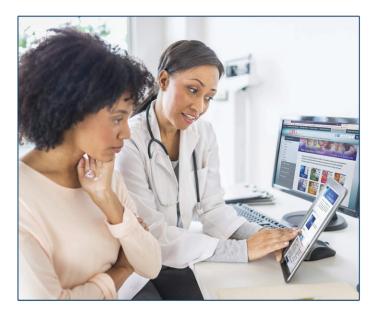
Oregon Pain Education T®OLKIT®

A handbook for clinicians and their patients with chronic pain













Share these social media links with your patients









Pain Education T®OLKIT Handbook

Resources for clinicians and their patients with chronic pain

Introduction	1
Online Continuing Education Course	2
Example Workflow For A Primary Care Clinic	3
Health Equity	4
Clinician Handout	5
What We Say Matters	8
Understanding Pain	9
Clinician Handout	10
Patient Handout	12
Sleep	14
Clinician Handout	15
Patient Handout	19
Nutrition	17
Clinician Handout	20
Patient Handout	22
Activity	24
Clinician Handout	25
Patient Handout	27
Mood	29
Clinician Handout	30
Patient Handout	31
Social	33
Clinician Handout	34
Patient Handout	36
Flare-Ups	38
Clinician Handout	39
Patient Handout	41
Medications	45
Clinician Handout	46
Patient Handout	47
Summary	52
Acknowledgments	Back Cover

The Challenge of Treating Chronic Pain

Providing care for patients with long term chronic pain can be challenging for both patients and providers. Part of the challenge is that both parties may have a different understanding of what causes pain. Pain can be a result of a physical injury or disease or other complex factors. Pain and its treatment can be complicated by mental health, substance use disorder, comorbidities, as well as adverse social determinants of health such as trauma and toxic stress.

However, despite the debilitating effects of chronic pain, when patients make healthy lifestyle changes their lives can improve significantly and their pain can be reduced. When we understand our patients' life goals and we have established a trusting relationship, we can help them develop realistic plans for improving their health and their lives, despite their pain. Making these life style changes can be a slow process and it's important to take small steps and celebrate success along the way. We have developed educational resources to help clinicians and their patients make this journey together.

Pain Education Toolkit for Patients

This consists of patient videos and handouts on topics that can influence pain.

- Understanding Pain •
- Sleep
- Nutrition
- Activity
- Social
- Flare-ups Mood
- Pain Medications







Pain Education Toolkit for Clinicians

This includes clinical handouts on the topics above and these additional topics:

- · Health Equity
- Characteristics of Complex Chronic Pain
- What We Say Matters
- Patient Scenario Before and After







Online Course for Clinicians "Changing the Conversation about Pain"

The Oregon Pain Management Commission and the Oregon Health Authority Public Health Division collaborated to produce a continuing education course for Physicians and all other healthcare professionals. This online course introduces the patient and clinician toolkits and explains how they can be used to help patients with long term chronic pain.

What is included in this Handbook

This handbook contains all the handouts from of the Patient and Clinician Toolkits and explains how they can be used with patients.



ONLINE CONTINUING EDUCATION COURSE

Changing the Conversation about Pain

This course has been developed for physicians and all other healthcare professionals. This educational module qualifies as the required web-based pain management training offered by the Oregon Pain Management Commission.



Use the QR code to access the course



Learning Objectives

After completing this enduring, online educational module, participants will be able to:

- Recognize features of complex, persistent pain in a patient presentation.
- Recognize health and cultural factors that can influence the experience of pain.
- Use consistent messaging to explain how pain works and the brain's role in how we experience pain.
- Access patient education resources and use shared decision making with patients to plan healthy life-style changes.

Accreditation

Physicians: This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the Joint Providership of the Oregon Medical Association and the Oregon Pain Management Commission. The Oregon Medical Association is accredited by the ACCME to provide continuing medical education for physicians.

The Oregon Medical Association designates this enduring materials activity for a maximum of 1.5 AMA PRA Category 1 Credit(s)TM. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nurses: This nursing continuing professional development activity was approved by Oregon Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. Approval valid through June 30, 2023 OCEAN ID # 2021-21.

Pharmacists: Approved for 1.5 hour of CE credit by the Oregon Board of Pharmacy through June 30, 2023.

EXAMPLE WORKFLOW FOR A PRIMARY CARE CLINIC

This handbook contains educational resources for patients and clinicians. Implementation guidelines are under development for different clinical settings. The draft workflow below is an example of implementation in a primary care clinic, but this workflow has not yet been tested.

Go to this link for further details about implementation:



If you are your organization are interested in piloting these materials in clinical settings, please contact:

Lisa Shields (lisa.m.shields@state.or.us) OHA Public Health Division

Mark Stephens (mark.r.stephens@comcast.net) Change Management Consulting LLC



Identify and contact receptive patients



Patient chooses a topic and sets short-term, achievable goals



The health coach monitors progress weekly via telemedicine



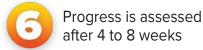


Patient watches the Understanding Pain video prior to meeting



Provider, health coach and patient meet to discuss goals











3



HEALTH EQUITY

Health equity means that everyone has a fair and just opportunity to attain their full health potential and that no one is disadvantaged, excluded, or dismissed from achieving this potential. Many of the pertinent factors — education, poverty, housing, racism, and others — affect people way before they interact with the healthcare system, leaving many of us in healthcare unsure what lies within our sphere of influence. However, healthcare professionals can play a major role in improving health outcomes for disproportionately affected people.

DISPARITIES AND PAIN

For people who experience social inequities and structural violence, pain and related care are closely linked to experiences of injustice and stigma. Conditions that cause adversity, trauma and toxic stress include abuse and neglect, violence, living in poverty, incarceration, family separation, and exposure to racism and discrimination. These events are correlated with chronic health problems including persistent/ chronic pain, mental illness, and substance use in adulthood. Our understanding of the links between pain, trauma and threat make health inequity not only an important social and public health issue, but a relevant one in establishing the trust of your individual patient with complex pain.

HEALTH INEQUITY AND PHYSIOLOGICAL ISSUES

There is evidence that social stressors alter neuroimmunological function, increasing the expression of pro-inflammatory genes. Pro-inflammatory cytokines play a role in widespread persistent pain, cancer, and even the cytokine storm seen in complicated COVID-19 illness. Thus, the grinding stressors of injustice actually take their toll on the body over time and can be expressed in a patient's generalized pain.



WATCH THE CLINICIAN VIDEO



The Health Equity video:

- Explains how health inequities can affect the pain people experience and how they are treated
- Explains that adversity, trauma, and toxic stress have a lifelong effect on health
- Encourages us to educate ourselves as individuals and organizations and to become part of the solution





HEALTH EQUITY AND PAIN Clinician Handout

"Health equity is achieved when every person has the opportunity to attain their full health potential and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances." — Centers for Disease Control and Prevention,

NCHHSTP Social Determinants of Health: Definitions



www.oregonpainguidance.org/paineducationtoolkitforclinicians/healthequity

DISPARITIES AND PAIN

For people who experience social inequities and structural violence, pain and related care are closely linked to experiences of injustice and stigma.¹

Conditions that cause adversity, trauma and toxic stress include abuse and neglect, violence, living in poverty, incarceration, family separation, and exposure to racism and discrimination. These events are correlated with chronic health problems including persistent/chronic pain, mental illness, and substance use in adulthood.² Our understanding of the links between pain, trauma and threat make health inequity not only an important social and public health issue, but a relevant one in establishing the trust of your individual patient with complex pain.

HEALTH INEQUITY AND PHYSIOLOGICAL ISSUES

There is evidence that social stressors alter neuroimmunological function, increasing the expression of pro-inflammatory genes. Pro-inflammatory cytokines play a role in widespread persistent pain, cancer, and even the cytokine storm seen in complicated COVID-19 illness. Thus, the grinding stressors of injustice actually take their toll on the body over time and can be expressed in a patient's generalized pain.³⁻⁵

HEALTH INEQUITY HISTORICALLY

Health inequity is not a historical accident, but a result of policies and practices developed and maintained over time.

Communities of color, people with low-income, people who live in rural areas, people who identify as LGBTQ+, and people with disabilities, face considerable barriers due to inequities in the social issues that affect health. This is because of systemic oppression, discrimination and explicit and implicit bias. The impact of trauma extends beyond the individuals who directly witness or experience violence. Trauma is also produced by structural violence, which prevents people and communities from meeting their basic needs.

In Oregon,

- African Americans, Asian Americans, Pacific Islanders, and Latinos have consistently reported less access to care than Whites⁷
- 22 percent of transgendered people living in Oregon have reported being refused medical care⁷
- Hispanic and Asian patients receiving EMS treatment were less likely to receive a pain assessment procedure and patients of color were less likely to receive pain medications compared with white patients from 2015 - 2017⁸

And nationally,

- People of color are less likely to be prescribed pain medication, less likely to have their pain taken seriously, and less likely to feel heard by their clinician⁹
- LGBTQ+ patients report higher levels of chronic pain, and higher degrees of functional limitations because of their pain^{10, 11}
- Rural residents with chronic pain are more likely to receive an opioid prescription than nonrural residents¹²

HEALTH EQUITY

Health equity means that everyone has a fair and just opportunity to attain their full health potential and that no one is disadvantaged, excluded, or dismissed from achieving this potential.¹³

Many of the pertinent factors — education, poverty, housing, racism, and others — affect people way before they interact with the healthcare system, leaving many of us in healthcare unsure what lies within our sphere of influence.¹⁴

However, healthcare professionals can play a major role in improving health outcomes for disproportionately affected people.





HEALTH EQUITY AND PAIN Clinician Handout



THE ROLE OF HEALTHCARE PROVIDERS

Although healthcare has a long way to go to effectively address health inequity, there are evidence-based approaches for equity-oriented healthcare. This includes patient-centered, trauma-informed, and culturally relevant care. These approaches predict better health outcomes, including lower pain disability scores, fewer depressive symptoms, fewer trauma symptoms and better quality of life. 15, 16

As individuals, a good place to start is to educate ourselves on implicit bias, including our own, and to understand what patient-centered, trauma-informed, and culturally relevant care is.

