Transforming Pain:
The Role of Integrative Pain Management

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@DrB_Well
HEALTHCARE
Take care of yourself

SELF-CARE CHECKLIST
- Good sleep
- Meditate
- Exercise
- Read book
- Eat healthy
- Drink more water
HOW CAN I BETTER TAKE CARE OF MYSELF?

• Pick one area in which you have not been giving yourself the right amount of care

• How do I promise to instill care into my health in the next month?
  • I will start walking at lunch for 30 minutes 4 days/wk
  • I will make an appt with a mental health professional
  • I will set up that preventative test that I’ve put off
  • I will check my home blood pressure daily and make a follow up appointment to discuss
  • I will eat one meal mindfully every day
  • I will pause and do nothing for 10 minutes /day …

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Objectives

- **Review**: The state of Pain Care in America
- **Examine**: What Therapies can be solutions
- **Evaluate**: The Role of CARE in pain care
Complementary, Alternative, or Integrative Health: What’s In a Name?

• Non-Pharmacologic (NP) treatments
• Complementary / Alternative Medicine (CAM)
• Integrative Medicine (IM)
• Integrative Health

http://www.hopkinsmedicine.org/integrative_medicine_digestive_center/index.html

What is Integrative Medicine?

• Integrative medicine is an approach that uses the best evidence-based practices to enhance conventional care.
Pain in America – Common

• Over the last 2 decades the number of American adults suffering from pain increased from 120.2 to 178 million or 41% of the adult population

*Source: Journal of Pain.*
Pain in America – Costly

- America spends > $600 billion per year on the treatment of pain, more than is spent on cancer, heart disease and diabetes.

FAMILY MEDICINE AND THE HEALTH CARE SYSTEM

Overtreating Chronic Back Pain: Time to Back Off?

Richard A. Deyo, MD, MPH, Sobail K. Mirza, MD, MPH, Judith A. Turner, PhD, and Brook I. Martin, MPH

• 629% ↑ in expenditures for epidurals
• 423% ↑ in expenditures for opioids LBP
• 307% ↑ in the # of lumbar MRIs
• 220% ↑ in spinal fusion surgery rates
Figure 4. National Drug Overdose Deaths Involving Prescription Opioids, Number Among All Ages, 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
The association of comorbid conditions with patient-reported outcomes in Veterans with hip and knee osteoarthritis

- Mean numbers of co-existing + activity limiting conditions → 6

- “There is a need for clinical care models and other interventions that simultaneously address the complexity and interrelationships of multiple chronic health conditions …”
Complementary and Alternative Medicine Use in the US Adult Low Back Pain Population

- 2012 National Health Interview Survey
- 41.2% used CAM in the past year
- 45% with more limiting pain
- 58.1% of those who used CAM perceived a great deal of benefit.
- The most popular options: supplements, chiropractic manipulation, and massage...

- **Predictors:** Female, higher education & longer pain
- **Discussion:** Most obtained information from family & friends
- ½ didn’t discuss with provider.


...integrative therapies in combination or combined with conventional medical care ... more effective than select single therapies alone for treating LBP
Are complementary therapies and integrative care cost-effective? A systematic review of economic evaluations

The higher-quality studies indicate potential cost-effectiveness, and even cost savings across a number of complementary and integrative therapies...

Cost Savings from Reducing Pain Through the Delivery of Integrative Medicine Program to Hospitalized Patients

- 2730 patients who were provided integrative services during hospital stay:
  - Pain was reduced by an average of 2.05 points
  - Cost of hospitalization reduced by $898 per admission


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- **Examine**: What Therapies can be solutions
- **Evaluate**: The Role of CARE in pain care
• Foundational ➔ Awareness
  • Mind
  • Reduce Stress
  • Body
  • Improving Breath, Balance and Muscle Tension
• Spirit
• Connection

• Up to **75%** of pain patients exhibited faulty breathing mechanics

• **12 sessions of breath retraining vs PT**
• **VAS:** -2.7 with breath therapy, -2.4 with physical therapy
• **Comparable changes in measures of pain and disability vs PT**
• **Qualitative data suggested improved coping skills and new insight into the effect of stress on the body as a result of breath therapy.**
Breathing for Relief

- Deep breathing at ~ 5 breaths/min
- (12 secs/ breath)
Breathing for Relief

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- (12 secs/ breath)
Biofeedback: A way to regain some control over pain

Integrating biofeedback into a patient's treatment plan can ease pain and improve quality of life.


