



PICK UP QUICK TIPS ON...
Non-drug strategies as a first step to manage acute and chronic pain

Educate patients about their pain to promote peace of mind, increase feelings of control, set realistic expectations, and engage them in non-drug strategies to help reach treatment goals with fewer interventions.

QUICKtip_{SC}

Non-drug strategies can improve pain and reduce the need for medications, including opioids

QUICK FACTS TO CONSIDER

- Pain education may lead to increased physical activity and reduced pain and depression.
- **Greater catastrophic thinking** (see below) is associated with **greater pain intensity**.
- **Fear avoidance** (see below) has been found to be a more **powerful predictor of disability** than the pain itself.
- Studies consistently correlate depression with increased pain, decreased pain tolerance, and overall reduction in quality of life.

PAIN CONVERSATIONS

An important part of a pain conversation is **helping your patients set realistic goals based on daily functioning and pain severity**. It is also important to **listen for and address common psychosocial factors** (catastrophizing, fear avoidance, and depressed mood) that may negatively influence their ability to improve. Guidelines and guidances recommend multi-modal pain care. The **multi-modal treatment plan should include non-drug options that can stand alone or work in combination** with drugs, procedures, or surgery to help patients minimize pain and return to daily activities (look inside for details). Improved patient participation, commitment to self-care, and improved mood are additional benefits that often accompany many non-drug strategies.

1	Hardly notice pain
2	Notice pain, does not interfere with activities
3	Sometimes distracts me
4	Distracts me, can do usual activities
5	Interrupts some activities
6	Hard to ignore, avoids usual activities
7	Focus of attention, prevents doing daily activities
8	Awful, hard to do anything
9	Can't bear the pain, unable to do anything
10	As bad as it could be, nothing else matters

PSYCHOSOCIAL FACTOR	WHAT YOU MIGHT HEAR	CONSIDER
<p>Catastrophizing Rumination (obsession with pain or a focused mindset on pain)</p> <p>+</p> <p>magnification (turning pain into something greater than it is)</p> <p>+</p> <p>a sense of helplessness</p>	<p>"If the pain does not get better, I will end up in a wheelchair."</p> <p>"I keep thinking about how much it hurts."</p> <p>"I will never feel better."</p> <p>"I keep thinking about how badly I want the pain to stop."</p>	<p>"Your pain is real, and your emotions surrounding it are real."</p> <p>"Let's devise an individualized treatment plan to deal with it."</p> <p>Keep thoughts focused on attainable functional goals, rather than on symptoms, causes, and consequences.</p>
<p>Fear Avoidance When fear of pain and its consequences lead to unnecessary avoidance of daily activities and body hypervigilance</p>	<p>"I can't do physical activities because it might make my pain worse."</p> <p>"My pain puts me at risk for more injuries."</p>	<p>"Let's work together to gradually increase your activity in a safe way."</p> <p>Use positive body language, compassion, and sensitivity when discussing pain and activity.</p> <p>Screen for anxiety using a validated tool like the GAD-7.</p>
<p>Depressed Mood Feelings of sadness, despair, anxiety, emptiness, discouragement, and/or hopelessness</p>	<p>"I feel so down and hopeless."</p> <p>"I am having trouble falling asleep/staying asleep" or "I am sleeping all the time."</p>	<p>"Treating emotional pain is just as important as treating physical pain, let's explore ways to treat both."</p> <p>Screen for depression using validated tool like the PHQ-2 or PHQ-9.</p>

NON-DRUG STRATEGIES FOR SELECT ACUTE AND CHRONIC PAIN CONDITIONS

Non- drug strategies are often used in conjunction with each other as a multi-modal pain management strategy and