THE ROLE OF ORGANIZATIONS

Many healthcare organizations have taken important steps towards health equity, such as increasing access to clinical services, working to improve cancer screening and survival, and closing disparities in the management of myocardial infarction. Taking these efforts to the next level in health equity can be achieved by leveraging the economic, social, and political power of the healthcare industry to change the structures of each organization within it.¹⁴

The Institute for Healthcare Improvement developed a framework of five concrete actions that any health care organization, regardless of its unique challenges, can take to improve health outcomes for all the patients they serve:¹⁵

- Make health equity a strategic priority
- Develop structure and processes to support health equity work
- Deploy specific strategies to address the multiple determinants of health on which health care organizations can have a direct impact
- 4. Decrease institutional racism within the organization
- Develop partnerships with community organizations to improve health and equity

RECOMMENDED TRAININGS AND RESOURCES

Implicit bias

 Harvard Implicit Association test: This test helps individuals find out implicit associations about race, gender, sexual orientation, and other topics. https://implicit.harvard.edu/implicit/ Implicit Bias Module Series, Kirwan Institute for the Study
of Race and Ethnicity, The Ohio State University: This
series helps individuals become aware of their biases
and the decisions that are most likely to be influenced
by unconscious processing, to help build interventions
and strategies to prevent the expression of bias and
unwanted outcomes. http://kirwaninstitute.osu.edu/implicit-bias-training/

Equity-oriented Healthcare

- AMA Journal of Ethics Feb 2021 Health Equity issue:
 Two-part theme with a specific focus on racial and ethnic inequity in morbidity, mortality and access to services that are endemic to American life, with CME modules. https://journalofethics.ama-assn.org/issue/racial-and-ethnic-health-equity-us-part-1
- EQUIP Toolkit For Equity-Oriented Healthcare, The University of British Columbia: Tools for practitioners to implement brief, practical strategies at the point of care to profoundly improve patients' experiences. The tools are designed to break down equity-oriented care into useful ideas, approaches and practices that any provider or organization can tailor to their own local context and needs. https://equiphealthcare.ca/resources/toolkit/
- Trauma-informed Oregon: foundational training on trauma and trauma informed care for organizations and systems to build internal capacity for ongoing training and information sharing. Resources include training presentations and resources, useful handouts, and selected literature on ACEs, trauma and trauma informed care. https://traumainformedoregon.org/
- Prevention Institute, Adverse Community Experiences and Resilience: A Framework for Addressing and Preventing Community Trauma. Developed by Kaiser Permanente, this framework and training document includes many strategies for community partners and healthcare to address trauma in their practices. https://www.preventioninstitute.org/sites/default/files/publications/Adverse%20Community%20Experiences%20and%20
 Resilience.pdf

Cultural and linguistic competency

 US Dept of Health and Human Services free, continuing education e-learning programs to help individuals provide culturally and linguistically appropriate services. https://thinkculturalhealth.hhs.gov/education

HEALTH EQUITY AND PAIN Clinician Handout



- National LGBTQIA+ Health Education Center Learning Resources, Introduction to LBGTQIA+ Health: a rich resource on healthcare and health education information. https://www.lgbtqiahealtheducation.org/resources/in/introduction-to-lgbtqia-health/
- Whitman-Walker LGBTQ+ cultural competency training programs for medical and human service providers with tools, terms and an understanding of how to better meet the health needs specific to LGBTQ+ populations. https://whitmanwalkerimpact.org/institute/education/request-a-training/
- The Health Resources and Services Administration (HRSA) Health Literacy website offers a free, go-at-your-own-pace training that includes LGBTQ+ populations as part of an overall approach to healthcare communication. https://www.hrsa.gov/about/organization/bureaus/ohe/health-literacy/culture-language-and-health-literacy

REFERENCES

- Wallace, B., Varcoe, C., Holmes, C. et al. Towards health equity for people experiencing chronic pain and social marginalization. Int J Equity Health 20, 53 (2021). https://doi.org/10.1186/s12939-021-01394-6
- 2. Centers for Disease Control and Prevention, Violence Prevention, Adverse Childhood Experiences https://www.cdc.gov/violenceprevention/aces/riskprotectivefactors.html
- Cole, Steven. Human Social Genomics, PLOS Genetics Aug 2014, Vol 10, Issue 8 https://doi.org/10.1371/journal.pgen.1004601
- Atzeni F et al. II-6 Involvement in pain, fatigue and mood disorders in rheumatoid arthritis and the effects of II-6 inhibitor sarilumab. Pharmacol Res. 2019 Nov;149:104402. doi: 10.1016/j.phrs.2019.104402. Epub 2019 Sep 16. PMID: 31536783.
- 5. Shintaro H. How COVID-19 induces cytokine storm with high mortality. Inflamm Regen Nov 2019, Vol 149 doi: 10.1186/s41232-020-00146-3
- 6. Healthier Together Oregon: State Health Improvement Plan 2020 2024 https://healthiertogetheroregon.org/
- Speaker of the House Tina Kotek's testimony to the House Committee on Healthcare, April 2, 2019: https://www.oregon.gov/oha/OEI/Pages/CCCE.aspx

- Kennel, Jamie MAS; Withers, Elizabeth MS; Parsons, Nate MS; Woo, Hyeyoung PhD. Racial/Ethnic Disparities in Pain Treatment, <u>Medical Care: December 2019</u> - <u>Volume 57 - Issue 12</u> - p 924-929 doi: 10.1097/ MLR.0000000000001208
- 9. Meghani SH, Byun E, Gallagher RM. Time to take stock: a meta-analysis and systematic review of analgesic treatment disparities for pain in the United States. Pain Med 2012;13:150-174.
- The Joint Commission. Advancing effective communication, cultural competence and patient and family centered care for the lesbian, gay, bisexual and transgender (LGBT) community: a field guide. 2014. Oakbrook Terrace, Illinois: The Joint Commission. http://www.jointcommission.org/lgbt/default.aspx
- Case P, Austin SB, Hunter DJ, et al. Sexual orientation, health risk factors, and physical functioning in the Nurses' Health Study II. J Womens Health. 2004;13:1033–1047. https://doi.org/10.1089/jwh.2004.13.1033
- Prunuske JP, St Hill CA, Hager KD, Lemieux AM, Swanoski MT, Anderson GW, Lutfiyya MN. Opioid prescribing patterns for non-malignant chronic pain for rural versus non-rural US adults: a population-based study using 2010 NAMCS data
- 13. The Prevention Institute, Health Equity and Racial Justice: https://www.preventioninstitute.org/focus-areas/health-equity
- Mate K, Wyatt R. Health equity must be a strategic priority. NEJM Catalyst. January 4, 2017. https://catalyst.nejm.org/doi/full/10.1056/CAT.17.0556
- 15. Ford-Gilboe, Marilyn et al. "How Equity-Oriented Healthcare Affects Health: Key Mechanisms and Implications for Primary Healthcare Practice and Policy." The Milbank quarterly vol. 96,4 (2018): 635-671. doi:10.1111/1468-0009.12349
- 16. Institute of Medicine Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research: https://www.nap.edu/catalog/13172/relieving-pain-in-america-a-blueprint-for-transforming-prevention-care
- Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. Achieving Health Equity: A Guide for Healthcare Organizations. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2016. http://www.ihi.org/resources/Pages/IHIWhitePapers/Achieving-Health-Equity.aspx







WHAT WE SAY MATTERS

Patients may carry misconceptions about pain and we clinicians sometimes inadvertently contribute to this. When we use language that focuses on a sense of safety and hope, rather than danger and threat, we can help quiet their pain.

HOW CHANGING WHAT WE SAY CAN HELP

Framing your discussion in positive language can be motivational. Because of the brain's neuroplasticity we know that the pain experience can be modified, and that pain can change, even after years of persistent pain. When our patients understand that actions they take can change their pain experience, they can become more active participants in their own care, and feel more hopeful. We can help with their motivation if we are positive and reassuring, acknowledging even small accomplishments.







WATCH THE CLINICIAN VIDEO







HOW NEUROSCIENCE HELPS EXPLAIN COMPLEX, PERSISTENT PAIN

Contemporary neuroscience shows that pain is a complex process and that chronic pain is actually not a life sentence of misery but something manageable and changeable. Yet our patients often continue to struggle, often receiving passive interventions only, without lasting improvement. Helping your patient to understand pain can completely change the conversation.











REVIEW THE CLINICIAN HANDOUT





- All pain is real
- Pain is complex and has many contributors besides tissue damage or bodily injury
- Pain is changing continuously and can change for the better
- Patients have a greater ability to change their own pain than others are able to change their pain for them







HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT







Be sure to have your patient watch the entire video!













UNDERSTANDING PAIN Clinician Handout

Nora Stern – MS, PT

"When we wish to perfect our senses, neuroplasticity is a blessing; when it works in the service of pain, plasticity can be a curse." – Norman Doidge, MD



www.oregonpainguidance.org/paineducationtoolkitforclinicians/understandpain



- · All pain is real
- · Pain is complex and has many contributors besides tissue damage or bodily injury
- · Pain is changing continuously and can change for the better
- You have more ability to change pain yourself, than others are able to change pain for you

CHALLENGES OF PREVIOUS MODELS OF PAIN

Until recently, it was commonly believed that pain occurred in the body, with "pain receptors" sending "pain signals" from nociceptive fibers in the body to the brain. Thus, pain that lasted beyond the normal healing time was a puzzling, chronic condition that could not be cured, but managed with medication and other medical procedures. This inability to effectively treat persistent, chronic pain is frustrating for clinicians and leaves patients feeling hopeless.

Neuroplasticity research helps explain the complexity of the interaction between mind and body when we experience pain. When our patients understand that they can change their own pain experience, it opens up new ways to treat pain. These patient education tools help our patients understand how they can make changes to improve their lives and ease their pain. This gives us hope that we can partner with our patients to help them with their long term persistent pain.

PAIN AS A BIOPSYCHOSCOCIAL EXPERIENCE

We now understand that pain is not based on nociceptive input alone, but is a complex biopsychosocial experience based on an assessment of actual or perceived danger or threat. This is the case with both acute and chronic pain. Yet many patients with chronic pain believe that their pain is only a bodily sensation that is best treated with medications and procedures. Thus they miss the opportunity to focus on the things that they can do themselves to change their pain experience.

NEUROPLASTICITY

"The age-old distinction between the brain and the mind is crumbling fast as the power of positive thinking finally gains scientific credibility. The credo of this revolution is neuroplasticity — the discovery that the human brain is as malleable as a lump of wet clay not only in infancy, as scientists have long known, but well into hoary old age." — NY Times review of The Brain that Changes Itself May 29th, 2007

Definition

Neuroplasticity is the ability of the brain to adapt to changes in an individual's environment by forming new neural connections over time. Neuroplasticity explains how the human brain is able to adapt, master new skills, store memories and information and even recover after a traumatic brain injury.

We know that pain increases in response to actual or perceived threat. Threat can come from a variety of sources such as injury, memory of previous pain, fears and worries. The longer a person lives with persistent pain, the more brain functions become recruited in the pain experience. This neurological reprocessing, called neuroplasticity, is the way that the brain changes its neural connectivity to learn a new skill, in this case creating a pain sensation. The brain becomes more efficient at producing pain.

COMPLEXITY OF PAIN AND COMORBIDITIES

The role of threat in the pain experience helps us appreciate the close link between pain and other chronic conditions. The many psychosocial contributors include emotional experiences and history, social contributors, and environment.

A person who has suffered emotionally is often wired to detect threat. Pain and suffering can be hard to separate, and the midbrain functions involved in processing suffering, stress, and anxiety, such as the amygdala, thalamus, and hypothalamus, are key parts of most pain processing. Thus, mental health comorbidities are a common aspect of chronic or persistent pain, including depression, anxiety, PTSD and trauma history, and substance use disorder.

UNDERSTANDING PAIN Clinician Handout



It is common for people with chronic pain to have comorbidities that affect pain, such as diabetes, sleep apnea, IBS, poor nutrition, osteoarthritis, or heart disease. Economic and social circumstances may be contributing to their stress and amplifying their pain.

ACTIVE VERSUS PASSIVE INTERVENTIONS

While there can be a role for medication, surgery, injections and other passive interventions, these treatments may be limited in their ability to change complex pain. We can treat complex chronic pain more effectively by taking advantage of the brain's neuroplasticity. When we prioritize active interventions such as a gentle increase in activity, improvements in sleep hygiene, and counseling, we can help our patients to rewire their brain's pain maps.

TEAM BASED CARE

An important aspect of helping your patient to understand pain is the acknowledgment of suffering. For complex chronic pain patients, a team-based approach to pain care, including mental health, physical rehabilitation, peer support, and treatments focused on restoring wellness are key to achieving lasting changes. While many clinics may not have a team readily available, common understanding of pain and communication through electronic charting can help bring together a team of available clinicians to create multidisciplinary care.

