Self Management Strategies and an Integrated Approach for Pain Management

Dr. James Fricton
Professor Emeritus, University of Minnesota (umn.edu)
HealthPartners Institute for Education and Research (hpier.org)
Minnesota Head & Neck Pain Clinic (mhnpc.com)
President, International Myopain Society (myopain.org)

Supported by NIH NIDCR R34DE024260 and NIDCR/U01DE025609
Disclosure Information

None
No investigational use of medications

Acknowledgements and many thanks to...

Co-investigators
Robin Whitebird PhD
Jeanette Ziegenfuss PhD
Gabriela Vazquez Benitez PhD
Neil Johnson DDS, PhD
Karen Lawson MD
Brad Rindal DDS
Eric Schiffman DDS, MS

Research Staff;
Elizabeth Grossman MPH, Manager
Gopikrishna Kunisetty, Web Dev
Santhosh Ramasubramanian, Web Dev
Ann Werner, Programming
Kayla Dean, Assessments
Elana Sour, Recruitment

This study was supported by NIH NIDCR R34DE024260 and NIDCR/U01DE025609
Chronic Pain = & Addiction
#1 reason people seek care

67% of all visits

Mayo Clinic Proceedings, 2011
The most common chronic condition

Figures in millions of people from the Institute of Medicine of The National Academies and the American Diabetes, Heart and Cancer Associations
#1 Cause of Disability

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthritis or rheumatism</td>
<td>8.6</td>
</tr>
<tr>
<td>Back or spine problems</td>
<td>7.6</td>
</tr>
<tr>
<td>Heart trouble</td>
<td>3.0</td>
</tr>
<tr>
<td>Mental or emotional problem</td>
<td>2.2</td>
</tr>
<tr>
<td>Lung or respiratory problem</td>
<td>2.2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>2.0</td>
</tr>
<tr>
<td>Deafness or hearing problem</td>
<td>1.9</td>
</tr>
<tr>
<td>Stiffness or deformity of limbs/extremities</td>
<td>1.6</td>
</tr>
<tr>
<td>Blindness or vision problem</td>
<td>1.5</td>
</tr>
<tr>
<td>Stroke</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Number (in millions) of 47.5 million U.S. adults with a disability

http://www.cdc.gov/Features/dsAdultDisabilityCauses/
How well do pain treatments work?

Systematic reviews of RCTs for...

- Physical therapy & chiropractic
- Cognitive-Behavioral treatments
- Psychological treatments
- Splints and orthotics
- Medications including opioids (oral & topical)
- Injections and nerve blocks
- Surgery and implants

Preventing chronic pain at https://www.coursera.org/learn/chronic-pain
Systematic reviews show...

Almost every treatment works about 10 to 20% above placebo...

Almost every treatment works about 10 to 20% above placebo...

but only short-term
Delayed recovery is common

• Over half of individuals with pain conditions at 1 month still have pain 5 years later

• Many of these patients continue to seek care for their pain years after onset

• Failed treatment and delayed recovery is often due to many physical, behavioral, and psychosocial risk factors that are not addressed

Consider ancient wisdom...

“It is more important to know what kind of person has a disease than to know what kind of disease a person has.”

-Hippocrates (384 BC to 322 BC)
Risk Factor (causes)

Characteristic, condition, or behavior, such as poor sleep, diet, stress or smoking, that increases the possibility of illness, injury, pain (sensitization).

Protective Factor (cures)

Characteristic, condition, or behavior, such as exercise or healthy diet, that prevents or reduces vulnerability to developing an illness and pain.
How do risk factors increase pain?

Body
- Injury, strain, & inflammation

Nerves & Spinal cord
- Wind-up & convergence

Brain
- Central Sensitization
## Studies of Risk and protective factors for chronic pain

<table>
<thead>
<tr>
<th>Category</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body</strong></td>
<td>e.g. fitness, range of motion, posture, strength, injury</td>
</tr>
<tr>
<td><strong>Lifestyle</strong></td>
<td>e.g. diet, sleep, activity level, pacing, sitting, strain, work activity, substance use</td>
</tr>
<tr>
<td><strong>Emotions</strong></td>
<td>e.g. anxiety/calm, depression/happiness, anger/peace, guilt/shame</td>
</tr>
<tr>
<td><strong>Spirit</strong></td>
<td>e.g. direction/ burned out, hope/ hopeless, stress, self-compassion</td>
</tr>
<tr>
<td><strong>Society</strong></td>
<td>e.g. harmony with others, social connection/ support, stress, secondary gain/ recovery rewards</td>
</tr>
<tr>
<td><strong>Mind</strong></td>
<td>e.g. optimism/ pessimism, understanding, expectation, self-efficacy, resilience, coping</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>e.g. safe, clean, infection-free, organized, orderly, adverse event-free, accident-free</td>
</tr>
</tbody>
</table>
Fewer Risk Factors

More Protective Factors

Recovery Principle
New Model of Transformative Care

Treat as usual with medications, therapy, surgery, and others

Train patients in self-management to reduce risk and boost protective factors

Team with health coach to support patient change

Transform the patient and the health care system
Transformative Care is a rare TRIPLE WIN!