	SELECT NON-DRUG STRATEGIES	ACUTE PAIN			CHRONIC PAIN	PAYER COVERAGE ²	
		LOW BACK PAIN (LBP)	SPRAINS/ STRAINS ¹	POST-OP		MEDICAID	BCBS
B E H A V I O R A L	Aromatherapy	-	✓ ³	✓ ⁴	✓ ⁵	-	-
	Cognitive Behavioral Therapy (CBT)	-	✓ ³	✓ ^{6,7}	✓ ^{6,8}	-	✓
	Distraction Techniques	-	✓ ^{5,9}	✓ ^{5,9}	✓ ⁴	-	-
	Guided Imagery	-	✓ ⁴	✓ ⁴	✓ ⁵	-	-
	Meditation/ Mindfulness	-	-	-	✓ ⁴	-	-
	Mindfulness Based Stress Reduction (MBSR)	✓ ⁴	-	✓ ^{5,10}	✓ ^{6,8}	-	-
	Music Therapy	-	✓ ³	✓ ^{6,8}	✓ ⁶	-	-
	Sleep Hygiene	-	-	-	✓ ⁵	-	-
P H Y S I C A L	Acupuncture	✓ ^{6,8}	✓ ⁶	✓ ⁶	✓ ^{6,8}	✓	-
	Chiropractic	✓	-	-	✓	-	✓ ¹²
	Cold Packs	✓	✓	✓	✓	-	-
	Heat Packs	✓	X	-	✓	-	-
	Massage	✓ ^{4,8}	-	✓ ⁶	✓ ^{6,8}	-	-
	Occupational Therapy	-	-	✓	✓	✓	✓
	Physical Therapy	✓	✓	✓	✓ ⁸	✓	✓
	Spinal Manipulation	✓ ^{6,8}	-	-	✓ ^{6,8}	✓ ¹¹	✓ ¹²
	Tai Chi	✓ ⁵	-	-	✓ ^{6,8}	-	-
	Transcutaneous Electrical Nerve Stimulation (TENS)	✓ ⁵	-	✓ ^{6,8}	✓ ⁴	-	-
	Yoga	-	-	-	✓ ^{6,8}	✓	-

KEY: ✓ Utility or Covered; X Do not use; - Identified in ≤ 1 study and no guideline recommendations or Not Covered

Exercise is a fundamental non-drug strategy that comes in many forms – ranging from light exercise such as stretching and walking

are also a foundational part of any multi-modal approach that includes medication or other medical interventions

SELF-DIRECTED CARE	RESOURCES FOR SELF-DIRECTED CARE	COMMENTS
✓	https://www.hopkinsmedicine.org/health/wellness-and-prevention/aromatherapy-do-essential-oils-really-work	Through olfactory system or absorption through skin; Lavender is the most commonly studied essential oil associated with decreased pain
-		May reduce psychosocial distress in chronic pain patients; American College of Physicians (ACP) recommended for chronic low back pain
✓	https://www.aci.health.nsw.gov.au/chronic-pain/painbytes/pain-and-mind-body-connection/how-can-distraction-be-used-to-manage-pain	Common techniques include counting, deep breathing, bubbles, drawing/coloring, listening to music, crafts, virtual reality
✓	https://www.youtube.com/watch?v=clJwbSk5_B4	May reduce fear of reinjury; May reduce pre- and post-operative anxiety, pain, and medication use; May increase patient satisfaction; May reduce chronic pain medication use
✓	https://www.headspace.com/ https://mobile.va.gov/app/mindfulness-coach	
✓	https://palousemindfulness.com/index.html	Typically delivered as a structured 8-week program; ACP-recommended for chronic LBP
✓	https://www.theacpa.org/pain-management-tools/the-art-of-pain-management/music-to-help-you-relax/	May reduce post-operative anxiety and medication use; May increase patient satisfaction; Decreases psychosocial distress in a variety of chronic pain conditions
✓	https://msp.scdhhs.gov/tips/c/sites/default/files/healthy_sleep_habits_handout_06_press.pdf	A good night's rest should always be part of a patient's care plan, especially when dealing with pain, stress, and illness.
-		May decrease post-operative medication use; ACP-recommended for acute, subacute, and chronic LBP
-		Licensed professional that utilizes multiple non-drug strategies
✓	https://www.uofmhealth.org/health-library/hw47901	The use of ice and heat as a standard of care in pain management is largely based on anecdotal evidence with limited studies available
✓		
-		May improve patient satisfaction in acute LBP; May reduce post-operative anxiety; ACP-recommended for acute, subacute, and chronic LBP
-		Licensed professional that utilizes multiple non-drug strategies
-		Licensed professional that utilizes multiple non-drug strategies
-		ACP-recommended for acute, subacute, and chronic LBP
✓	https://www.youtube.com/watch?v=B0QDRqHNNE8	ACP-recommended for chronic LBP
✓	https://urldefense.com/v3/___https://myclevelandclinic.org/health/treatments/15840-transcutaneous-electrical-nerve-stimulation-tens_!!Ab1_Rw!TagFY0bmW6RCEg3y-fsciZVWzJ557_P-3X8A9S_TwQc4gdIqMMT9tk4WK0eivUo\$	May decrease post-operative medication use
✓	https://www.youtube.com/user/yogawithadriene	ACP-recommended for chronic LBP

