

FP Essentials
Call for Authors – May 2022

Chronic Pain Syndromes

We are seeking an author or author group to write an edition of *FP Essentials* that will update family physicians about chronic pain syndromes. This edition will cover four topics:

1. Fibromyalgia
2. Myofascial pain syndrome
3. Complex regional pain syndrome
4. Neuropathic pain

The main text of the manuscript should be approximately 10,000 words in length, divided into four sections of approximately 2,500 words each, plus an abstract of approximately 200 words for each section. In addition, there should be key practice recommendations, a maximum of 15 tables/figures total, suggested readings, and up to 200 references to provide support for all recommendations and factual statements in the manuscript.

This edition should focus on what is new in each topic and should answer the key questions listed for each section. Each section should begin with an illustrative case, similar to the examples provided, with modifications to emphasize key points; each case should have a conclusion that demonstrates resolution of the clinical situation. The references provided here include information that should be considered in preparation of this edition of *FP Essentials*. However, these should be used only as a starting point in identifying the most current guidelines and references to include in the edition.

Needs Assessment: Family physicians have a vital role in the evaluation and management of chronic pain. In a 2018 American Academy of Family Physicians (AAFP) Continuing Medical Education Needs Assessment Report, nearly 44% of responding AAFP members reported knowledge gaps in chronic pain disease management. Additionally, gaps in coordination of care for chronic pain management were reported by more than 30% of respondents. This edition of *FP Essentials* will discuss the evaluation and management of chronic pain syndromes in an attempt to address those gaps. Specifically, it will discuss the diagnostic criteria for fibromyalgia and complex regional pain syndrome, the systematic evaluation of patients who present with neuropathic pain, and diagnostic clues to aid in identification myofascial pain syndrome. This edition also will help the learner differentiate among pain syndromes with overlapping presentations. Finally, it will summarize evidence-based management with pharmacologic, procedural, interventional, physical, psychosocial, and integrative medicine therapies.

Section 1: Fibromyalgia

Example case: *AZ is a 40-year-old woman with arm and leg pain of several years' duration, associated chronic fatigue, and sleep difficulties. AZ has been evaluated by multiple physicians, but comes to you to ask if you agree with the current diagnosis of fibromyalgia. AZ also asks about treatments to manage pain and insomnia.*

Key questions to consider:

- What is the prevalence of fibromyalgia among people of different sexes and various ages?
- What are the classifications and diagnostic criteria?
- What is thought to be the pathophysiologic cause of fibromyalgia?
- What are the roles of socioeconomic and psychosocial factors in development of fibromyalgia?
- What are the risk factors?
- How often is fibromyalgia overlooked or overdiagnosed?
- What are the presenting symptoms? Which pain sites are common in patients with fibromyalgia?
- What are the similarities and differences between fibromyalgia and other chronic pain syndromes (eg, functional somatic syndromes, chronic fatigue syndrome)? Consider using a table to summarize the similarities and differences in manifestations and diagnosis.
- What are common coexisting or related conditions?
- Have any strategies been proven to prevent development of fibromyalgia in patients at increased risk?
- Which treatments are effective?
- What is the role of drugs in management?
- What is the role of exercise in management?
- Which adjunctive therapies (eg, cognitive behavioral therapy, physical therapy, osteopathic manipulative therapy, acupuncture, dry needling) are effective?
- Which alternative drugs and integrative medicine therapies are effective?
- What are other emerging therapies?
- Are opioids ever appropriate for fibromyalgia management? If so, when?
- Which therapies are used commonly but have no evidence of benefit?
- How should mood and sleep disorders be addressed?
- What are the indications for referral to subspecialist physicians? Which subspecialist physicians are appropriate? Which therapies can subspecialist physicians provide that family physicians cannot?

Initial references/resources to consider:

- Arnold LM, Bennett RM, Crofford LJ, et al. AAPT Diagnostic Criteria for Fibromyalgia. *J Pain*. 2019;20(6):611-628.