Key Points

• Integrative Therapies help to approach pain at foundational levels to improve *Breath & Body Awareness*
Tai Chi
Health benefits of Tai Chi

**Brain**
Improves cognitive function in older adults

**Mood**
Relieves symptoms of anxiety and depression

**Connective flexibility**
Improves strength

**Cardiovascular system**
- Significantly lowers blood pressure
- Reduces the resting heart rate

**Joints**
Relieves arthritic pain

**Overall well-being**
Improves quality of life markers in healthy and chronically ill people

**Muscles**
Improves strength

**Immune system**
Improves immune function and reduce inflammation

**Bones**
Increase bone density and prevent fractures in elderly

**Balance**
Improves balance and reduces falls in elderly adults
Yoga
In patients with chronic low back pain

Yoga can shift the nervous system towards vagal dominance (relaxation system) and away from sympathetic (stress) dominance
• At 12 weeks, yoga compared to usual care
• Participants reported: (control vs yoga)
  • Less analgesic use (13% vs 73%)
  • Less opiate use (0% vs 33%)
  • Greater overall improvement (27% vs 73%)

Key Points

• Yoga and Tai Chi are effective for reducing pain often by shifting the nervous system towards balance
• Reintroduces non-painful movement

BMJ 2018; 360 doi: https://doi.org/10.1136/bmj.k851 (Published 21 March 2018)
Acupuncture
• Acupuncture is effective for the treatment of chronic musculoskeletal, headache, and osteoarthritis pain.
• Requires a course of treatment 8-12 visits
The Efficacy of Acupuncture in Post-Operative Pain Management: A Systematic Review and Meta-Analysis

- Patients treated with acupuncture had
- less pain and used less opioid medications on the first day after surgery
Key Points

• Acupuncture benefit goes beyond endorphins
• Can be helpful for acute and chronic pain
• May help to reduce medication requirement
Massage and Manipulation
• For Bodily Pain 49.4% were clinically improved at 12 weeks, 40% at 24 weeks.

• Adults older than age 49 years had better pain and disability outcomes than younger adults.

• Important to find Therapist experienced with
  • Treating chronic pain
  • Using myofascial release / acupressure

Diet and Exercise
Only 1 in 10 Adults Get Enough Fruits and Vegetables

New MMWR shows that few adults meet recommendations
Cross-Promoters:
- Obesity
- Nutrient Deficiency
- Oxidative Stress
- Microbiome changes
- Epigenetic changes...

S.A.D.

Change:
- Activity
- Function
- Mood
- Sleep...

Pain

Low Grade Systemic Inflammation / Hyperalgesia
6588 subjects aged ≥50 years
Knee pain score decreased significantly with ↑ intake

Our findings suggest that intake of whole fruits and vegetables may help improve knee pain in older adults.

... intake of foods rich in polyphenols was associated with lower numbers of tender points ... and better quality of life in the fibromyalgic group

Han HS, Chang CB, Lee DC, Lee JY. Relationship between total fruit and vegetable intake and self-reported knee pain in older adults. The journal of nutrition, health & aging. 2017 Jul 1;21(7):750-8.
Targeted alteration of dietary n-3 and n-6 fatty acids for the treatment of chronic headaches: A randomized trial

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The IDEA Trial 18 Month randomized trial of 450 osteoarthritis subjects to: Diet, Exercise or Combination

A 5% weight loss = 30% reduction in pain
24% improvement in function
Significant reduction in IL-6
More Than Just Pain Relief..