SHARED DECISION MAKING

The Understanding Pain video and handout can be used as a shared decision making tool to help your patient identify areas where they are most motivated to make changes. When the patient sets some personal goals, for example for improving their sleep, the clinic team are important allies to help your patient achieve their goals at a pace that is right for them. Starting with sleep helps the patient develop mastery and success and they begin to feel a little better. This strengthens their self-efficacy that they can affect change. When our patients understand the relationship between pain and mood, they are more likely to respond positively when we recommend that they talk with a therapist.

PAIN EDUCATION AS A TREATMENT INTERVENTION

An accurate understanding of pain is critical to pain care, and evidence shows that pain education is an important treatment intervention.

When a person rethinks pain, they change their understanding of their own actions and thoughts. They may learn simple meditation and begin to take short walks while looking at the world around them, allowing their brain to be engaged in something that is meaningful to them and away from the pain.

When practitioners are trained to deliver structured patient education interventions, the reassurance this provides to patients is superior to usual care and can have a positive effect on decreasing pain, disability, catastrophizing, and improving function and quality of life.

REFERENCES

- Reframing Chronic Pain as a Disease, Not a Symptom: Rationale and Implications for Pain Management https://pubmed.ncbi.nlm.nih.gov/30700198/
- The Brain That Changes Itself
 Norman Doidge Viking Press
 https://www.amazon.com/Brain-That-Changes-Itself-Frontiers/dp/0143113100
- Neuroplasticity and pain: what does it all mean? https://pubmed.ncbi.nlm.nih.gov/23451946/
- Explain Pain Supercharged

 G. Lorimer Moseley and David Butler Noigroup Publishing,
 Adelaide, Australia
 https://www.noigroup.com/product/explain-pain-supercharged/
- The neuroscience of placebo effects: connecting context, learning and health https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC6013051/
- Effect of Primary Care Based Education on Reassurance in Patients with Acute Low Back Pain https://pubmed.ncbi.nlm.nih.gov/25799308/
- The Effect of Neuroscience Education on Pain, Disability, Anxiety, and Stress in Chronic Musculoskeletal Pain Chronic Pain Self-Management Support with Pain Science Education and Exercise (COMMENCE) for People with Chronic Pain and Multiple Comorbidities: A Randomized Controlled Trial https://pubmed.ncbi.nlm.nih.gov/32004517/
- Pain Reconceptualisation after Pain Neurophysiology Education in Adults with Chronic Low Back Pain: A Qualitative Study https://pubmed.ncbi.nlm.nih.gov/30275918/







Do you have persistent pain?

HAVE YOU HAD PAIN THAT...

- Lasts beyond normal healing?
- Feels like it spreads, moves around, gets bigger?
- Increases with stress or decreases when you are having fun?
- Affects your ability to sleep?

DO YOU FIND THAT...

- Tests don't explain your symptoms?
- Medication doesn't completely control your pain?
- People don't think your pain is real



Some things make pain worse

For many years, we misunderstood pain. We now understand that pain is actually produced in the brain using information from your body.

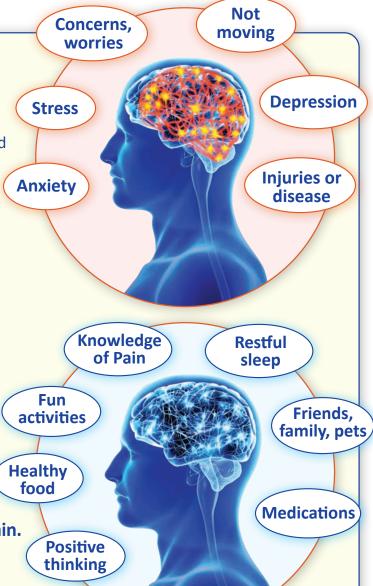
With persistent pain, your brain forms more and more pathways over time that can create pain.

We say that nerves that fire together, wire together.

Some things make pain better

We now know that the brain can change.

We can rewire these pathways and change our pain.



Turn the page to learn more!

START HERE Watch this video on **Understanding Pain**



www.oregonpainguidance.org/paineducationtoolkit



THEN Check out the videos and handouts







FINALLY Make a plan with your health care team









HOW PAIN AND SLEEP WORK TOGETHER

Poor sleep can increase your patient's pain, lower their ability to fight infection, and increase inflammation. Restful sleep can help decrease their chronic pain and improve their mood, which helps them feel more energized, active and social. Good sleep can also reduce their cravings for unhealthy foods.

WHAT CAN MAKE THINGS BETTER

Sleep often improves over time when your patients change their sleep habits, create a restful environment and reduce their stress. Good quality sleep improves their health and can boost their immune system.



WATCH THE CLINICIAN VIDEO



- Identifying sleep problems
- Why sleep is important for pain management
- Ideas to improve sleep
- Goal setting







REVIEW THE CLINICIAN HANDOUT





- Symptoms of Sleep Deprivation
- Sleep and the Body's Immune Response
- Why the Circadian Rhythm is Important
- Insomnia and CBT-i
- · Sleep Apnea
- Sleep and Medications







HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT







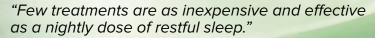
Be sure to have your patient watch the entire video!



SLEEP Clinician Handout Catriona Buist, Psy.D.

Catriona Buist, Psy.D.

Pain Psychologist, Oregon Health and Science University





www.oregonpainguidance.org/paineducationtoolkitforclinicians/sleep

SLEEP AND PAIN

Good sleep is important for our physical and mental health. Many studies link poor sleep to an increased risk of heart disease, cancer, kidney disease, high blood pressure, diabetes, stroke, and obesity. When we get good quality sleep we have more energy, feel better emotionally, digest our food more effectively, and our bodies have a stronger immune response. Over 50% of patients with chronic pain suffer from poor quality sleep. Disturbed sleep affects the perception of pain by lowering the pain threshold. Providers are encouraged to regularly screen for sleep quality and sleep disorders such as sleep apnea or insomnia.^{1,2}

Symptoms of sleep deprivation include:

- Fatigue
- Reduced cognitive abilities, lack of attention, poor memory
- Increased centralized pain sensitivity (fibromyalgia, hyperalgesia)
- · Muscle aches and pains (myalgia)
- · Increased anxiety and depression
- · Gastrointestinal problems
- · Inflammation and impaired immune response

SLEEP AND THE BODY'S IMMUNE RESPONSE

Getting a good night's sleep can boost our immune system. Studies show that when we don't get quality sleep or enough sleep, we are more likely to get sick after being exposed to a virus, such as a common cold. Lack of sleep can also affect how fast you recover if you do get sick. During sleep, your immune system releases proteins called cytokines, some of which help promote sleep. Certain cytokines need to increase when you have an infection or inflammation, or when you're under stress. Sleep deprivation may decrease production of these protective cytokines. In addition, infection-fighting antibodies and cells are reduced during periods when you don't get enough sleep.³

WHY IS THE CIRCADIAN RHYTHM IMPORTANT?

Our circadian clock regulates a daily sleep-wake cycle, called the circadian rhythm. This internal clock is located in the brain's hypothalamus. The clock runs constantly, receiving light signals from our eye's retina, and adjusts our hormone levels. At night, the brain releases melatonin, causing sleepiness, and suppressing cortisol, an activating hormone. When our retina sees morning light, it triggers our circadian system to suppress melatonin, and increase levels of cortisol, testosterone, leptin, and ghrelin that wake us up, provide energy for activities, and stimulates our appetite.⁴

Habits that disrupt our sleep

Patients with persistent pain often have habits that disrupt their circadian clocks. They may sleep late into the morning, stay indoors with no change in lighting, or take long naps during the day. Many stay up late watching TV, playing video games, or using computers or social media apps. These blue light-emitting devices can cause our circadian clock to delay melatonin secretion, making it difficult to get to sleep. When we vary our sleep and wake times, our circadian clock cannot keep up. It's important that we work with our circadian clock, getting up in the morning and exposing ourselves to light at about the same time every morning. In the evening, we can turn off screens, darken our sleeping area, and relax to help our system convert to nighttime restorative physiological process.⁵

Shift Work

The circadian clocks of people who work evening or night shifts are often are not synchronized with their environment. This desynchronization can be detrimental to their health. Studies have uncovered elevated rates of several diseases, including cancer, diabetes, cardiovascular risks, obesity, mood disorders and age-related macular degeneration for people who do shift work. If you have patients who work evening/nights shifts or who have a varying schedule, watch for sleep related disorders. Our bodies can adjust to different 24 hour schedules, but it's important to keep a regular schedule, even on days off. Good sleep habits/hygiene still apply, just on a different schedule.⁵





SLEEP Clinician Handout



INSOMNIA

Insomnia is defined as difficulty falling asleep, maintaining sleep, waking up too early, or experiencing non-refreshing sleep. Approximately 60% to 80% of patients with pain have symptoms of insomnia. Chronic stress can lead to insomnia. Insomnia has been linked to poorer daytime functioning (fatigue, poorer concentration, memory and alertness) and increased mood disturbances (irritability, lethargy), making it more difficult to manage pain.

Cognitive behavioral therapy for insomnia (CBT-i)

CBT-I has been shown to be effective in treating pain related insomnia. CBT-I often includes psychoeducation, sleep hygiene, relaxation training, cognitive therapy, sleep restriction, stimulus control therapy, sleep modulation/restriction, biofeedback, and imagery training.⁶

SLEEP APNEA

Obstructive Sleep Apnea Syndrome (OSAS) is a common condition characterized by frequent episodes of upper airway collapse and repeated episodes of apnea and hypopnea during sleep, and can lead to excessive daytime sleepiness. Symptoms include snoring, breathing pauses, lack of concentration, memory impairment and psychological disturbances. OSAS has been associated with many types of pain and medical problems and is associated with increased morbidity and mortality, diminished quality of life, workplace issues and motor vehicle accidents. Data from patients with OSAS supports a correlation between sleepiness and pain sensitivity. STOP-Bang is a widely used screening tool for sleep apnea.⁷

SLEEP AND MEDICATIONS

Ensure you review medication history, including prescribed and OTC sleep aids. Sleep aids can be used for temporary relief of insomnia. Be aware that patients can become dependent on sleep medications over the long term. If this is a concern, consider tapering your patient slowly off these medications. A significant side effect of opioids related to sleep is opioid induced sleep disordered breathing. Talk with your patient about whether opioids may be interfering with their sleep.

REFERENCES

- Pain and sleep: A bidirectional relationship https://pubmed.ncbi.nlm.nih.gov/30367215/
- 2. The role of sleep in pain and fibromyalgia https://pubmed.ncbi.nlm.nih.gov/25907704/
- The bidirectional relationship between sleep and Immunity against Infections https://pubmed.ncbi.nlm.nih.gov/26417606/
- 4. Sleep, immunity, and circadian clocks: a mechanistic model https://pubmed.ncbi.nlm.nih.gov/20130392/
- Association between light at night, melatonin secretion, sleep deprivation, and the internal clock https://pubmed.ncbi.nlm.nih.gov/28214594/
- Cognitive-behavioral therapy for sleep abnormalities of chronic pain patients https://pubmed.ncbi.nlm.nih.gov/19922736/
- Chronic widespread musculoskeletal pain in patients with obstructive sleep apnea syndrome https://europepmc.org/article/med/26504332





A good night's sleep can reduce your pain

and alcohol close to bedtime



Public Health Division

OregonPainGuidance.org



Find more ways to help with your pain: www.oregonpainguidance.org/paineducationtoolkit

HOW PAIN AND SLEEP WORK TOGETHER:

Poor sleep can increase pain, lower your ability to fight infection, and increase inflammation. Restful sleep can help decrease pain and improve your mood, which helps you feel more energized, active and social. Good sleep can also reduce your cravings for unhealthy foods.