- Fitzcharles MA, Rampakakis E, Ste-Marie PA, Sampalis JS, Shir Y. The association of socioeconomic status and symptom severity in persons with fibromyalgia. *J Rheumatol*. 2014;41(7):1398-1404.
- Chakrabarty S, Zoorob R. Fibromyalgia. *Am Fam Physician*. 2007;76(2):247-254.
- Arnold LM, Clauw DJ, Dunegan LJ, Turk DC; FibroCollaborative. A framework for fibromyalgia management for primary care providers. *Mayo Clin Proc*. 2012;87(5):488-496.
- Kodner C. Common questions about the diagnosis and management of fibromyalgia. *Am Fam Physician*. 2015;91(7):472-478.
- Walitt B, Urrútia G, Nishishinya MB, Cantrell SE, Häuser W. Selective serotonin reuptake inhibitors for fibromyalgia syndrome. *Cochrane Database Syst Rev*. 2015;(6):CD011735.
- Welsch P, Üçeyler N, Klose P, Walitt B, Häuser W. Serotonin and noradrenaline reuptake inhibitors (SNRIs) for fibromyalgia. *Cochrane Database Syst Rev*. 2018;2(2):CD010292.
- Thorpe J, Shum B, Moore RA, Wiffen PJ, Gilron I. Combination pharmacotherapy for the treatment of fibromyalgia in adults. *Cochrane Database Syst Rev*. 2018;2(2):CD010585.
- Busch AJ, Barber KA, Overend TJ, Peloso PM, Schachter CL. Exercise for treating fibromyalgia syndrome. *Cochrane Database Syst Rev*. 2007;(4):CD003786.
- Bidonde J, Busch AJ, Schachter CL, et al. Mixed exercise training for adults with fibromyalgia. *Cochrane Database Syst Rev*. 2019;5(5):CD013340.
- Kim SY, Busch AJ, Overend TJ, et al. Flexibility exercise training for adults with fibromyalgia. *Cochrane Database Syst Rev*. 2019;9(9):CD013419.
- Chaves C, Bittencourt PCT, Pelegrini A. Ingestion of a THC-Rich Cannabis Oil in People with Fibromyalgia: A Randomized, Double-Blind, Placebo-Controlled Clinical Trial. *Pain Med*. 2020;21(10):2212-2218.
- Walitt B, Klose P, Fitzcharles MA, Phillips T, Häuser W. Cannabinoids for fibromyalgia. *Cochrane Database Syst Rev*. 2016;7(7):CD011694.
- Skelly AC, Chou R, Dettori JR, et al. *Noninvasive Nonpharmacological Treatment for Chronic Pain: A Systematic Review Update* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Apr. Report No.: 20-EHC009. <https://www.ncbi.nlm.nih.gov/books/NBK556229/>
- Welsch P, Bernardy K, Derry S, Moore RA, Häuser W. Mirtazapine for fibromyalgia in adults. *Cochrane Database Syst Rev*. 2018;8(8):CD012708.
- Castro Sánchez AM, García López H, Fernández Sánchez M, et al. Improvement in clinical outcomes after dry needling versus myofascial release on pain pressure thresholds, quality of life, fatigue, pain intensity, quality of sleep, anxiety, and depression in patients with fibromyalgia syndrome. *Disabil Rehabil*. 2019;41(19):2235-2246.

- Plazier M, Ost J, Stassijns G, De Ridder D, Vanneste S. C2 nerve field stimulation for the treatment of fibromyalgia: a prospective, double-blind, randomized, controlled cross-over study. *Brain Stimul.* 2015;8(4):751-757.
- McDonagh MS, Selph SS, Buckley DI, et al. *Nonopioid Pharmacologic Treatments for Chronic Pain* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Apr. Report No.: 20-EHC010.
<https://www.ncbi.nlm.nih.gov/books/NBK556277/>

Section 2: Myofascial Pain Syndrome

Example case: JR is a 35-year-old man with chronic, recurrent, deep aching pain of the right gluteal area, which at times is associated with a burning sensation. Deep palpation of the gluteus medius muscle causes pain that radiates to the ipsilateral hamstring. JR wants to know the cause of the pain and how it can be managed, as well as strategies that will allow him to resume moderate physical activity.

Key questions to consider:

- What is myofascial pain syndrome (MPS)?
- How common is MPS?
- What causes MPS? What are the risk factors?
- How is MPS diagnosed? Which features of the history and physical findings may indicate MPS? What are myofascial trigger points? What are the most common point locations for each body region?
- Why is the lack of diagnostic criteria problematic? What new ideas are being proposed to standardize diagnosis?
- What are the similarities and differences among MPS, fibromyalgia, and other pain syndromes? Consider using a table to illustrate these concepts.
- What are common coexisting or related conditions?
- Which treatments are effective for MPS management?
- What is the role of systemic drugs?
- What is the role of topical drugs?
- What are the roles of exercise and physical therapy?
- Which procedural interventions (eg, trigger point injection, dry needling, botulinum toxin injection) are effective?
- Which integrative medicine therapies are effective?
- Are opioids ever appropriate for MPS management? If so, when?
- What is the prognosis for patients with MPS?
- What are the indications for referral to subspecialist physicians (eg, subspecialists in sports medicine, physical medicine and rehabilitation, pain management, anesthesiology)? Which therapies can subspecialist physicians provide that family physicians cannot?