Effects of Diet on Sleep Quality\textsuperscript{1,2}

- Higher Mediterranean diet adherence associated with
  - Better Sleep and QOL
  - Decreased
    - Pain
    - Disability
    - Depressive symptoms
Key Points

• Food is medicine
• Small changes in Diet combined with Exercise can have significant impact on pain and function
Objectives

Review: The state of Pain Care in America

Examine: What Therapies can be solutions

Evaluate: The Role of CARE in pain care
           Mindfulness, Compassion, Community
Key Concepts

• Moment to moment awareness without judgment
• Element of self-compassion / self-acceptance
• MBSR: Formal 8 wk class incorporating mindful breathing, yoga and mental training
Mindfulness training vs relaxation training:

Mindfulness meditation is: “able to reduce distractive and ruminative thoughts and behaviors,

This ability may provide a unique mechanism by which MM reduces distress”
8-week Mindfulness Based Stress Reduction induces brain changes similar to traditional long-term meditation practice – A systematic review

Rinske A. Gotink, Rozanna Meijboom, Meike W. Vernooij, Marion Smits, M.G. Myriam Hunink
Gratitude Enhanced Mindfulness (GEM): A pilot study of an internet-delivered programme for self-management of pain and disability in people with arthritis

Gratitude Enhanced Mindfulness improved:

- Pain anxiety
- pain interference
- pain intensity
- fear of movement
- pain self-efficacy
Care in Pain Care

Exploring a compassion-focused intervention for persistent pain in a group setting

• a group-based intervention based on a model of compassion and including mindfulness and loving-kindness exercise has potential as an intervention to be used within routine pain management settings.

‘All these things don’t take the pain away but they do help you to accept it’: making the case for compassion-focused therapy in the management of persistent pain
Turning the Waiting Room into a Classroom: Weekly Classes Using a Vegan or a Portion-Controlled Eating Plan Improve Diabetes Control in a Randomized Translational Study

Neal D. Barnard, MD, FACC; Susan M. Levin, MS, RD, CSSD; Lise Gloede, MS, RDN, CDE; Roxendo Flores, MA

Group treatment makes acupuncture more affordable for patients

By Evelyn Theiss, The Plain Dealer
Email the author
on April 16, 2012 at 4:01 PM, updated April 17, 2012 at 7:33 AM

CLEVELAND, Ohio -- Treatment for Jeff Husney's head and neck cancer made him a survivor but diminished something many of us take for granted -- the ability to eat.

The radiation aimed at the cancerous growth on Husney's tonsils left

Acupuncturist Jamie Starkey inserts a needle into Jeff Husney's forehead in the shared acupuncture room at the Ohio State Cancer Center.
Positive outcome themes included:

- \( \uparrow \) options and hope
- \( \uparrow \) ability to relax
- \( \uparrow \) body awareness
- \( \uparrow \) sense of well-being
- \( \uparrow \) energy
- \( \uparrow \) patient activation

- Changes in thinking that increased the **ability to cope** with back pain
- **Improvement** in physical conditions unrelated to back pain
- + changes in emotional states

Key Points

- Mindfulness, compassion and gratitude especially in a group setting enable full CARE
- Create deeper, often unanticipated, levels of healing

BMJ 2018; 360 doi: https://doi.org/10.1136/bmj.k851 (Published 21 March 2018)
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- Mean numbers of co-exiting + activity limiting conditions → 6
- “There is a need for clinical care models and other interventions that simultaneously address the complexity and interrelationships of multiple chronic health conditions…”
Conclusions

• The treatment of chronic pain is often focused on Cure creating a costly and catastrophic scenario

• A focus that infuses greater CARE through integrative therapies, especially those which involve Self-Care, reflection, expression and community are key

• These approaches have the ultimate ability to truly TRANSFORM the HEALTH & CARE of Americans living with pain
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• ACUPUNCTURE
• MASSAGE THERAPY
• YOGA
• TAI CHI ...
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