WHAT CAN MAKE THINGS BETTER:

Sleep often improves over time when you change your sleep habits, create a restful environment and reduce your stress. Good quality sleep improves your health and can boost your immune system.

A good night's sleep can help reduce your pain Start practicing these tips for better sleep



GO TO BED AND GET UP AT THE SAME TIME EVERY DAY:

Regular bed and rise times maintain the body's natural rhythm and improves the quality of your sleep.



> KEEP A BALANCE BETWEEN ACTIVITIES AND REST:

Pace your activities throughout the day. Even a small amount of activity a day can improve your sleep at night.



> LIMIT NAPS:

Think about doing things that get you up and moving, and less time napping. If you need to nap, limit it to 20 minutes a day.



AVOID CAFFEINE (coffee, sodas, energy drinks) IN THE AFTERNOON AND ALCOHOL CLOSE TO BEDTIME:

Avoid caffeine eight hours before you go to bed. Alcohol can make you fall asleep but affects the quality of sleep.



> MAKE THE ROOM WHERE YOU SLEEP RESTFUL:

Keep the room where you sleep dark, cool (67° or cooler) and quiet.



CREATE A BEDTIME ROUTINE:

Start a relaxing routine one hour before bed.



TURN OFF ALL SCREENS AN HOUR BEFORE BED:

Turning off devices helps quiet your mind before sleep.



> GET OUT OF BED IF YOU CAN'T SLEEP:

Do something calming in a dimly lit area and return to bed when you are sleepy. Avoid using screens.



> USE THE BED FOR SLEEP AND PARTNER TIME ONLY:

This helps your brain associate the bed with sleep.





My short-term goal:

Go to bed and wake up at the same time every day

Steps to reach my goal:

- · I won't have any coffee after one
- · TV goes off one hour before bed
- · Limit naps so I can sleep well and not be tired

www.oregonpainguidance.org



NUTRITION, STRESS AND PAIN ARE DIRECTLY RELATED

When our brain and body are stressed, we do not digest food very well, even with a healthy diet. This can cause diarrhea or constipation and add to pain. Good nutrition will improve your gut health and change your experience with pain.

A HEALTHY LIFESTYLE HELPS YOUR PAIN

If your patients make healthy food choices, prepare food at home, and eat with friends and family in a relaxed environment, many of their digestion problems are likely to improve. Restful sleep, regular activity, and a good social life can also help with pain.



WATCH THE CLINICIAN VIDEO



- Common symptoms of nutritional or gut health problems
- Why gut health is important for pain management
- Lifestyle tips for better nutritional or gut health
 - Goal Setting





REVIEW THE CLINICIAN HANDOUT





- The Gut Microbiome and Pain
- Why the Gut Microbiome is Important: The Gut-Brain Axis
- Gut-Barrier Integrity
- How the Gut Microbiome can be Disrupted the Effect of Antibiotics





HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT







Be sure to have your patient watch the entire video!





Public Health Division





NUTRITION Clinician Handout

Erika La Vella, DO Bariatric Surgeon, Samaritan Health Services

"Let food be thy medicine and medicine be thy food." – Hippocrates



www.oregonpainguidance.org/paineducationtoolkitforclinicians/nutrition

THE GUT MICROBIOME AND PAIN

The connection between mind and body resides in the human gut microbiome. Research has highlighted the importance of a good diet for reducing inflammation seen in many chronic ailments such as cancer, autoimmune disease, metabolic disease, psychiatric conditions, and pain. When the diet is rich in antioxidants and fiber, all aspects of health benefit. The link between nutrition and health outcomes lies in the health of the human gut microbiome. The microbiome contains the most extensive collection of microbes in the body, consisting of primarily bacteria, as well as archaea, fungi, and viruses which chemically crosstalk with human tissue. Good nutrition is the foundation for a healthy microbiome. Diets deficient in antioxidants and fiber have low microbial species diversity which is associated with worse health outcomes.1 Providers should screen for symptoms of a poor diet. These symptoms include:

- Fatigue
- · Reduced cognitive abilities and emotional processing
- · Muscle aches and joint pains
- Increased anxiety and depression
- Bloating, abdominal pain, GERD, and constipation/ diarrhea
- · Poor sleep quality
- Inflammation and impaired immune response

Providers should remind their patients to eat more prebiotic foods such as fresh fruits, vegetables, and whole grains to optimize their health. Micronutrient rich foods are those in whole food form. A simple phrase to use is "Eat the colors of the rainbow."

Common Definitions

A **prebiotic** is a plant fiber that feeds beneficial gut bacteria. Prebiotic rich foods include onion, leeks, garlic, asparagus, chicory, Jerusalem artichoke, etc.

A **probiotic** is a beneficial bacterium that can be cultured and given as a supplement with a health-promoting benefit. Probiotic foods include plain yogurt, kefir, miso, sauerkraut, kimchi, kombucha, and others.

A **postbiotic** is a short-chain-fatty-acid (SCFA) metabolite from complex carbohydrates' fermentation within the GI tract. The most notable SCFA to-date is butyrate, which the human colonocyte uses as its only energy substrate. A healthy colon is dependent on a healthy gut microbial ecosystem in a mutualistic manner. A healthy diet creates many postbiotic substrates that are beneficial in every organ system, including the nervous system and brain.²

WHY IS THE GUT MICROBIOME IMPORTANT? THE GUT-BRAIN AXIS

The gut and the brain are connected via the microbiome-gutbrain axis and communicate via neural, metabolic, immune, and endocrine means. Through bi-directional communication, the gut and the brain are hard-wired through the vagal nerve pathways and lymph-circulatory systems. Several studies demonstrate that poor gut health and nutrition can increase symptoms of anxiety/depression, age-related cognitive decline, and lower resiliency to stress. Research has shown that gut microbes secrete byproducts that convey messages to the nervous and endocrine systems. The cell-signaling involved can turn on inflammation, turn on susceptibility to disease, and even further damage the gut environment, as in IBD.3 The human gut microbiome synthesizes up to 95% of the serotonin and GABA in our bodies. Studies show micronutrient rich diets have less mental illness because gut bacteria are integral to the nervous system response.^{4, 5} Clinicians need to watch for symptoms of anxiety/depression, age-related cognitive decline, lower resiliency to stress and consider the impact of nutrition.

GUT-BARRIER INTEGRITY

The intestinal tract begins in the mouth and becomes an acidic environment by stomach acid. It gradually becomes more alkalotic towards the cecum with bile and pancreatic secretions mixing in the duodenum. There are specific populations of bacteria that live in each digestive compartment unique to that niche's exposure to oxygen and pH. The lining of the intestinal tract from mouth to anus is covered in a mucosal layer. The integrity of the mucosal layer is significant for the microbiome and immune response. Under the intestinal cells live the body's most extensive collection of lymph tissue. If the mucosal lining is damaged or weakened, the undigested food particles and unhealthy species of bacteria, viruses, and parasites can cross

NUTRITION Clinician Handout



the gut barrier and incite immune activation. This process is known as increased intestinal permeability and is proven to proceed chronic conditions, including anxiety, depression, and chronic pain.⁶

WHAT CAN DISRUPT OUR GUT MICROBIOME?

Diet low in fiber and high in saturated fat and processed foods

The Standard American Diet (SAD) is low in fiber and high in saturated fat and processed foods, which produce low levels of beneficial microbiome metabolites needed for healthy gutbrain axis function. Dietary habits that support the microbiome include a whole foods diet with antioxidants, minerals, and fiber with little to no processing and probiotic-rich foods.

Common OTC medications can interrupt the gut microbiome

Medications such as antacids are proven to change the stomach's pH such that it changes the native bacterial populations from favorable to dysbiosis. Likewise, drugs commonly prescribed for pain also cause disturbances to the gut lining and microbiome. Through prostaglandin inhibition, NSAIDs cause thinning of the mucus membrane, subjecting those who take it to compromised gut barrier function.^{7,8}

Stress increases intestinal permeability

The bi-directionality of the gut-brain axis implies that while there are nutritional and gut-mediated pathways to mental well-being, brain-gut mediated pathways mediate gastrointestinal health. Research shows that the stress response releases corticotropin-releasing hormone which systemically releases enzymes from mast cells at the gut level. These enzymes degrade tight junction proteins linking enterocytes together, causing increased intestinal permeability. Often pain is exacerbated by stress physiology, especially as it pertains to the emotional and cognitive relationship to their pain. Providers need to understand the importance of stress on the gut microbiome and its impact on chronic pain.⁹

ANTIBIOTICS

While antibiotics have revolutionized medical care, they must be used prudently. Native bacterial species are destroyed with every antibiotic and recovery is contingent upon diet, medications, stress, and environmental exposures to microbes. Antibiotic use in early childhood causes metabolic disorders, obesity, and neurodegenerative diseases. Inquire about antibiotic use and frequency to shed light on your patient's gastrointestinal health. Probiotic supplements and foods have been shown to decrease complications from antibiotics. ¹⁰

REFERENCES

- Lynch SV, Pedersen O. The human intestinal microbiome in health and disease. New England Journal of Medicine. 2016 Dec 15;375(24):2369-79.
- Peluzio MD, Martinez JA, Milagro FI. Postbiotics: Metabolites and mechanisms involved in microbiota-host interactions. Trends in Food Science & Technology. 2020 Dec 10.
- Carabotti M, Scirocco A, Maselli MA, Severi C. The gutbrain axis: interactions between enteric microbiota, central and enteric nervous systems. Annals of gastroenterology: quarterly publication of the Hellenic Society of Gastroenterology. 2015 Apr;28(2):203.
- Hibberd MC, Wu M, Rodionov DA, Li X, Cheng J, Griffin NW, Barratt MJ, Giannone RJ, Hettich RL, Osterman AL, Gordon JI. The effects of micronutrient deficiencies on bacterial species from the human gut microbiota. Science translational medicine. 2017 May 17;9(390):eaal4069.
- 5. Rogers GB, Keating DJ, Young RL, Wong ML, Licinio J, Wesselingh S. From gut dysbiosis to altered brain function and mental illness: mechanisms and pathways. Molecular psychiatry. 2016 Jun;21(6):738-48.
- 6. Guo R, Chen LH, Xing C, Liu T. Pain regulation by gut microbiota: molecular mechanisms and therapeutic potential. British journal of anaesthesia. 2019 Nov 1;123(5):637-54.
- Imhann F, Bonder MJ, Vila AV, Fu J, Mujagic Z, Vork L, Tigchelaar EF, Jankipersadsing SA, Cenit MC, Harmsen HJ, Dijkstra G. Proton pump inhibitors affect the gut microbiome. Gut. 2016 May 1;65(5):740-8.
- 8. Syer SD, Wallace JL. Environmental and NSAID-enteropathy: dysbiosis as a common factor. Current gastroenterology reports. 2014 Mar 1;16(3):377.
- Kempuraj D, Mentor S, Thangavel R, Ahmed ME, Selvakumar GP, Raikwar SP, Dubova I, Zaheer S, Iyer SS, Zaheer A. Mast cells in stress, pain, blood-brain barrier, neuroinflammation and Alzheimer's disease. Frontiers in cellular neuroscience. 2019 Feb 19:13:54.
- 10. lizumi T, Battaglia T, Ruiz V, Perez Gl. Gut microbiome and antibiotics. Archives of medical research. 2017 Nov 1;48(8):727-34.