Initial references to consider:

- Skootsky SA, Jaeger B, Oye RK. Prevalence of myofascial pain in general internal medicine practice. *West J Med.* 1989;151(2):157-160.
- Phan V, Shah J, Tandon H, et al. Myofascial Pain Syndrome: A Narrative Review Identifying Inconsistencies in Nomenclature. *PM R.* 2020;12(9):916-925.
- Duarte FCK, West DWD, Linde LD, Hassan S, Kumbhare DA. Re-Examining Myofascial Pain Syndrome: Toward Biomarker Development and Mechanism-Based Diagnostic Criteria. *Curr Rheumatol Rep.* 2021;23(8):69.

- Couppé C, Torelli P, Fuglsang-Frederiksen A, Andersen KV, Jensen R. Myofascial trigger points are very prevalent in patients with chronic tension-type headache: a double-blinded controlled study. *Clin J Pain*. 2007;23(1):23-27.
- Money S. Pathophysiology of Trigger Points in Myofascial Pain Syndrome. *J Pain Palliat Care Pharmacother*. 2017;31(2):158-159.
- Barbero M, Schneebeli A, Koetsier E, Maino P. Myofascial pain syndrome and trigger points: evaluation and treatment in patients with musculoskeletal pain. *Curr Opin Support Palliat Care*. 2019;13(3):270-276.
- Galasso A, Urits I, An D, et al. A Comprehensive Review of the Treatment and Management of Myofascial Pain Syndrome. *Curr Pain Headache Rep*. 2020;24(8):43.
- Charles D, Hudgins T, MacNaughton J, Newman E, Tan J, Wigger M. A systematic review of manual therapy techniques, dry cupping and dry needling in the reduction of myofascial pain and myofascial trigger points. *J Bodyw Mov Ther*. 2019;23(3):539-546.
- Soares A, Andriolo RB, Atallah AN, da Silva EM. Botulinum toxin for myofascial pain syndromes in adults. *Cochrane Database Syst Rev*. 2014;(7):CD007533.
- Leite FM, Atallah AN, El Dib R, et al. Cyclobenzaprine for the treatment of myofascial pain in adults. *Cochrane Database Syst Rev*. 2009;(3):CD006830.
- McDonagh MS, Selph SS, Buckley DI, et al. *Nonopioid Pharmacologic Treatments for Chronic Pain* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Apr. Report No.: 20-EHC010.
<https://www.ncbi.nlm.nih.gov/books/NBK556277/>
- Skelly AC, Chou R, Dettori JR, et al. *Noninvasive Nonpharmacological Treatment for Chronic Pain: A Systematic Review Update* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Apr. Report No.: 20-EHC009.
<https://www.ncbi.nlm.nih.gov/books/NBK556229/>
- Chou R, Hartung D, Turner J, et al. *Opioid Treatments for Chronic Pain* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Apr. Report No.: 20-EHC011. <https://www.ncbi.nlm.nih.gov/books/NBK556253/>
- Chou R, Rongwei F, Dana T, et al. *Interventional Treatments for Acute and Chronic Pain: Systematic Review* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2021 Sep. Report No.: 21-EHC030.
<https://www.ncbi.nlm.nih.gov/books/NBK573963/>

Section 3: Complex Regional Pain Syndrome

Example case: *SM is a 54-year-old man who presents with severe left knee pain and stiffness that have persisted for several months after arthroscopy for degenerative meniscal tears. SM has completed 6 weeks of physical therapy without significant relief, and has been referred to you for pain management. SM says he has noticed changes in skin temperature and sensation around the left knee.*

Key questions to consider:

- What is complex regional pain syndrome (CRPS)? What causes it?
- What are the presenting symptoms of CRPS? What are the diagnostic criteria? How does CRPS differ from other related syndromes and conditions?
- What is the prevalence of CRPS among people of different sexes and various ages?
- What are the most common inciting events that lead to development of CRPS? When do symptoms typically manifest after the event? Are there any predisposing factors?
- What are the classification criteria for subtypes of CRPS?
- Which tests are available to assist in the evaluation and diagnosis of CRPS? Which tests can aid in ruling out syndromes and conditions with similar manifestations?
- Have any strategies been proven to prevent development of CRPS in patients at increased risk?
- What are the treatment goals and management options for CRPS? How effective are treatments?
- Are opioids ever appropriate for CRPS management? If so, when?
- What is the role of integrative medicine in CRPS management?
- What procedural and surgical interventions are available for management of refractory cases?
- What are the indications for referral to subspecialist physicians (eg, subspecialists in pain management, physical medicine and rehabilitation, anesthesiology)? Which therapies can subspecialist physicians provide that family physicians cannot?

