests
Numeric Pain Rating Scale

0 1 2 3 4 5 6 7 8 9 10
No pain Moderate pain Worst possible pain

Wong-Baker FACES Pain Rating Scale

0 2 4 6 8 10
NO HURT HURTS LITTLE BIT HURTS LITTLE MORE HURTS EVEN MORE HURTS WHOLE LOT HURTS WORST
How does your pain affect your life?

- Does your pain stop you from doing anything?
- Does your pain affect your sleep?
- Does your pain affect your relationships?
- Does your pain affect your work life?
- Does your pain affect your moods?
Don’t worry, there are a ton of options!

Unfortunately, the evidence is mostly from small studies
What can we offer our patients?

PHARMACOLOGICAL  INTERVENTIONAL  PSYCHOLOGICAL  PHYSICAL  INTEGRATIVE
Pharmacological

- Acetaminophen and/or NSAIDS
- Muscle Relaxers
- Tramadol
- Opioids
Figure 3. National Drug Overdose Deaths Involving Any Opioid, Number Among All Ages, by Gender, 1999-2017

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018
Maximize Non-opioid Treatment

If opioids are prescribed, they should be used at the lowest possible dose.

Opioids should be maintained at a dose <90MME/Day

If tapering is necessary, it should be done in collaboration with the patient.
What can we offer our patients?

PHARMACOLOGICAL  INTERVENTIONAL  PSYCHOLOGICAL  PHYSICAL  INTEGRATIVE
Pharmacological

- SSRIS/SNRIS
- TYLENOL
- NSAIDS
Interventional

- Injections
- Implantable devices
- Surgical options
What can we offer our patients?

- Pharmacological
- Interventional
- Psychological
- Physical
- Integrative
Psychological

- Cognitive Behavioral Therapy (CBT)
- Acceptance Commitment Therapy (ACT)
- Mindfulness
WHY DO PSYCHOLOGICAL TECHNIQUES WORK?
ACUTE PAIN

Emotion

Thought

Tissue Input

CHRONIC PAIN

Emotion

Tissue Input

Thought
CBT

Thoughts

Situation

Emotions

Actions
Have you ever woken up at 3am?
ACT

Acceptance of unwanted private experiences which are out of personal control.

Letting go, showing up for life, and focusing on living in line with personal values.
The Unwanted Guest
Don’t think about the word DUCK
The Evidence

- Improved pain and functionality
- Long term effects with improvement at 12 months
- Treats comorbidities

Mindfulness
Let’s Try It!

Brief Body Scan Meditation
Psychological

COGNITIVE BEHAVIORAL THERAPY (CBT)

ACCEPTANCE COMMITMENT THERAPY (ACT)

MINDFULNESS
CYCLE OF PAIN

PAIN

Psychological
- Increased perception of pain
- Poor mood
- Depression

Physical
- Lowered pain threshold
- Lack of sleep
- Pain with decreased activity

Activity Avoidance

Anger, anxiety, fear, panic

Reduced social interaction/isolation

Deconditioning
Physical Modalities

- Exercise
- Yoga
- Physical Therapy
Exercise
- A Cochrane review found that exercise therapy using individualized regimens, supervision, stretching, and strengthening was associated with the best outcomes.

Yoga
- Less high-quality data
- RCTs showed improvement in function

Physical Therapy
- Has good quality data showing improvement in pain and function
- Improvement was greatest in Chronic Back and Knee Pain
Let’s Try It!
Integrative Approaches

- Massage
- Acupuncture
- Acupressure
- Manipulation
Massage

- Some research showing improvement
- Effect varies by practitioner
- Can be expensive
Acupuncture

- Good short-term effect compared to sham
- Can be expensive
- Lack of long-term effects
Figure 1. Points in the ear where needles were applied to reduce low back pain\textsuperscript{4,25}.

Ushinohama et al, 2014
| Acupressure | Similar affect to acupuncture for pain | Can be self applied and cheaper | No large trials |
Manipulation

- Improved Pain compared to sham
- Similar outcomes to Physical Therapy in head-to-head trial
- Risk of Injury
So...What Works Best?

A COMBINATION!
Combination Programs

- COST-EFFECTIVE
- IMPROVED PAIN SEVERITY
- IMPROVED FUNCTION
- DECREASED ER VISITS AND SICK DAYS
7 → 3
112 → 60
178 → 16mg
To Summarize

**PHARMACOLOGICAL**
The most used but comes with risks
Consider non-opioids

**INTERVENTIONAL**
Refer to Anesthesiology
Long term benefits are lacking

**PSYCHOLOGY BASED**
CBT
ACT
Mindfulness

**MOVEMENT BASED**
Exercise
Yoga
PT

**INTEGRATIVE BASED**
Massage
Manipulation
Acupuncture
Acupressure
Questions?
Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018
References