Good nutrition can aide digestion and improve your pain and overall health

NUTRITION, STRESS AND PAIN ARE DIRECTLY RELATED:

When our brain and body are stressed, we do not digest food very well, even with a healthy diet. This can cause diarrhea or constipation and add to pain. Good nutrition will improve your gut health and change your experience with pain.

A HEALTHY LIFESTYLE HELPS YOUR PAIN:

If we make healthy food choices, prepare food at home, and eat with friends and family in a relaxed environment, many of our digestion problems are likely to improve. Restful sleep, regular activity, and a good social life can also help with pain.

Understanding the relationship food has with your body can help improve your health and your pain



DRINK MOSTLY WATER

- Staying hydrated makes everything function better. Aim for 8-10 cups a day
- If you don't drink enough water you can get dehydrated easily, increasing fatigue, headaches and irritability



- Eat many colors of fruits, vegetables, nuts, seeds, legumes, whole grains
- These foods have the most vitamins, minerals, antioxidants, and fiber to feed those healthy gut bacteria



- Fermented foods have good bacteria that help your immune system and bowel movements
- These foods include miso, sauerkraut, kefir, yogurts, tempeh, kimchi, kombucha

> LIMIT ASPIRIN, IBUPROFEN, AND PRESCRIPTION PAIN RELIEVERS

- Medications such as ibuprofen, aspirin, and naproxen, damage the gut lining and build up toxins which can lead to ulcers
- Prescription pain relievers such as oxycodone and hydrocodone limit digestion and cause constipation



PREPARE FOOD AT HOME

- Cooking food yourself stimulates your digestive system
- When you cook at home you can control the quality and variety of your food
- Eating at a table, with others in a relaxed state promotes good digestion





My short-term goal:
Eat a different
color vegetable at
every meal

Steps to reach my goal:

- Breakfast scramble spinach and eggs
- · Lunch add shredded red cabbage to my sandwich
- Dinner steam carrots as a side



Public Health Division







HOW PAIN AND ACTIVITY WORK TOGETHER

When your patients move less and less, their brain becomes accustomed to that decrease in activity. As the brain learns pain, more and more activity becomes connected with the pain response even when they are doing things that aren't harmful.

WHAT CAN MAKE THINGS BETTER

Encouraging your patients to increase their activity helps their brain rewire itself so that they can move more easily. Some pain or discomfort as they get moving again is normal. They may be a little sore, but they are safe. Over time, they will become more active and healthy and their pain will likely decrease.



WATCH THE CLINICIAN VIDEO



- Does activity helps with pain or makes pain worse?
- Increasing activity is essential to improve, but learn to pace yourself
- Steps and plans to get more active
- Testimonials from patients
- Setting some personal goals







REVIEW THE CLINICIAN HANDOUT





- How Exercise Reduces Chronic Pain
- Making Activity Recommendations for Your Patients
- Helping Your Patients Set Achievable Activity Goals







HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT





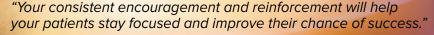


Be sure to have your patient watch the entire video!



ACTIVITY Clinician Handout

Kim Jones – PhD, FNP, Dean of Nursing, Linfield University Nora Stern – MS, PT, Director, Know About Pain





www.oregonpainguidance.org/paineducationtoolkitforclinicians/activity

Clinicians know that exercise/physical activity, like medication, is a cornerstone treatment for people with chronic or persistent pain and helps with mood, sleep, and social engagement, all of which can help ease pain and is a key aspect of pain care treatment. Yet most patients have experienced a pain flare-up after exercising too intensely. Most clinicians have heard "I've tried all types of exercise, but it always ends up with a flare-up. I just can't do it". When we are in pain, it is natural to avoid moving and to guard painful areas. In fact, bed rest was once considered standard treatment for chronic back pain.¹

Research has shown that when patients start moving and exercising on a regular basis, the severity of chronic pain is reduced, their overall physical and mental health improves, and their level of function increases². Of course, any program for a return to movement needs to be tailored to the individual's current level of health and fitness. And most importantly, we want to form a partnership with the patient, setting goals that are meaningful and motivating to them and achievable considering their health and level of fitness.^{3,4}

To form this partnership with our patients, we need to:

- Validate patients' concerns that movement may be painful. Help them understand that pain is not equivalent to harm and is not an indication of injury.
- Explain that some pain or discomfort is likely and normal as they begin moving again, but that over time, this pain will subside as they get back into action.
- Have the patient watch the video on Activity which explains the concept of pacing.
- Use the Activity patient handout to have a shared decision-making discussion to help patients set short term goals that are meaningful, motivating, and achievable given their current level of health and fitness.
- Include in the plan of care regular follow-up checkups (e.g. via telemedicine) to coach them in their journey, celebrating their successes along the way.

 Communicate the plan of care to the clinic team, so that behavioral health specialists, social workers, and physical and occupational therapists can re-enforce the value of activity and provide encouragement.

As you collaborate with your patient to set some short term, achievable goals, keep these points in mind:

- People who live with pain are often fear avoidant, believing that pain indicates that they are harming themselves. Helping your patient understand pain and reconceptualize safe movement is fundamental to working with complex pain.⁵
- Lower your expectations. Clinicians commonly coach
 patients to begin activities at a level of intensity that they
 are not able to tolerate. A helpful guideline is to cut any
 expectations that we or our patients have by at least 50%
 and start out at this lower level.
- Patients with centralized pain symptoms (e.g. fibromyalgia, etc.) may interpret muscle soreness as muscle pain. These patients may also have an enhanced awareness of bright lights, loud noise, and strong smells and should avoid these in their exercise environment.^{6,7}
- Be aware of fall risks. Research has demonstrated that otherwise healthy people with chronic pain in their 40s, have balance scores similar to people in their 80s. Patients can minimize the risk of falls if they avoid exercises that require cognitive multitasking such as memorizing a routine and exercises that require pivots or fast turns.⁷
- Consider referral to physical and occupational therapist.
 PTs/OTs have a variety of techniques and devices that help
 minimize pain during activities of daily living. They can
 adjust the exercise program over time to account for aging,
 injuries and other life changes that disrupt exercise.





ACTIVITY Clinician Handout



ACTIVITY RECOMMENDATIONS FOR YOUR PATIENTS

- Include all components of exercise and emphasize stretching, strengthening, aerobic conditioning and balance training. Note that physical function will improve before symptoms improve, so encourage patients to persist and to recognize that they are making progress.
- Start low, go slow is the general mantra for progressing exercise. Make recommendations that are individualized based on each person's fitness and abilities. Slow, consistent progression is the goal.
- Promote water-based activities for people with easy access to water. Water provides resistance that builds muscle. Buoyancy decreases load on lower extremities and may reduce nociception. However, hypermobile persons may find that weight training in water may move their joints outside the natural joint line, resulting in increased pain.
- Whole body movement is best but avoid high intensity workouts. Whole body, mindful movement exercises such as yoga, tai chi, qigong have been demonstrated to reduce pain and improve sleep more than traditional exercise8.
- Modify strengthening for pain or swelling in specific joints. Soft elastic bands have the advantage of providing resistance without requiring heavy lifting, a tight grip, or sustained contraction. This is especially helpful in rheumatoid arthritis and carpal tunnel syndrome.
- Try out different times of day for exercise. Some people
 with pain from autoimmune diseases have profound,
 prolonged morning stiffness. For those, exercising midday may be more achievable.
- Group based activities can be motivating and fun. Look for supervised, group-based exercise programs with other people of similar abilities. Seeing other people who have improved over time gives patients hope that they can improve as well. The social aspects of group exercise can be fun and may be helpful to those who suffer from depression or anxiety. (self mgt programs)

Your consistent encouragement and reinforcement will help them stay focused and improve their chance of success. Patients are more motivated when they feel that their healthcare team is monitoring their progress and providing regular encouragement. If they have difficulties or flare-ups, make adjustments rather than discontinuing the activities. And celebrate all gains, no matter how small.⁹

REFERENCES

- Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews https://pubmed.ncbi.nlm.nih.gov/28436583/
- 2. Exercise and Chronic Pain https://pubmed.ncbi.nlm.nih.gov/32342462/
- 3. Physical exercise as non-pharmacological treatment of chronic pain: Why and when https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4534717/
- Exercise interventions in fibromyalgia: clinical applications from the evidence https://pubmed.ncbi.nlm.nih.gov/19647149/
- Exercise for chronic musculoskeletal pain: A biopsychosocial approach https://onlinelibrary.wiley.com/doi/abs/10.1002/msc.1191
- Exercise, not to exercise, or how to exercise in patients with chronic pain? Applying science to practice https://journals.lww.com/clinicalpain/Abstract/2015/02000/ Exercise, or How to Exercise in.3.aspx
- Postural control deficits in people with fibromyalgia: a pilot study https://arthritis-research.biomedcentral.com/ articles/10.1186/ar3432
- 8. Carson JW, Carson KM, Jones KD, Mist SD, Bennett RM. Follow-up of yoga of awareness for fibromyalgia: results at 3 months and replication in the wait-list group https://pubmed.ncbi.nlm.nih.gov/22751025/
- 9. Facilitators and barriers to physical activity in people with chronic low back pain: A qualitative study https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5526504/



Push yourself to a flare-up then want to give up?

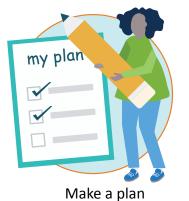
Find you are doing less and less?

Taking small steps can lead you back to the life you want:





Break down an activity into its parts





Think about whole body movement



Pace yourself



Try something new



Get prepared

Make a plan for flare-ups, they're normal! Your health care team is here to help.





And

remember:

Public Health Division

OregonPainGuidance.org



HOW PAIN AND ACTIVITY WORK TOGETHER:

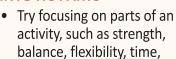
When you move less and less, your brain becomes accustomed to that decrease in activity. As the brain learns pain, more and more activity becomes connected with the pain response even when you are doing things that aren't harmful.

WHAT CAN MAKE THINGS BETTER:

Gradually increasing your activity helps your brain rewire itself so that you can move more easily. It's normal to have some pain or discomfort as you get moving again. You may be a little *sore*, but you are safe. Over time, you will become more active and healthy and your pain will likely improve.

It may seem overwhelming to start increasing your activity when you are hurting, but small steps get you closer to your goal!

BREAK DOWN AN ACTIVITY **INTO ITS PARTS**



 What are the parts of your activity?

and location.



- Simply swinging your arms when you are walking gets more of your body moving.
- Tai chi and yoga are exercises for your whole body.
- Any movement is better than none, so keep it simple and fun.

TRY SOMETHING NEW

 Try some new things, like going to a new park or a community event.



- Watch this video about pacing
- See how to gradually add activities safely.
- Small steps get you closer to your goal!
- This is a process so be patient with yourself.



MAKE A PLAN & GET PREPARED

- Planning ahead can help you change a habit.
- What clothing and shoes will you need?
- Do you need transportation?

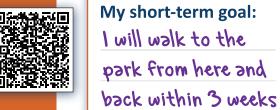


MAKE IT SOCIAL

 Doing things with other people or with your pet is a great way to get back in action.



This is a process so be patient with yourself.



Steps to reach my goal:

- · I will pick a route first in my neighborhood
- · I'll do my leg strengthening during commercials
- · I'll walk 5 min after breakfast and after lunch







HOW PAIN AND MOOD WORK TOGETHER

Pain and mood are closely linked. Pain can make your patient feel stressed, down, and worried. They may feel isolated or alone. These things can make pain worse. With some guidance and practice, you can help your patients make small changes that will gradually lift their mood and improve their pain over time.