Initial references/resources to consider:

- Mesaroli G, Hundert A, Birnie KA, Campbell F, Stinson J. Screening and diagnostic tools for complex regional pain syndrome: a systematic review. *Pain*. 2021;162(5):1295-1304.
- Shim H, Rose J, Halle S, Shekane P. Complex regional pain syndrome: a narrative review for the practising clinician. *Br J Anaesth*. 2019;123(2):e424-e433.
- Smart KM, Wand BM, O'Connell NE. Physiotherapy for pain and disability in adults with complex regional pain syndrome (CRPS) types I and II. *Cochrane Database Syst Rev*. 2016;2(2):CD010853.
- O'Connell NE, Wand BM, McAuley J, Marston L, Moseley GL. Interventions for treating pain and disability in adults with complex regional pain syndrome. *Cochrane Database Syst Rev*. 2013;(4):CD009416.

- Kwak SG, Choo YJ, Chang MC. Effectiveness of prednisolone in complex regional pain syndrome treatment: A systematic narrative review. [Online ahead of print.]. *Pain Pract.* 2021;10.1111/papr.13090.
- Lichtman DM, Bindra RR, Boyer MI, et al; American Academy of Orthopaedic Surgeons. American Academy of Orthopaedic Surgeons clinical practice guideline on: the treatment of distal radius fractures. *J Bone Joint Surg Am.* 2011;93(8):775-778.
- Harke H, Gretenkort P, Ladleif HU, Rahman S, Harke O. The response of neuropathic pain and pain in complex regional pain syndrome I to carbamazepine and sustained-release morphine in patients pretreated with spinal cord stimulation: a double-blinded randomized study. *Anesth Analg.* 2001;92(2):488-495.
- Żyluk A, Puchalski P. Effectiveness of complex regional pain syndrome treatment: A systematic review. *Neurol Neurochir Pol.* 2018;52(3):326-333.
- Cohen SP, Bhatia A, Buvanendran A, et al. Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Chronic Pain From the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists. *Reg Anesth Pain Med.* 2018;43(5):521-546.
- Chitneni A, Patil A, Dalal S, Ghorayeb JH, Pham YN, Grigoropoulos G. Use of Ketamine Infusions for Treatment of Complex Regional Pain Syndrome: A Systematic Review. *Cureus.* 2021;13(10):e18910.
- O'Connell NE, Wand BM, Gibson W, Carr DB, Birklein F, Stanton TR. Local anaesthetic sympathetic blockade for complex regional pain syndrome. *Cochrane Database Syst Rev.* 2016;7(7):CD004598.
- O'Connell NE, Ferraro MC, Gibson W, et al. Implanted spinal neuromodulation interventions for chronic pain in adults. *Cochrane Database Syst Rev.* 2021;12(12):CD013756.
- Giustra F, Bosco F, Aprato A, Artiaco S, Bistolfi A, Masse A. Vitamin C Could Prevent Complex Regional Pain Syndrome Type I in Trauma and Orthopedic Care? A Systematic Review of the Literature and Current Findings. *Sisli Etfal Hastan Tip Bul.* 2021;55(2):139-145.
- Aïm F, Klouche S, Frison A, Bauer T, Hardy P. Efficacy of vitamin C in preventing complex regional pain syndrome after wrist fracture: A systematic review and meta-analysis. *Orthop Traumatol Surg Res.* 2017;103(3):465-470.

