

# Assessing and Managing Chronic Non-Cancer Pain

CADTH

# Conflict of Interest Disclosure and Funding Support

This material is produced through a financial contribution by Health Canada's Substance Use and Addiction Program. The views expressed herein do not necessarily represent the views of Health Canada

## **Content Creation:**

CADTH; Clinical Expert Input provided by Dr. Richard Dumais

## **Disclosures**

- CADTH is an independent, not-for-profit organization funded by contributions from the Canadian federal, provincial, and territorial ministries of health, with the exception of Quebec.
- CADTH receives application fees from the pharmaceutical industry for:
  - CADTH Pharmaceutical Reviews: Common Drug Review, pan-Canadian Oncology Drug Review, Interim Plasma Protein Product Review
  - CADTH Scientific Advice

## **Commercial interests:**

None

# Collaborators

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- New Brunswick Department of Health
- New Brunswick Medical Society
- Choosing Wisely New Brunswick
- CADTH



# Learning Objectives

1. Describe the central features, classification of, and current issues related to chronic non-cancer pain (CNCP) in Canada
2. Recognize recommended approaches to the management of CNCP, including assessment (and recognition of the dominant pain mechanism) and treatment options
3. Identify and apply contemporary evidence-based guidance and tools for managing patients with CNCP
4. Discuss and implement strategies for managing complex patients with CNCP using a case-based approach

# Chronic Non-Cancer Pain (CNCP)

A refresher on CNCP and the  
current context in Canada



“CNCP includes any painful condition that persists for at least three months and is not associated with malignant disease”

# Chronic Pain in Canada

**7.63 Million Canadians**

## **Risk factors**

- Drug users
- Low SES
- Indigenous Peoples
- Ethnic minorities
- Women
- Individuals who have experienced trauma



Health Canada. Canadian Pain Task Force Report: September 2020. Published November 6, 2020.

# Impact of Chronic Pain



Health Canada. Canadian Pain Task Force Report: September 2020. Published November 6, 2020.



# Canadian Pain Task Force (CPTF)

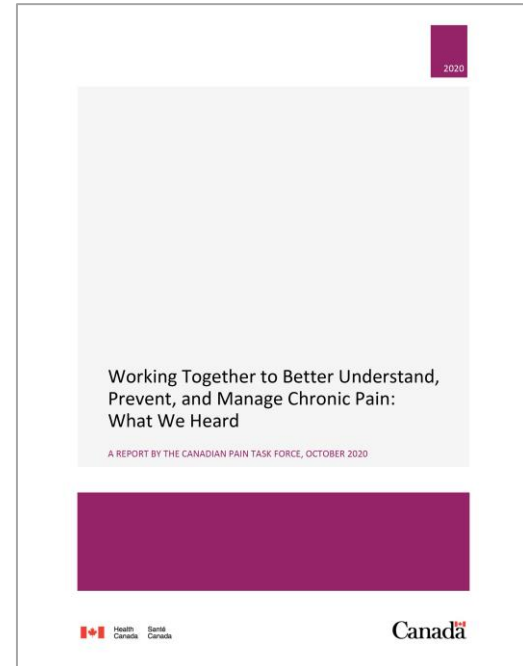
- Established by Health Canada (March 2019) to advise on evidence and best practices for preventing and managing chronic pain
- Mandated to:
  - assess how chronic pain is currently addressed in Canada
  - conduct national consultations and evidence reviews to identify best practices, areas for improvement, and elements of an improved approach to chronic pain
- Created to provide recommendations on priority actions to ensure recognition and support of people with pain, and that pain is understood, prevented, and effectively treated across Canada

[Health Canada. Canadian Pain Task Force. December 17, 2020.](#)

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# CPTF Key Findings 2020

- Issues regarding access to timely and patient-centred pain care
- Need for better awareness, education, and specialized training for pain; improved pain research and related infrastructure; and standardization in monitoring population health and health system quality related to chronic pain
- Looking ahead, care for Indigenous Peoples must acknowledge negative experiences (including bias and racism) and recognize traditional, trauma-informed, and violence-informed approaches