1. Excludes neck and back. 2. May differ based on plan coverage. 3. No Studies identified to assign clinical benefit; supported by one or more guidelines. 4. Clinical benefit inconsistent. 5. Clinical benefit potentially favorable. 6. Clinical benefit favorable. 7. Peri-operative use may reduce risk of long term pain. 8. Supported by multiple guidelines/guidances. 9. Usefulness based on pediatric studies. 10. Pre-operative program may benefit patients with higher psychosocial distress. 11. Manual Therapy covered for a physical therapist. 12. Manual Therapy covered for a physical therapist or chiropractor.

that can be self-initiated to more structured, supervised interventions to safely rehabilitate injuries and retrain body movement.

LOW BACK PAIN (LBP)

Non-pharmacologic treatment remains the foundation of LBP management, and new technology has improved and expanded the number of available non-pharmacologic options. **A good history and physical is key to the proper diagnosis and individualized management of acute, chronic, and acute on chronic LBP. Patients also need realistic expectations based on what is discovered in the history and physical.**

It is important to avoid patient education and counseling that may increase the fear associated with LBP and hinder or prolong recovery. **Smart word choices and positive body language, from the beginning, can make a big difference in outcomes by empowering your patients to take an active role in their treatment plan and recovery.**

CHOOSE YOUR WORDS WISELY

INSTEAD OF:

“Your back is unstable”



“Back pain is a symptom that your back is simply not moving and working quite as it should”

“Your discs are degenerative”



“Your discs are showing normal age-related changes...This is not unusual”

“If it hurts, avoid it”



“Many times, pain does not mean that you are doing damage to your back”

“Rest to heal”



“The sooner you get active in the proper way, the sooner your back will feel better”

“Back pain is hard to treat”



“I’ve treated this before and let’s find what works best for you”

See A Physical Therapist Talks About Getting Your Healthy Back “Back”

available at <https://msp.scdhhs.gov/tipsc/site-page/lbphandout> for reasonable topics to cover with LBP patients and a general self-management plan for now and later