- Better quality of care
- Better outcomes of care
- Lower cost of care

-Institute for Healthcare Improvement
The Problem

Self-management is neglected in routine care due to...

✓ Not part of biomedical model
✓ Inadequate time to “train” patients
✓ Lack of reimbursement
✓ Healthcare reform and regulation by health plans
✓ Tedious electronic health record charting
✓ Inadequate training of health professionals

Battersby M et al. The Joint Commission Journal on Quality and Patient Safety. 2010
Massive Open On-line Course

Preventing Chronic Pain: A Human Systems Approach

www.Coursera.org

Be the change you want to see in the world.
-Gandhi
Participant Ratings (n=771)

95% very good to excellent lesson quality
93% changed their life
85% changed their care

“Absolutely fascinating and enlightening…This information should be part of every health care educational program!”

“This course has really helped me to understand myself better and why I think, act and see the world as I do.”

“I am eternally grateful for taking the time and energy to provide this beacon of knowledge to the world.”

“I think this course is a wonderful gift…pain is an avoidable part of our lives.”
Self-management training tools
Personalized based on risk factors
On-line access anywhere anytime
Tele-health coaching
Goal is to improve outcomes of treatment and relieve pain long-term

Supported by NIH NIDCR R34DE024260 and NIDCR/U01DE025609
32 on-line training tools...

- Understand pain: Conditions, causes, treatments, self-management
- Body tools: Stretching, exercise, posture, reducing strain
- Lifestyle tools: Diet, sleep, substance use, and activity level
- Emotion tools: Anxiety, depression, anger, and shame
- Mind Tools: Optimism, self-efficacy, expectations, resilience
- Spirit tools: Purpose, self-compassion, hopefulness, grit and determination
- Social tools: Belonging, social support, work well-being, social stressors
- Environment tools: Safe living, hygiene, pollution-free, and minimizing risk
Each PACT tool includes...

- Pain and Risk Assessment
- Personalized CBT training to reduce risk factors & strengthen protective actions
- Personal stories of real people
- Daily action plan (habits, pauses, calming)
- Documenting outcomes
- Overcoming barriers
Engaging staff present material
Healthy HABITS

Healthy Actions Bring Improvement & Transformation

Studies of...
- Exercise
- Posture
- Diet
- Sleep
- Social support

👍 👍 👍 = Excellent results
Take a PAUSE

Pause Assess Understand Start New Enjoy moment

Studies of...
- Mindfulness practice
- Posture & strain awareness
- Substance use
- Emotional awareness
- Social support

👍👍👍 = Excellent results
Practice CALMING

Calming Actions Lighten the Mind

Studies of...

Meditation
Biofeedback/relaxation
Self-hypnosis
Emotional calming

👍👍👍 = Excellent results
Health Coach & Support Team

✓ Support self-management
✓ Tele-health coach visits
✓ Family & friends support
✓ Improve adherence
✓ Achieve goals

= Excellent results
Resources to Enhance Engagement

- Smart phone app
- Worksheets
- Action plans
- Daily logs
- Precautions
- Seeking care
Measure Engagement & Outcomes

My Dashboard

Name: testpact2 pacttest2
, 53
Work: Employed fulltime
Education: College
Disability: No
Readiness to change score: 7.6

Worst pain (0-10): jaw pain is 9
Second worst pain (0-10): temple headaches is 8
Third worst pain (0-10): neck pain is 9
Other pains include: Jaw, Temple, Back of Neck, Low Back, Hip Joint
Other symptoms include: Sleep problems
Amount of past health care (0-10): 2.0

Impact score: 6.72
Medical history includes: Fibromyalgia, Muscle pain/myofascial pain/ rheumatism, Migraine, Osteoarthritis, Temporomandibular (TMJ) disorders, Stomach reflux, High blood pressure, Heart Disease
Self-care includes: Strengthening exercise e.g. weights, Stretching exercise e.g. yoga, Hot or cold applications, Lying down, Taking breaks during day, Practice calming technique, Warm baths, Massage trigger points/ muscle knots, Staying busy being creative
Goals include: Reduce pain, Improve physical function, Return to normal daily activities

Lessons Completed
Action Plan
Pain Level
Interference

Pain Level

This chart shows how your pain changes after each module

Module 1 Module 2 Module 3 Module 4 Module 5 Module 6 Module 7 Module 8
Introducing PACT in the clinic

Health professionals need to ask...

“I am happy to provide you treatment but it is more effective long-term if we also train you to reduce the lifestyle causes of your pain. Are you interested?”
NIH/ NIDCR
Pilot Study of Self-management

✅ Study utility & methods for multi-site RCT of self-management
✅ Compare usual self-care vs PACT program
✅ 50 participants in 3 weeks with brochure (target =80)
✅ Strong interest by patients

www.preventingchronicpain.org
“Divine is the task to relieve pain.”

-Hippocrates

Thank you

www.preventingchronicpain.org