HOW TO HELP WITH STRESS

Stress has a direct impact on our bodies. When we quiet our response to stress, we release the body's natural chemicals that calm the brain and body and decrease pain. When you slow your breathing and relax your muscles, you slow your heart rate and quiet the stress response, which quiets your pain.





WATCH THE CLINICIAN VIDEO



- Identifying Mood problems
- · Why Mood is import for pain management
- Ideas to improve Mood
- · Goal setting







REVIEW THE CLINICIAN HANDOUT



- How Mood Affects Chronic Pain
- Stress, Pain Catastrophizing, and Trauma
- The Impact of Fearfulness
- How Improving Your Patient's Mood can Help to Manage Pain
- Mindfulness for Chronic Pain Management
- Cognitive Behavioral Therapy and Acceptance and Commitment Therapy for Coping with Pain







HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT



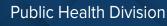




Be sure to have your patient watch the entire video!











MOOD Clinician Handout



Catriona Buist, Psy.D.

Pain Psychologist, Oregon Health and Science University

"One text, one call, one message, one person can change your mood in one second." – Narasimha



www.oregonpainguidance.org/paineducationtoolkitforclinicians/mood

MOOD

Chronic pain often leads to fear, anxiety, depression, and avoidance behaviors. People often stop engaging in the activities they associate with pain, giving up hobbies they enjoy. Pain management aims to increase patients' function and quality of life, by helping them to see they can improve and enjoy their lives without necessarily eliminating their pain.

STRESS, PAIN CATASTROPHIZING, AND TRAUMA

Chronic pain can be considered a form of chronic stress, activating the body's stress response.

Pain catastrophizing is the tendency to describe a pain experience in more exaggerated terms than the average person, to ruminate on it more, and/or to feel more helpless about the experience. Pain catastrophizing, PTSD or a history of trauma can also exacerbate pain.

PAIN AND FEAR

The body's natural response to pain is to guard and protect, which often leads to muscle guarding, and changing breathing patterns and movements to protect from pain. Fear of movement can make pain worse by leading to a more sedentary lifestyle and weight gain.

HOW TO IMPROVE MOOD TO MANAGE PAIN

Improving Mood can improve pain. Learning stress management techniques such as deep breathing and mindfulness, engaging in fun activities, and connecting with social supports can decrease depression and anxiety. Mood can also improve by learning how to reframe negative thoughts and through counseling.

MINDFULNESS FOR PAIN

Mindfulness meditation has been shown to improve pain, pain acceptance, depression, functional status, and quality of life.

Mindfulness meditation refocuses the mind on the present and increases awareness of one's external surroundings and inner sensations, allowing the individual to step back and reframe experiences. These changes are associated with increases in overall well-being and decreases in fear.

COGNITIVE BEHAVIORAL THERAPY (CBT) and ACCEPTANCE AND COMMITMENT THERAPY (ACT) are evidence-Based Therapies for Pain.

Cognitive Behavioral Therapy (CBT)

CBT is a present-focused, short-term psychotherapy approach that encourages patients to engage in an active coping process. The patient learns to change their maladaptive thoughts and behaviors that often maintain and even exacerbate the experience of chronic pain. The goals of CBT in pain management are to reduce the impact pain has on one's daily life and to learn skills for better coping with pain.

Acceptance and Commitment Therapy (ACT)

ACT is based on behavioral therapy and encourages acceptance, mindfulness, and values-guided action. Helping patients identify their values enables them to refocus their priorities away from pain and toward doing more of what they enjoy. ACT encourages patients to shift from reducing or eliminating pain to fully engaging in their lives.

REFERENCES

- Abdellah, C.G. & Geha, P. Chronic Pain and Chronic Stress: Two Sides of the Same Coin? Chronic Stress (Thousand Oaks). 2017 Jan-Dec:
- Hilton, L, Hempel, S., Ewing, B.A., Apaydin, E., Xanakis, L., Newberry, S., Colaiaco, B, Maher, A., Shanman, R.M., Sorbero, M.E., Maglione, M.A. Mindfulness Meditation for Chronic Pain: Systematic Review and Meta-analyssi. Ann. Behav. Med. 2017; 51(2): 199-213.
- Clark, M.R., & Dinoff, B. CBT and ACT Therapy for Chronic Pain: How Does Psychotherapy Help? Practical Pain Management.



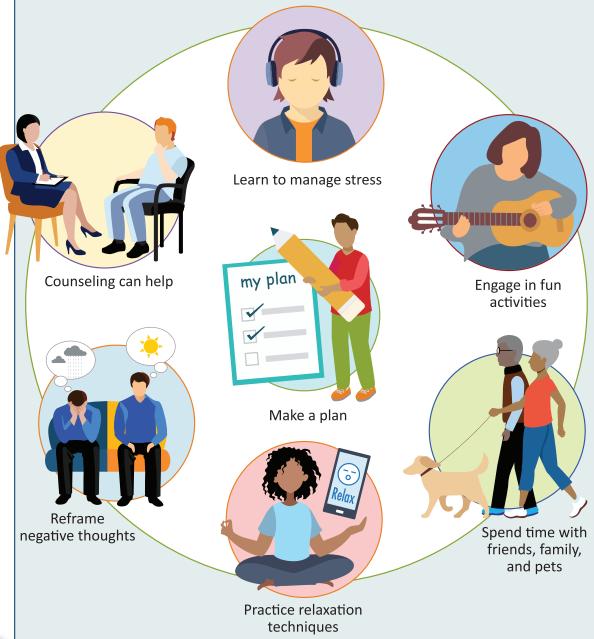


Feel anxious or worried?

Avoid doing things you enjoy?

Here are some tips for improving your mood









With small changes you can slowly lift your mood and quiet your pain.





HOW PAIN AND MOOD WORK TOGETHER:

Pain and mood are closely linked. Pain can make you feel stressed, down and worried. You may feel isolated or alone. These things can make pain worse. With some guidance and practice you can make small changes that will gradually lift your mood and improve your pain over time.

HOW TO HELP WITH STRESS:

Stress has a direct impact on our bodies. When we quiet our response to stress, we release the body's natural chemicals that calm the brain and body and decrease pain. When you slow your breathing and relax your muscles, you slow your heart rate and quiet the stress response, which quiets your pain.

Change how you respond to stress. Your mood and pain will improve with even small, positive changes.

> DO SOMETHING FUN

- Find meaningful activities that you enjoy or find new hobbies
- When you do things you enjoy, you begin to rewire your brain



- Connect with friends who are fun to be around
- Children and pets can be great stress relievers
- Remember to thank your family and friends for their support

> PRACTICE RELAXATION TECHNIQUES

- Mindfulness and meditation can calm the mind and the body
- Deep breathing calms your body's emergency response system
- Many great relaxation apps are available

CHANGE NEGATIVE THOUGHTS

- You can improve your mood by changing negative thoughts
- Focus on the positive points of your life
- Maintaining a positive attitude keeps pain from interfering with your happiness

> COUNSELING CAN HELP



- Often people with pain can feel sad, anxious, or fearful
- Talk therapy can help you manage your pain by changing your thoughts, emotions, and actions
- Two common types of therapy are Cognitive Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT)

Be patient with yourself. Each step, no matter how small, adds up.

My short-term goal:
Do some fun things,
practice relaxation
skills

Steps to reach my goal:

- · Call Beverly today (my best friend in high school)
- · Practice relaxing for 10 minutes each evening
- · Buy some yarn to start knitting again

www.oregonpainguidance.org







HOW PAIN IS IMPACTED BY OUR SOCIAL CONNECTIONS

When people live with pain, they can become isolated. Isolation can amplify pain in the brain. When people are not socially connected, they tend to do less and focus more on pain.

HOW SOCIAL CONNECTIONS CAN HELP

We can begin to rewire the brain and reduce pain by changing a few habits. Connecting with others helps us be more active, happier, and focused on what matters to us. You can help your patients decide what social activities make the most sense to them.





WATCH THE CLINICIAN VIDEO







REVIEW THE CLINICIAN HANDOUT





- What is Social Support
- The Impacts of Isolation and Negative Social Support on Health
- Health Benefits of Strong Social Connections
- Assessment and Treatment





HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT







Be sure to have your patient watch the entire video!











www.oregonpainguidance.org/paineducationtoolkitforclinicians/social

WHAT IS SOCIAL SUPPORT?

Connection to a strong social support network impacts health outcomes in many ways. Research has examined how positive and negative social support results in changes in both health behaviors and physical health indicators. A widely used definition of the concept of social support was proposed by Cobb in 1976, "Social support... information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligation". In short, the presence of positive social relationships increases the fundamental belief that one is cared for and safe. Additionally, social support is bi-directional in that it also involves giving to and caring for others, providing reinforcement of self worth, efficacy, and a connection with one's identity and values. Multiple studies have shown that social relationships—both quantity and quality—affect mental health, health behavior, physical health, and mortality risk. Social relationships have short- and long-term effects on health, for better and for worse. These effects emerge in childhood and cascade throughout life to foster cumulative advantage or disadvantage in health.²

HEALTH IMPACTS OF ISOLATION AND NEGATIVE SOCIAL SUPPORT

The absence of positive social support has demonstrated significant detrimental health outcomes in multiple health and behavior studies. A large-scale Swedish study examined the effects of the social environment at a population health level and demonstrated that poor social connectivity was associated with multiple poor health outcomes. Individuals with low levels of social support had more than three times increased odds of being depressed, three times increased odds of having many psychosomatic symptoms, and double the odds of having musculoskeletal pain.³

Other studies have demonstrated that poor quality and low quantity of social supports are associated with inflammatory biomarkers and impaired immune function, resulting in higher rates of chronic pain.⁴ Isolation is not the only problematic factor. The CDC-Kaiser study on ACES (Adverse Childhood Experiences) and multiple subsequent related studies indicate that when there is a history of severely negative social relationships, such as in situations of abuse and trauma, the likelihood of developing chronic pain and other poor health outcomes is greater.⁵ Research indicates that both history of trauma and current presence of violent or abusive relationships results in higher rates of chronic pain.⁶

HEALTH BENEFITS OF STRONG SOCIAL CONNECTIONS

The good news is that when people develop healthy social relationships they are able to regain and improve positive health outcomes, including better management of pain. Multiple studies demonstrate that people engaged in prosocial activities and relationships are more likely to have positive health behaviors, such as exercise, nutritional balance, and lower rates of substance use. These behaviors are crucial in the successful management of most chronic pain-related syndromes. In addition to behavior changes, physical indicators are improved in the presence of positive social support. For example, one study found that a supportive social network leads to reduced blood pressure, heart rate, and stress hormones.² Even when pain and underlying conditions are still present, the impact of pain is reduced in individuals who perceive a greater sense of inclusion from and engagement with others. This can provide a sense of relief in that patients can begin to feel better even when cure or fixation of underlying conditions is not expected.