REFERENCE LIST

- Anheyer D, Haller H, Barth J, Lauche R, Dobos G, Cramer H. Mindfulness-based stress reduction for treating low back pain: a systematic review and meta-analysis. *Ann Intern Med*. 2017 Jun 6;166(11):799-807.
- Binnys J, Joshua Wong NL, Garga S, et al. Transcutaneous electric nerve stimulation (TENS) for acute low back pain: systematic review. *Scand J Pain*. 2019 Apr 24;19(2):225-33.
- Bleakley CM, Glasgow PD, Phillips N, et al. Management of acute soft tissue injury using protective rest ice compression and elevation: recommendations from the Association of Chartered Physiotherapists in Sports and Exercise Medicine (ACPSM) [Internet]. Sheffield (UK): Association of Chartered Physiotherapists in Sports and Exercise Medicine. 2010 Oct [cited 2021 Mar 2]. Available from: https://www.physiosinsport.org/media/wysiwyg/ACPSM_Physio_Price_A4.pdf
- Chou R, Gordon DB, de Leon-Casasola OA, et al. Management of postoperative pain: a clinical practice guideline from the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional Anesthesia, Executive Committee, and Administrative Council. *J Pain*. 2016 Feb;17(2):131-57.
- Davidson F, Snow S, Hayden JA, Chorney J. Psychological interventions in managing postoperative pain in children: a systematic review. *Pain*. 2016 Sep;157(9):1872-86.
- de Almeida CC, da Silva VZM, Júnior GC, Liebano RE, Durigan JLQ. Transcutaneous electrical nerve stimulation and interferential current demonstrate similar effects in relieving acute and chronic pain: a systematic review with meta-analysis. *Braz J Phys Ther*. 2018 Sep-Oct;22(5):347-54.
- Delitto A, George SZ, Van Dillen L, et al.; Orthopaedic Section of the American Physical Therapy Association. Low back pain. *J Orthop Sports Phys Ther*. 2012;42:A1-57.
- Dimitriou V, Mavridou P, Manatakaki A, Damigos D. The use of aromatherapy for postoperative pain management: a systematic review of randomized controlled trials. *J Periianesth Nurs*. 2017 Dec;32(6):550-61.
- Dowse M, Castle D, Knowles S, et al. The effect of mindfulness training prior to total joint arthroplasty on post-operative pain and physical function: A randomised controlled trial. *Complement Ther Med*. 2019 Oct;46:195-201.
- Furlan AD, Giraldo M, Baskwill A, Irvin E, Inamara M. Massage for low-back pain. *Cochrane Database Syst Rev*. 2015 Sep 1;(9):CD001929.
- Hamlin AS, Robertson TM. Pain and complementary therapies. *Crit Care Nurs Clin North Am*. 2017 Dec;29(4):449-60.
- Hawk C, Whalen W, Farabaugh RJ, et al. Best practices for chiropractic management of patients with chronic musculoskeletal pain: a clinical practice guideline. *J Altern Complement Med*. 2020 Oct;26(10):884-901.
- Herdman CM, Ray JB, Kominick CM. Pain Management. In: DiPiro JT, Yee GC, Posey L, Haines ST, Nolin TD, Ellingrod V, eds. *Pharmacotherapy: A Pathophysiologic Approach*, 11e. McGraw-Hill; Accessed March 03.
- Hilton L, Hempel S, Ewing BA, et al. Mindfulness meditation for chronic pain: systematic review and meta-analysis. *Ann Behav Med*. 2017 Apr;51(2):199-213.
- Hole J, Hirsch M, Ball E, Meads C. Music as an aid for postoperative recovery in adults: a systematic review and meta-analysis. *Lancet*. 2015 Oct 24;386(10004):1659-71.
- Hsu JR, Mir H, Wally MK, Seymour RB; Orthopaedic Trauma Association Musculoskeletal Pain Task Force. Clinical practice guidelines for pain management in acute musculoskeletal injury. *J Orthop Trauma*. 2019 May;33(5):e158-e182.
- Institute for Clinical and Economic Review (ICER) [Internet]. Boston (MA): Institute for Clinical and Economic Review. Cognitive and mind-body therapies for chronic low back and neck pain: effectiveness and value. 2017 Nov 6 [cited 2021 Mar 2]; 143 p. Available from: <https://icer-review.org/material/back-and-neck-pain-evidence-report/>.
- Jackson T, Wang Y, Wang Y, Fan H. Self-efficacy and chronic pain outcomes: a meta-analytic review. *J Pain*. 2014 Aug;15(8):800-14.