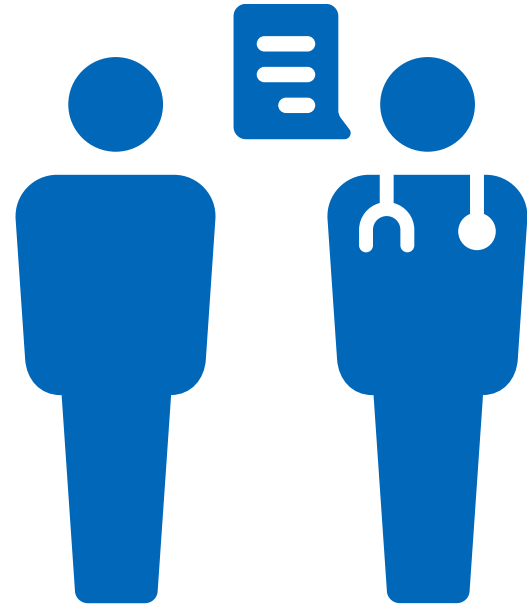


[Health Canada. Canadian Pain Task Force Report: September 2020.](#)

# Prioritizing Chronic Pain in Primary Care

In spring 2020, Chronic Pain was added as a priority to the *Assessment Objectives for Certification in Family Medicine* published by the College of Family Physicians of Canada, outlining essential skills and competencies expected at the end of training.

Chronic pain was also specifically highlighted as a priority topic for rural and remote family medicine



College of Family Physicians of Canada. *Assessment Objectives for Certification in Family Medicine*, Second Edition. 2020.

# Challenges Facing Individuals Living With Chronic Pain

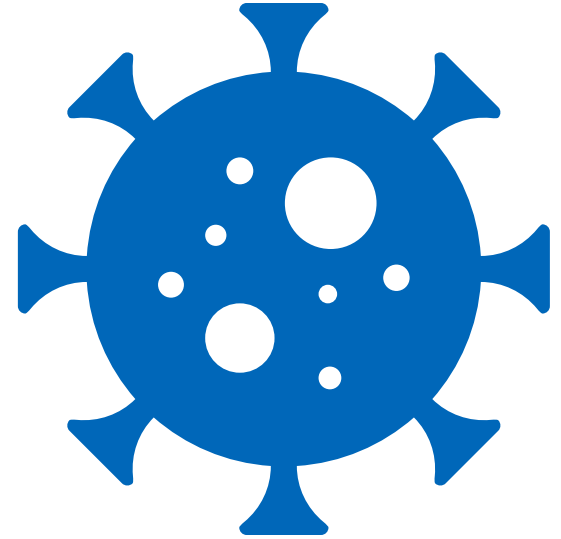
Both COVID-19 and record numbers of opioid-related deaths have had a great impact on the the lives of individuals living with chronic pain



Health Canada. Canadian Pain Task Force Report: September 2020. Published November 6, 2020.

# Chronic Pain and COVID-19

- Individuals with CNCP may be at increased risk for COVID-19 and mental health concerns
- CNCP (and treatments for CNCP) may increase immunosuppression and infection risk
- Mental health concerns exacerbated by the pandemic may impact quality of life, experience of pain, and safety
- Recent simulations by the Public Health Agency of Canada suggest potential increases in opioid-related harms and death related to the pandemic