SOCIAL Clinician Handout



ASSESSMENT AND TREATMENT

Medical examinations and interventions alone, in which the patient is a passive recipient, are unlikely to result in effective management of pain over the long term. The individual's social environment plays a critical role as it can provide the informal support and care over time, beyond healthcare institutions. As such, the assessment of social support should become a routine and fundamental part of patient-clinician interactions. Utilizing a biopsychosocial model as a patient assessment tool provides a powerful framework to understand how biological, psychological and social processes interact and affect pain significantly. Developing a thorough understanding of a patient's unique social situation—as well as trauma history—will provide crucial information in determining treatment options. As the evidence suggests, helping a patient set goals related to increasing social connections is likely to result in improved management of pain and can be considered a first line of treatment for chronic pain conditions.⁷

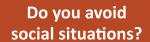
REFERENCES

- Social Relationships and Health: A Flashpoint for Health Policy https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC3150158/
- Social capital in relation to depression, musculoskeletal pain, and psychosomatic symptoms: a cross-sectional study of a large population-based cohort of Swedish adolescents (2010) https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC3091587/
- 4. The Impact of Social Isolation on Pain Interference: A Longitudinal Study https://pubmed.ncbi.nlm.nih.gov/29668841/
- Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults – The Adverse Childhood Experiences (ACE) Study https://www.ajpmonline.org/article/S0749-3797(98)00017-8/abstract
- Chronic pain: a review of its epidemiology and associated factors in population-based studies https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC6676152/#bib155
- Personal Network Analysis in the Study of Social Support: The Case of Chronic Pain https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC6313565/









Is your pain worse when you're alone?

Are you sometimes anxious or depressed?

When you are connecting with others, pain won't bother you as much



Socializing with others rewires your brain and this can change your pain

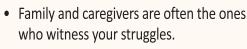
HOW PAIN IS IMPACTED BY OUR SOCIAL CONNECTIONS:

When people live with pain, they can become isolated. Isolation can amplify pain in the brain. When people are not socially connected they tend to do less and focus more on pain.

HOW SOCIAL CONNECTION CAN HELP:

We can begin to rewire the brain and reduce pain by changing a few habits. Connecting with others helps us be more active, happier, and focused on what matters to us. You can decide what activities make the most sense to you.

CONNECT WITH FAMILY AND CAREGIVERS



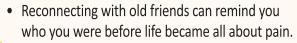
 Using new tools and sharing them with your family can help everyone feel more connected and hopeful.



> JOIN AN ONLINE GROUP

- You are not the only one dealing with pain – you can get support and learn about helpful things others have tried.
- Look for online groups that offer positive, action-oriented support without promising quick fixes.

CONNECT WITH FRIENDS

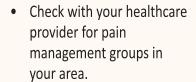


Sharing fun experiences with new people releases powerful brain chemicals that help us feel more confident and capable.

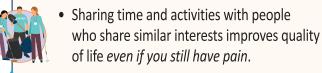


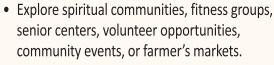
JOIN A PAIN MANAGEMENT **GROUP OR CLASS**

 Community groups offer skills, support, and social connection that can help change your experience of pain in powerful ways.



CONNECT WITH COMMUNITY GROUPS







Celebrate each social connection you make, no matter how small.



My short-term goal: I will spend one hour a week taking a painting class.

Steps to reach my goal:

- · Call Sue today and ask if she'll take the class too
- · Sign up for the Saturday art class
- · Buy paint and brushes







HOW TO MANAGE AND MINIMIZE PAIN FLARE-UPS

Pain flare-ups happen. You can help your patients learn to reduce the chance of a chronic pain flare-up and, if one happens, to minimize the pain. By planning ahead, your patients can better understand how to avoid pain flare-ups and to manage the pain when a flare-up happens.

HOW A PLAN CAN HELP WITH FLARE-UPS

With a flare-up plan, your patients can take control and have options ready to manage and minimize their pain. This plan will help them to learn about their triggers and includes suggestions for their own personal flare-up kit.





WATCH THE CLINICIAN VIDEO



- What can cause or trigger a flare-up?
- What to do when you are having a flare-up?
- How to avoid or minimize a flare-up?
- How to create a flare-up kit







REVIEW THE CLINICIAN HANDOUT





- What a Flare-up is
- How to Balance Self-Assessment with Quality of Life
- Signs and Symptoms of Flare-ups
- Coping Strategies
- Planning Ahead for Flare-ups with Your Patients
- Advising Patients About When to Go to the ER
- Flare-ups and Changes in Medications or Other Treatments





HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT





Be sure to have your patient watch the entire video!







FLARE-UPS Clinician Handout

Kim Jones – PhD, FNP, Dean of Nursing, Linfield University Michelle Marikos – Certified Peer Support Specialist

"Be gentle first with yourself if you wish to be gentle with others." – Lama Yeshe



www.oregonpainguidance.org/paineducationtoolkitforclinicians/flareups

FLARE-UP DEFINITION

A chronic pain flare-up is a sudden increase in pain or other symptoms that may occur in patients who already have chronic pain from low back pain, arthritis, fibromyalgia, or other conditions. A pain flare-ups usually lasts for a short time. Surprisingly, scientists have not agreed on a definition of a flare-up, so studying flare-ups is challenging.¹

BALANCING SELF ASSESSMENT WITH QUALITY OF LIFE

Flare-ups can be spontaneous and occur randomly with little or no warning. In fact, flare-ups are experienced by the majority of people with chronic pain. While researchers continue to unravel the mechanisms underlying a flare-up, there are things people can do now that may decrease the severity or length of a flare-up. For some, pain can be triggered by disrupted sleep, vigorous activity such as exercising and even routine movements like coughing. Flare-ups can also stem from emotional triggers like stress, and can show up abruptly when pain medication wears off. However, spending excessive time and energy trying to identify cause(s) of a flare-up should be balanced against spending time on outward facing activities, such as time with family, friends and activities that bring joy.²

SIGNS AND SYMPTOMS OF FLARE-UPS

Flare-ups often include symptoms beyond pain severity. For some people, these symptoms may include a decrease in overall well-being, more disrupted sleep, stiffness, joint swelling and other changes depending on the disease state underlying chronic pain such as osteoarthritis, rheumatoid arthritis, headaches, fibromyalgia, and low back pain. Frequency of flare-ups also differs between people. Patients who experience frequent flare-ups are more likely to have depression, somatization, and self-reported poor health and to be on higher doses of opioid medication. These factors lead to an increased number of provider visits, hospitalizations, and utilization of the healthcare system.³

COPING STRATEGIES FOR FLARE-UPS

A variety of coping strategies and cognitive behavioral techniques (CBT) may be helpful for the overall management of chronic pain, including flare-ups. Identifying helpful coping strategies will enable people experiencing pain to work together with family members and providers to assess their effectiveness. Over time, coping techniques become more effective and may require less energy to employ.⁴

Not all coping is created equally. Active coping strategies such as problem solving, explanatory style, relaxation, biofeedback, humor, exercise, support groups, professional help, training, and improving interpersonal skills may be better for some than passive coping strategies such as wishing, complaining, escaping, avoiding, or denying. A lack of knowledge or unsuccessful coping strategies may cause some to conclude hurt equals harm. Perhaps the most natural response to pain is to protect by limiting and restricting activity until the pain eases. Though too often the cycle of self-limiting and activity restriction leads to ongoing pain and greater functional limitation. Evidence from the pain literature suggests that, for selected patients from chronic pain clinics, psychosocial factors such as catastrophizing and fear-avoidance may be related to the presence of pain fluctuations.⁵

PLANNING AHEAD FOR FLARE-UPS WITH YOUR PATIENT

When you are treating patients with complex chronic pain, of course it's important to establish a healthy partnership with your patient. As part of this partnership, it's critical to have a plan to deal with flare-ups. When we are proactive with our patients, we can help them manage through a flare-up, rather than just reacting. Things to keep in mind:

- Explain to your patient that they can learn from each flareup if they collect some information and adjust their flare-up plan to manage better the next time.
- Develop a flare-up plan during a stable period.





FLARE-UPS Clinician Handout



- During flare-ups or crisis executive functioning can decrease, so use simple language and concrete, specific advice.
- Be cautious about making any changes in medications or other treatments during a flare-up.
- Document the flare-up plan in the chart to communicate this to the care team.

ADVISING PATIENTS ON WHEN TO GO TO THE EMERGENCY DEPARTMENT

When a person is in intense pain they may think that they have injured themselves or that something else is seriously wrong. They may wonder if they should go to the emergency department. Discuss with your patient when this is appropriate. Provide contacts and other resources to call prior to going to the emergency department.

Some options before going to the emergency department:

- Call the clinic, even if it is after hours, as many clinics have an after hours answering service
- · Call the 24 hour nurse advice line
- Some regions have urgent care clinics with expanded hours that take walk-in patients

The best approach though is to plan ahead. Encourage your patient to create a plan for pain flare-ups.

FLARE-UPS AND CHANGES IN MEDICATIONS OR OTHER TREATMENT

Flare-ups can be caused when a patient changes their medications. Here are some examples:

- · The patient abruptly stops their pain medication
- The patient tapers opioids too guickly
- The patient stops taking medications for anxiety or depression

Providers should discuss with their patients how important it is to take medications as prescribed at all times. This will help avoid flare-ups caused by medication changes.

REFERENCES

- What constitutes back pain flare? A cross sectional survey of individuals with low back pain https://pubmed.ncbi.nlm.nih.gov/28866119/
- Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research https://www.ncbi.nlm.nih.gov/books/NBK92525
- Defining Flare in Osteoarthritis of the Hip and Knee: A Systematic Literature Review https://pubmed.ncbi.nlm. nih.gov/28668808/
- Older peoples' strategies for coping with chronic nonmalignant pain: A qualitative meta-synthesis International Journal of Nursing Studies https://pubmed.ncbi.nlm.nih.gov/28073051/
- Pain-Related Fear, Disability, and the Fear-Avoidance Model of Chronic Pain https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC4383173/

A flare up is when your pain is suddenly more intense than usual. Flare-ups are common, but temporary and can be managed.

Here are some things you can do to minimize flare-ups



When you have a flare-up plan, you can take control and have options to manage your pain.





Public Health Division





Find mor www.ore



MANAGE STRESS



 If you feel stressed or anxious, practice deep breathing, gentle yoga or meditation.

TAKE MEDICATION AS PRESCRIBED

 Taking more or less medication can lead to a flare-up.
 Talk to your provider about medications you can take safely.



EAT WELL AND STAY HYDRATED

 Eat healthy foods and avoid foods that can cause inflammation. Drink plenty of water.



GET GOOD SLEEP

 Lack of sleep can make a pain flare-up worse. Getting enough sleep helps with pain and makes flare-ups less likely.



KEEP MOVING BUT PACE YOURSELF

 If you stay active, but pace yourself, you can minimize the chances of overdoing it.

Create a flare-up plan



FILL OUT YOUR FLARE-UP PLAN

You can manage flare-ups better if you can plan ahead. Fill out your plan on page 3 to help AVOID flare-ups and to MANAGE the pain when you have a flare-up. Write down things like:

- What activities can I do each day without overdoing it?
- How well am I taking care of myself (showering, dressing, brushing my teeth)?
- What positive things can I say to myself when I am not feeling well?

Take notes during a flare-up

S.S.

> MY FLARE-UP NOTES

Taking notes during a flare-up helps you learn more about your pain. The flare-up notes sheet on page 4 can help. Write down things like:

- What may have been the trigger?
- What can I do better next time?
- What else was stressful at the time?

Create a flare-up kit



BUILD YOUR OWN, PERSONAL FLARE-UP KIT

Include things you enjoy. Here are some examples:

- Books and magazines
- Lists of movies and music
- Photo books
- Cards from friends and family
- Greeting cards to write
- Heating pads and ice packs
- Art and crafts supplies
- Gift cards to movies or restaurants
- Treats or snacks
- Playing cards
- Phone apps for relaxation, mindfulness, and gentle stretching
- People you can call for support

www.oregonpainguidance.org



FLARE-UPS

Find more ways to help with your pain: www.oregonpainguidance.org/paineducationtoolkit

這≥	
7	
	I



MY FLARE-UP PLAN

Flare-ups happen! Write down what works for you before a flare-up happens. It will help you manage flare-ups in the future.