- Jank R, Gallee A, Boeckle M, Fiegl S, Pieh C. Chronic pain and sleep disorders in primary care. *Pain Res Treat*. 2017;2017:9081802.
- Kim TH, Lee MS, Kim KH, Kang JW, Choi TY, Ernst E. Acupuncture for treating acute ankle sprains in adults. *Cochrane Database Syst Rev*. 2014 Jun 23;(6):CD009065.
- Koller D, Goldman RD. Distraction techniques for children undergoing procedures: a critical review of pediatric research. *J Pediatr Nurs*. 2012 Dec;27(6):652-81.
- Lakhan SE, Sheaffer H, Tepper D. The effectiveness of aromatherapy in reducing pain: a systematic review and meta-analysis. *Pain Res Treat*. 2016;2016:8158693.
- Leeuw M, Goossens ME, Linton SJ, Crombez G, Boersma K, Vlaeyen JW. The fear-avoidance model of musculoskeletal pain: current state of scientific evidence. *J Behav Med*. 2007 Feb;30(1):77-94.
- Li J, Song Y. Transcutaneous electrical nerve stimulation for postoperative pain control after total knee arthroplasty: A meta-analysis of randomized controlled trials. *Medicine (Baltimore)*. 2017 Sep;96(37):e80836.
- Low back pain and sciatica in over 16s: assessment and management (NICE Guideline, No. 59) [Internet]. London: National Institute for Health and Care Excellence (UK); 2020 Sep 22 [cited 2021 Mar 2]. Available from: <https://www.nice.org.uk/guidance/ng59>
- Mirgain SA, Singles J. Self-management of chronic pain management [Internet]. Washington (DC): U.S. Department of Veterans Affairs. 2014 [updated 2016; cited 2020 Mar 2]. Available from: <https://www.va.gov/WHOLEHEALTHLIBRARY/overviews/self-management-chronic-pain.asp>
- Multhaupt G, Beuth J. The use of imagery in athletic injury rehabilitation. A systematic review. *Dtsch Z Sportmed*. 2018;69:57-64.
- Nicholas MK, Linton SJ, Watson PJ, Main CJ. “Decade of the Flags” Working Group. Early identification and management of psychological risk factors (“yellow flags”) in patients with low back pain: a reappraisal. *Phys Ther*. 2011 May;91(5):737-53.
- Nicholls JL, Azam MA, Burns LC, et al. Psychological treatments for the management of postural pain: a systematic review of randomized controlled trials. *Patient Relat Outcomes Meas*. 2018 Jan 19;9:49-64.
- North American Spine Society [Internet]. Burr Ridge, IL: North American Spine Society. Diagnosis and treatment of low back pain. 2020 [cited 2021 Mar 2]. Available from: <https://www.spine.org/Portals/0/assets/downloads/Research-ClinicalCare/Guidelines/LowBackPain.pdf>
- Paige NM, Mlake-Lye IM, Booth MS, et al. Association of spinal manipulative therapy with clinical benefit and harm for acute low back pain: systematic review and meta-analysis. *JAMA*. 2017 Apr 11;317(14):1451-60.
- Pharmaceutical Assistance Contract for the Elderly (PACE) Program of the Pennsylvania Department of Aging and by the Pennsylvania Department of Health [Internet]. Treating acute pain without overusing opioids. Boston (MA): Alosa Health; 2019 [cited 2021 Mar 2]. Available from: https://alosahealth.org/wp-content/uploads/2020/03/UnAd-Acute-Pain_11.19.pdf
- Posadzki P, Ernst E. Guided imagery for musculoskeletal pain: a systematic review. *Clin J Pain*. 2011 Sep;27(7):648-53.
- Qaseem A, Wilt TJ, McLean RM, Forciea MA; Clinical Guidelines Committee of the American College of Physicians. Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of Physicians. *Ann Intern Med*. 2017 Apr 4;166(7):514-530.
- Qin J, Zhang Y, Wu L, et al. Effect of Tai Chi alone or as additional therapy on low back pain: systematic review and meta-analysis of randomized controlled trials. *Medicine (Baltimore)*. 2019 Sep;98(37):e17099.
- Quartana PJ, Campbell CM, Edwards RR. Pain catastrophizing: a critical review. *Expert Rev Neurother*. 2009 May;9(5):745-58.
- Sheng J, Liu S, Wang Y, Cui R, Zhang X. The link between depression and chronic pain: neural mechanisms in the brain. *Neural Plast*. 2017;2017:9724371.