Section 4: Neuropathic Pain

Example case: *QC is a 60-year-old woman with hypertension, dyslipidemia, and a history of a stroke 6 months ago. She presents with persistent left-sided neuropathic pain that interferes with sleep and rehabilitation therapy. QC asks if there are effective drugs or interventions to manage the pain.*

Key questions to consider:

- What is neuropathic pain? What are its common and uncommon causes? How does the definition of neuropathic pain differ from the definitions of the conditions discussed in the previous sections?
- What systems are used to classify chronic pain (eg, International Association for the Study of Pain [IASP] classification; Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks [ACTTION]-American Pain Society [APS] Pain Taxonomy [AAPT])? Consider using a table to summarize these systems.
- How should patients who present with neuropathic pain be evaluated? Develop an algorithm that uses the history, physical and neurologic examination findings, and laboratory and other test results to guide the evaluation and help determine the cause.
- For which conditions that cause neuropathic pain does management of those underlying conditions result in improvement in neuropathic pain?
- Do the management recommendations for the various conditions that involve neuropathic pain (eg, trigeminal neuralgia, diabetic neuropathy) differ?
- Which drugs are recommended for neuropathic pain management? How effective are they? What adverse effects and drug interactions may occur?
- Are opioids ever appropriate for neuropathic pain management? If so, when?
- How effective are procedural and surgical interventions? Which specific procedures have been proven to be most effective?
- How effective are physical therapies, counseling, and other psychosocial interventions?
- What is the role of integrative medicine in neuropathic pain management?
- What is the prognosis for patients with neuropathic pain?
- What are the indications for referral to subspecialist physicians (eg, subspecialists in pain management, physical medicine and rehabilitation)? Which therapies can subspecialist physicians provide that family physicians cannot?

Initial references to consider:

- Scholz J, Finnerup NB, Attal N, et al; Classification Committee of the Neuropathic Pain Special Interest Group (NeuPSIG). The IASP classification of chronic pain for ICD-11: chronic neuropathic pain. *Pain*. 2019;160(1):53-59.
- Freeman R, Edwards R, Baron R, et al. AAPT Diagnostic Criteria for Peripheral Neuropathic Pain: Focal and Segmental Disorders. *J Pain*. 2019;20(4):369-393.
- Haanpää M, Attal N, Backonja M, et al. NeuPSIG guidelines on neuropathic pain assessment. *Pain*. 2011;152(1):14-27.
- McDonagh MS, Selph SS, Buckley DI, et al. *Nonopioid Pharmacologic Treatments for Chronic Pain* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality

(US); 2020 Apr. Report No.: 20-EHC010.
<https://www.ncbi.nlm.nih.gov/books/NBK556277/>

- Chou R, Hartung D, Turner J, et al. *Opioid Treatments for Chronic Pain* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Apr. Report No.: 20-EHC011. <https://www.ncbi.nlm.nih.gov/books/NBK556253/>
- Chou R, Rongwei F, Dana T, et al. *Interventional Treatments for Acute and Chronic Pain: Systematic Review* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2021 Sep. Report No.: 21-EHC030. <https://www.ncbi.nlm.nih.gov/books/NBK573963/>
- McDonagh MS, Wagner J, Ahmed AY, et al. Living Systematic Review on Cannabis and Other Plant-Based Treatments for Chronic Pain – Quarterly Progress Report: May 2021. In: *Living Systematic Review on Cannabis and Other Plant-Based Treatments for Chronic Pain: Interim Progress Reports* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Dec. <https://www.ncbi.nlm.nih.gov/books/NBK571709/>
- Derry S, Rice AS, Cole P, Tan T, Moore RA. Topical capsaicin (high concentration) for chronic neuropathic pain in adults. *Cochrane Database Syst Rev*. 2017;1(1):CD007393.
- Wiffen PJ, Derry S, Bell RF, et al. Gabapentin for chronic neuropathic pain in adults. *Cochrane Database Syst Rev*. 2017;6(6):CD007938.
- Derry S, Bell RF, Straube S, Wiffen PJ, Aldington D, Moore RA. Pregabalin for neuropathic pain in adults. *Cochrane Database Syst Rev*. 2019;1(1):CD007076.
- Lunn MP, Hughes RA, Wiffen PJ. Duloxetine for treating painful neuropathy, chronic pain or fibromyalgia. *Cochrane Database Syst Rev*. 2014;(1):CD007115.
- O’Connell NE, Marston L, Spencer S, DeSouza LH, Wand BM. Non-invasive brain stimulation techniques for chronic pain. *Cochrane Database Syst Rev*. 2018;4(4):CD008208.
- Boyd A, Bleakley C, Hurley DA, et al. Herbal medicinal products or preparations for neuropathic pain. *Cochrane Database Syst Rev*. 2019;4(4):CD010528.
- Ju ZY, Wang K, Cui HS, et al. Acupuncture for neuropathic pain in adults. *Cochrane Database Syst Rev*. 2017;12(12):CD012057.