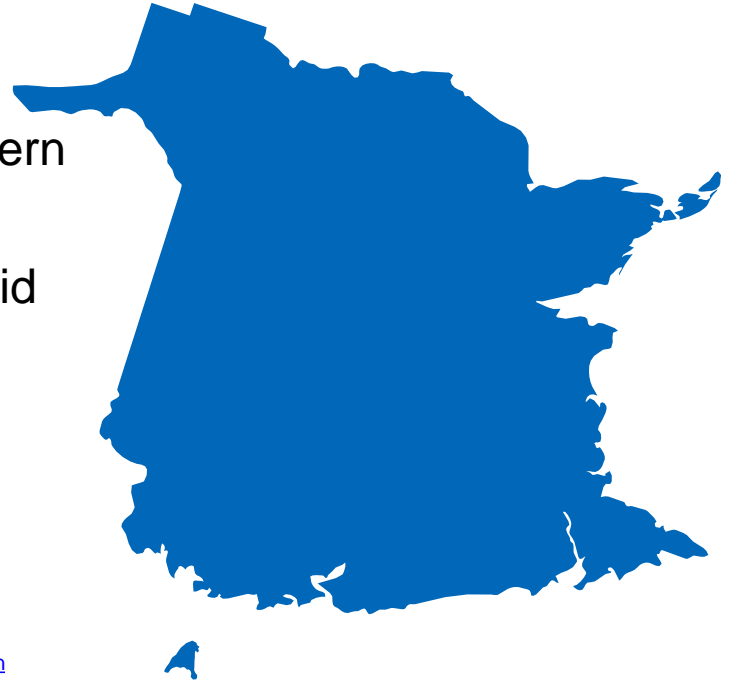


Government of Canada. Modelling opioid overdose deaths during the COVID-19 outbreak. Published November 26, 2020.

# New Brunswick

In 2020 (January to September):

- Opioid-related harms remain a pressing concern
- 94 EMS responses to suspected overdoses
- 317 naloxone administrations to suspect opioid overdose patients (125 responded)
- 76 hospitalizations
- 21 deaths



[Special Advisory Committee on the Epidemic of Opioid Overdoses. Opioids and stimulant-related Harms in Canada. Ottawa: Public Health Agency of Canada; March 2021.](#)

[Surveillance of apparent opioid overdoses, 2020 Q3&4. Public Health New Brunswick. May 2021.](#)

# In the News...

## **As Canada's overdose deaths soar, the safe-supply debate enters a new and urgent phase**

Fentanyl-related deaths have hit new heights in the pandemic, putting pressure on programs to protect vulnerable people from toxic street drugs – and renewing questions about why not all provinces have them

*The Globe and Mail, February 18, 2021*

British Columbia

## **2020 was B.C.'s deadliest year ever for drug overdoses, coroner says**

1,716 people died due to illicit drug use last year, equating to 4.7 deaths a day — a 74% increase over 2019

*CBC News, January 30, 2021*

Toronto

## **Paramedics attend a record 40 suspected opioid overdose calls, 3 deaths in 24 hours**

Toronto saw record number of overdose deaths in December 2020 alone, public health unit says

*CBC News, February 11, 2021*

HEALTH | News

## **Pandemic aggravates opioid crisis as overdoses rise and services fall out of reach**

Christopher Reynolds  
The Canadian Press Staff  
Contact

Published Sunday, November 15, 2020 7:07AM EST

*CTV News, November 15, 2020*

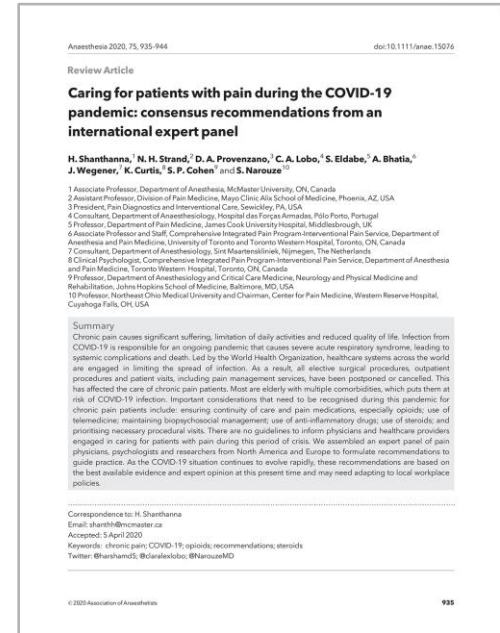
# Increase in Opioid-Related Harms - Why?