What are my	triggers and how can I avoid them?
What in my l	ife is causing stress and how can I manage it better?
How well am	I taking care of myself (showering, dressing, brushing my teeth)?
How can I im	prove my sleep?
How can I ea	t better and make sure I'm drinking enough water?
Which relaxa	ation techniques can I use (deep breathing, meditation)?
What positiv	re things can I say to myself when I am not feeling well?
What activiti	es can I do each day without overdoing it?
Who do I go	to for support from family and friends?
What other t	things can I do to feel better?





FLARE-UPS

3

Find more ways to help with your pain: www.oregonpainguidance.org/paineducationtoolkit

ij	\$
4	



Take notes to learn from each flare-up. **NOTES DURING A FLARE UP** Share these notes with your provider. **Pain INTENSITY** DAY. Rate from Interferes with my **ACTIVITIES** 0 - 10TIME Interferes with **ENJOYING LIFE** What triggered my flare-up? My flare-up pain descriptions (ex. sharp, burning, tingling, etc.) Location: __ Type of pain: __ Type of pain: ___ Location: Location: _____ Type of pain: _____ What was I doing shortly before my flare-up? What was my mood before the flare-up?

What else was causing me stress before the flare-up?

Did I over-do something? How can I avoid this in the future?

Was there a change in my medication or treatment?

How did I reward myself when the flare-up was over?

What helped with this flare-up and what can I do better next time?

What did I eat in the last 4 hours and did I drink enough water?

www.oregonpainguidance.org



HOW MEDICATIONS IMPACT PAIN

Managing chronic pain is an ongoing process and successful strategies will involve multiple different strategies. Medications may be one part of a care plan for chronic pain, but they should never be the only solution. While medications can be a helpful tool for managing pain, they can also carry significant risks. Discuss the risks and benefits of different types of medications with your patient to find out which medications may be right for them.

HOW UNDERSTANDING MEDICATIONS CAN HELP

Understanding the risks and benefits of medications your patients may be taking can help them to set realistic expectations for managing their pain.





WATCH THE CLINICIAN VIDEO



- Common pain medications
- · Opioid pain medications
- Medication safety







REVIEW THE CLINICIAN HANDOUT



Success in prescribing requires taking a consistent and systematic approach. Download the handout to learn about the steps you can take to reduce risk and maximize benefits for your patients.







HAVE THE PATIENT WATCH THE VIDEO AND FILL IN THE HANDOUT





Be sure to have your patient watch the entire video!

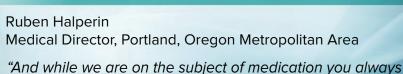




Public Health Division



MEDICATIONS Prescriber Handout





www.oregonpainguidance.org/paineducationtoolkitforclinicians/medications

need to look at risk versus benefit." - Temple Grandin

Success in prescribing requires taking a consistent and systematic approach. The following steps can help you reduce risks and maximize benefits for your patients.



1. INITIAL EVALUATION

History and physical with complete psychosocial history
Assess baseline function and pain levels
Review records, PDMP and UDS (even if you haven't decided whether to prescribe opioids)



2. CHOOSING MEDICATIONS

Consider the patient's type of pain and which classes of medications are appropriate. Consider the patient's medical history and individual risk profile – there are several risk assessment tools to assess risk of opioid abuse

Consider medications that treat comorbidities that affect the pain experience



3. SETTING PATIENT EXPECTATIONS

Establish treatment goals: Define Success!

- The goal is to improve patient function
- Complete elimination of pain as a goal is unrealistic and may lead patients to give up on effective treatments

Establish a timeline: It can take weeks for medications to demonstrate benefit

Describe possible side effects: minor and severe

<u>Create a medication agreement</u>: include parameters for monitoring progress and discontinuing treatment



4. STARTING MEDICATIONS

Start doses low and titrate slowly to minimize side effects



5. MONITORING

Maintain appropriate follow-up frequency
Titrate dose to maximize benefits
Review PDMP (state drug monitoring program)
Decide on UDS frequency



6. TAPERING AND DISCONTINUING MEDICATIONS

To learn when and how to taper safely and effectively, I recommend the BRAVO framework which is linked here

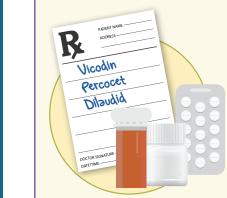
https://www.oregonpainguidance.org/guideline/tapering/

Managing chronic pain is a long term process Be patient

Different pain medications have different risks and benefits

Create a plan with your provider that is right for you

Medications can be a helpful tool for pain, in some situations







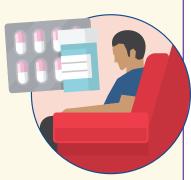
Opioid medications

medications

Anti-seizure medications







Muscle relaxants

Talk to your provider about your pain medication





Topical



Medications are never the only answer.





Public Health Division





Common Pain Medications: Use and Risks



TYLENOL (Acetaminophen)

- Relieves mild to moderate pain from headache, muscle aches, arthritis, backache, toothaches, colds and fevers.
- Risks: Excess use can cause liver damage.



ASPIRIN, ADVIL, MOTRIN, ALEVE (NSAIDs)

- Relieves mild to moderate pain and reduces inflammation.
- **Risks:** Taking these medications regularly can cause problems with your digestion and increase the risk of bleeding in your stomach.



TOPICAL

- For localized pain.
- **Risks:** Skin irritation.



ANTI-SEIZURE

- For nerve pain and headaches.
- **Risks:** Sleepiness, confusion, dizziness.



ANTI-DEPRESSANTS

- Some anti-depressants can help nerve pain and headaches. Treating depression and anxiety can improve pain.
- **Risks:** Sleepiness, dizziness, agitation, confusion, dry mouth, sexual dysfunction.



MUSCLE RELAXANTS

- For short term muscle aches.
- Risks: Sleepiness. Can contribute to an overdose if used with opioids.



CANNABIS (Marijuana)

- Used for many different kinds of pain, though evidence is limited.
- **Risks:** Dizziness, confusion, dry mouth, sleepiness, nausea and vomiting.
- Note: Illegal federally and in some states.

Talk to your provider about what pain medications are best for you.



Opioid Pain Medications: Use and Risks

OPIOIDS – WHAT ARE THEY?

Opioids are strong prescription pain medications used to treat moderate to severe pain, such as after a major injury or major surgery.

COMMON BRANDS

OxyContin, Vicodin, Codeine, and Percocet

> WHEN ARE OPIOIDS USEFUL?

- Relieves pain from major injuries, typically prescribed for 3 to 7 days
- Relieves pain after major surgeries
- For comfort at end of life

WHAT ARE THE RISKS?

- Less effective over time (tolerance)
- Dependence may occur
- Possible withdrawal symptoms
- Dizziness, sluggishness and confusion
- Constipation and nausea
- Reduced sexual drive and function
- Slowed breathing that can worsen sleep apnea
- May cause overdose or death if taken with other pills or alcohol

Use, Storage and Disposal



HOW TO USE OPIOID PAIN MEDICATION SAFELY

- Take only as prescribed.
- Avoid alcohol, sedatives, and muscle relaxants while taking opioids.
- If you become too sleepy or have breathing problems: Call 911 right away and do not take any more medications, including opioids.
- Your doctor may prescribe Naloxone (Narcan) a drug to reverse accidental overdose.



HOW TO STORE AND DISPOSE OF PAIN MEDICINES SAFELY

- Never let anyone else use your medicine.
- Always store your medicine in a safe place, away from children and pets.
- Don't leave potentially deadly drugs in your medicine cabinet where they can be easily stolen and sold or abused.
- Dispose of all your unused medicine properly.
 See this link for a list of take back locations in Oregon





Public Health Division



Medication Class	Drug Names	Brand Names	Common Uses	Common Side Effects
Over-the-Counter	Acetaminophen	Tylenol	For mild to moderate pain.	Tylenol: liver damage
	Ibuprofen	Advil, Motrin	Can buy without prescription.	Advil/Aleve: stomach ulcers,
	Naproxen	Aleve		kidney damage
Anti-Seizure	Gabapentin	Neurontin	For nerve pain and	Sleepiness, confusion, dizziness
	Pregabalin	Lyrica	headaches.	
Anti-Depressants	Amitriptyline	Elavil	For nerve pain and headaches.	Sleepiness, dizziness, agitation,
	Duloxetine	Cymbalta	Treating depression and	confusion, dry mouth, sexual
	Venlafaxine	Effexor	anxiety can improve pain.	aystunction
Creams, Gels, and Other	Lidocaine	Lidoderm	For localized pain.	Skin irritation
Topical Medications	Diclofenac	Voltaren		
Muscle Relaxants	Cyclobenzaprine	Flexeril	Used short term for	Sleepiness.
	Tizanadine	Zanaflex	muscle aches.	Can interact with opioids, sedatives
	Methcarbamol	Robaxin		and alcohol to depress breathing.
Cannabis	THC – can be	Too numerous to	Used for many different	Dizziness, confusion, dry mouth,
	Milina altering CBD – not mind	count, specinc to states.	kinds or pain, though research is limited.	Steepiness, nausea and vorniting NOTE: Illegal federally and legal in
	altering			some states
Opioids	Morphine	MS Contin, Kadian	For severe pain, most	Respiratory depression, sleep
	Hydrocodone	Norco, Vicodin	useful for short periods,	apnea, dizziness, confusion,
	Oxycodone	Percocet, Oxycontin,	like after surgery or acute	sluggishness, vomiting,
	Hydromorphone	Dilaudid	traumatic injury.	constibation, sexual dystunction,
	Fentanyl	Duragesic	Evidence is poor for long	dependence, addiction, death
	Methadone	Dolophine	term use.	
	Runranorphina	Choxodio		

NOTE: Medication list is not comprehensive. Consult with your provider before using any medications.



We hope these educational resources for patients and clinicians will help provide a common understanding of the challenges of long term chronic pain. Understanding neuroplasticity and the brain's role in the pain experience can provide our patients with hope for reduced pain and a better quality of life.

We Can Make a Difference

When we share decisions with our patients and encourage them to develop realistic plans we can help them achieve their goals. As we partner together, it's important to celebrate every success along the way. What we say does make a difference.

Good luck!

The Clinical Experts

The new videos, handouts, and educational module are a toolkit for patients to learn about and work on life style changes. We cover eight topics.



Catriona Buist, Psy.D Mood, Sleep



Ruben Halperin, MD Medications, Recognizing Complex Chronic Pain



Erika La Vella, D.O. Nutrition



Michelle Marikos, PSS Flare-ups



Miriam Parker, MSW, LCSW Social



Nora Stern, MS, PT Understanding Pain, Activity

Editors

Lisa Shields (<u>lisa.m.shields@state.or.us</u>) OHA Public Health Division Injury and Violence Prevention Section, Overdose Prevention Project Manager

Mark Stephens (mark.r.stephens@comcast.net) Change Management Consulting LLC Healthcare and Chronic Pain Consultancy

Use of these Materials

The patient education videos, handouts, and educational module are in the public domain and we encourage both patients and provider to use them. Please credit Oregon Health Authority and include a link to

www.OregonPainGuidance.org/pain-education-toolkit

Contact: Lisa Shields (lisa.m.shields@state.or.us)

Share these social media links with your patients