- Simpson PM, Fouché PF, Thomas RE, Bendall JC. Transcutaneous electrical nerve stimulation for relieving acute pain in the prehospital setting: a systematic review and meta-analysis of randomized-controlled trials. *Eur J Emerg Med*. 2014 Feb;21(1):10-7.
- Smith MT, Haythornthwaite JA. How do sleep disturbance and chronic pain inter-relate? Insights from the longitudinal and cognitive-behavioral clinical trials literature. *Sleep Med Rev*. 2004 Apr;8(2):119-32.
- Spatar SB. Standardizing the use of mental health screening instruments in patients with pain. *Fed Pract*. 2019 Oct;36(Suppl 6):S28-S30.
- Tick H, Nielsen A, Pelletier KR, Bonakdar R, Simmons S, Glick R, Ratner E, Lemmon RL, Wayne P, Zador V; Pain Task Force of the Academic Consortium for Integrative Medicine and Health. Evidence-based nonpharmacologic strategies for comprehensive pain care: The Consortium Pain Task Force White Paper. *Explore (NY)*. 2018 May-Jun;14(3):177-211.
- Tanabe P, Ferket K, Thomas R, Paice J, Marcantonio R. The effect of standard care, ibuprofen, and distraction on pain relief and patient satisfaction in children with musculoskeletal trauma. *J Emerg Nurs*. 2002 Apr;28(2):118-25.
- Thomas KM, Sethares KA. Is guided imagery effective in reducing pain and anxiety in the postoperative total joint arthroplasty patient? *Orthop Nurs*. 2010 Nov-Dec;29(6):393-9.
- Thompson C, Kelsberg G, St Anna L, Poddar S. Clinical inquiries. Heat or ice for acute ankle sprain? *J Fam Pract*. 2003 Aug;52(8):642-3.
- Traeger AC, Hübscher M, Henschke N, Moseley GL, Lee H, McAuley JH. Effect of primary care-based education on reassurance in patients with acute low back pain: systematic review and meta-analysis. *JAMA Intern Med*. 2015 May;175(5):733-43.
- Tusek D, Church JM, Fazio VV. Guided imagery as a coping strategy for perioperative patients. *AORN J*. 1997 Oct;66(4):644-9.
- U.S. Department of Veterans Affairs [Internet]. Washington (DC): U.S. Department of Veterans Affairs. Diagnosis and Treatment of Low Back Pain Work Group. VA/DoD clinical practice guideline: diagnosis and treatment of low back pain. Version 2.0. 2017 Sep [cited 2021 Mar 2]; 110 p. Available from: <https://www.healthquality.va.gov/guidelines/Pain/lbp/VADoDLBPCPG092917.pdf>
- Zhou J, Dan Y, Yixian Y, et al. Efficacy of transcutaneous electronic nerve stimulation in postoperative analgesia after pulmonary surgery: a systematic review and meta-analysis. *Am J Phys Med Rehabil*. 2020 Mar;99(3):241-9.

WRITING GROUP

Writing Group (and Disclosures for Pharmaceutical Relationships): Sarah Ball, PharmD (none), Kelly Barth, DO (none), Sandra Counts, PharmD (none), Nancy Hahn, PharmD (none), Lauren Linder, PharmD (none), Jenna McCauley, PhD (none), Joseph McElwee, MD (none), William Moran, MD (none), David Seagle, PT, OCS, (none), Megan Pruitt, PharmD (none), Sophie Robert, PharmD (none), Chris Wisniewski, PharmD (none).

Acknowledgements: The MUSC College of Pharmacy houses SCORxE as a research and service center advancing the strategic initiative Building Healthy Communities. Chloe Cooper provided assistance with graphic support and review. The MUSC Drug Information Center provided assistance with background research.

The information contained in this summary is intended to assist primary care providers in the management of non-cancer pain in adults in the primary care setting. This information is advisory only and is not intended to replace sound clinical judgement, nor should it be regarded as a substitute for individualized diagnosis and treatment. Not all guidance regarding the benefit of non-pharmacologic management of pain is based on controlled studies and may be based on anecdotal evidence or clinical experience. Special considerations may be needed when treating some populations with certain conditions (such as debility, elderly and pregnancy).