- Changes in illegal drug supply
- Reduced access to services and supports (particularly in-person)
- Increased use of substances to cope with stress

## How to support chronic pain patients during the pandemic?

Push to minimize in-person visits, leverage virtual care and online supports, emphasize harm reduction

[Health Canada. Modelling opioid overdose deaths during the COVID-19 outbreak. November 26, 2020.](#)





# New Brunswick Prescription Monitoring

## Local Tools

- Electronic access to full medication summary including monitored drug prescriptions (e.g., opioids, benzodiazepines, stimulants)
- Enables early identification of New Brunswickers at risk of monitored drug-related harm and promotes optimal prescribing and use of monitored drugs for those who need them
- Key data on monitored drugs — can alert to issues (e.g., double-doctoring, high doses, risky drug combinations)



# Classification of CNCP

Classifying the dominant pain  
mechanism to provide tailored  
multidisciplinary care



# Classifying Pain

- Not all pain is the same
- There are many approaches to classifying pain
- Identifying the dominant pain mechanism is important during assessment to support decision-making about optimal tailored management of CNCP
- Lack of consensus about how to classify and discriminate between pain mechanisms
- Overlap between categories of pain (multiple mechanisms may be present to varying degrees)
- Diversity of terminology

Shraim MA et al. Methods to discriminate between mechanism-based categories of pain experienced in the musculoskeletal system: a systematic review. *Pain*. 2021;162(4):1007-1037.  
Shraim MA et al. Systematic Review and Synthesis of Mechanism-based Classification Systems for Pain Experienced in the Musculoskeletal System. *Clin J Pain*. 2020;36(10):793-812

# Mechanism-Based Classification

- There are numerous tools used in the classification of pain (e.g., clinical examination, quantitative testing, imaging, diagnostic and laboratory testing, and questionnaires)
- International Association for the Study of Pain (IASP) ICD-11 pain mechanism categories (nociceptive, neuropathic, nociplastic)
- Three multicomponent systems (i.e., Smart, Schafer, and Kolski) for discriminating pain mechanisms and identifying the dominant mechanism
- Three category-specific systems (e.g., Berlin for inflammatory pain, RAPIDH for radicular pain, neuropathic pain special interest group [NeuPSIG] for neuropathic pain)

Shraim MA et al. Methods to discriminate between mechanism-based categories of pain experienced in the musculoskeletal system: a systematic review. *Pain*. 2021;162(4):1007-1037.  
Shraim MA et al. Systematic Review and Synthesis of Mechanism-based Classification Systems for Pain Experienced in the Musculoskeletal System. *Clin J Pain*. 2020;36(10):793-812.

# Purpose of Classification

Pain Mechanism



# Pain Mechanism Classification System (PMCS)

Smart et al. multicomponent system

**Nociceptive**

**(Peripheral)  
Neuropathic**

**Nociplastic  
(Central Sensitization)**

Smart KM, Blake C, Staines A, Doody C. The Discriminative validity of “nociceptive,” “peripheral neuropathic,” and “central sensitization” as mechanisms-based classifications of musculoskeletal pain. Clin J Pain. 2011;27(8):655-663. doi:10.1097/AJP.0b013e318215f16a

# Nociceptive

Pain associated with tissue injury or damage and related inflammation.  
Affects joints, ligaments, muscles

**Associated Conditions:** Osteoarthritis, tendinopathies, repetitive strain injuries, fractures, sprains, rheumatoid arthritis, ankylosing spondylitis



# Nociceptive



## Symptoms and Signs

- Pain localized to the area of injury or dysfunction (somatic referral)
- Intermittent and sharp pain with movement or mechanical provocation
- Constant dull ache or throbbing at rest
- Associated with dysesthesias (e.g., crawling sensation)
- Clear, proportionate relationship with aggravating/easing factors

*Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: part 3 of 3: symptoms and signs of nociceptive pain in patients with low back (± leg) pain. Man Ther. 2012;17(4):352-357. doi:10.1016/j.math.2012.03.002*



# Nociceptive



## Symptoms and Signs

Absence of:

- Night pain / disturbed sleep
- Antalgic (i.e., pain relieving) postures / movement patterns
- Pain described as burning, shooting, sharp or “electric shock like”

*Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: part 3 of 3: symptoms and signs of nociceptive pain in patients with low back (± leg) pain. Man Ther. 2012;17(4):352-357. doi:10.1016/j.math.2012.03.002*

# (Peripheral) Neuropathic

Nerve generated pain distal to the dorsal root ganglion. Associated with injury or disease of nerve tissue

**Associated conditions:** Fibromyalgia, trigeminal neuralgia, diabetic neuropathy



# (Peripheral) Neuropathic



## Symptoms and Signs

- Pain referred in a dermatomal or cutaneous distribution
- History of nerve injury, pathology, or mechanical compromise
- Pain/symptom provocation with mechanical/movement tests (e.g., active/passive, neurodynamic) that move/load/compress neural tissue

Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: part 2 of 3: symptoms and signs of peripheral neuropathic pain in patients with low back ( $\pm$  leg) pain. *Man Ther.* 2012;17(4):345-351. doi:10.1016/j.math.2012.03.003

# DN4 Questionnaire

- Screening tool that assesses sensory descriptors and signs associated with neuropathic pain
- Scores  $\geq 4$  suggest likely neuropathic pain

Bouhassira, Didier, et al. "Comparison of pain syndromes associated with nervous or somatic lesions and development of a new neuropathic pain diagnostic questionnaire (DN4)." *pain* 114.1-2 (2005): 29-36.

## DN4 – QUESTIONNAIRE

To estimate the probability of neuropathic pain, please answer yes or no for each item of the following four questions.

### INTERVIEW OF THE PATIENT

**QUESTION 1:**  
Does the pain have one or more of the following characteristics?      YES      NO

Burning .....	<input type="checkbox"/>	<input type="checkbox"/>
Painful cold .....	<input type="checkbox"/>	<input type="checkbox"/>
Electric shocks .....	<input type="checkbox"/>	<input type="checkbox"/>

**QUESTION 2:**  
Is the pain associated with one or more of the following symptoms in the same area?      YES      NO

Tingling .....	<input type="checkbox"/>	<input type="checkbox"/>
Pins and needles .....	<input type="checkbox"/>	<input type="checkbox"/>
Numbness .....	<input type="checkbox"/>	<input type="checkbox"/>
Itching .....	<input type="checkbox"/>	<input type="checkbox"/>

### EXAMINATION OF THE PATIENT

**QUESTION 3:**  
Is the pain located in an area where the physical examination may reveal one or more of the following characteristics?      YES      NO

Hypoesthesia to touch .....	<input type="checkbox"/>	<input type="checkbox"/>
Hypoesthesia to pinprick .....	<input type="checkbox"/>	<input type="checkbox"/>

**QUESTION 4:**  
In the painful area, can the pain be caused or increased by:      YES      NO

Brushing? .....	<input type="checkbox"/>	<input type="checkbox"/>
-----------------	--------------------------	--------------------------

YES = 1 point  
NO = 0 points

Patient's Score:      /10

# Nociplastic (Central Sensitization)

Pain due to altered nociception despite no clear evidence of tissue damage

**Associated Conditions:** Low back pain, whiplash, migraine, restless leg syndrome, fibromyalgia



# Nociplastic (Central Sensitization)



## Symptoms and Signs

- Diffuse/non-anatomic areas of pain/tenderness on palpation
- Disproportionate pattern of pain provocation in response to multiple/nonspecific aggravating/easing factors
- Pain disproportionate to the nature and extent of injury/pathology
- Strong association with maladaptive psychosocial factors (e.g., negative emotions, poor self-efficacy, maladaptive beliefs, and pain behaviours, altered family/work/social life, and medical conflict)

Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: part 1 of 3: symptoms and signs of central sensitisation in patients with low back ( $\pm$  leg) pain. *Man Ther.* 2012;17(4):336-344. doi:10.1016/j.math.2012.03.013

# Quiz



# Quiz

**Q:** What are some population groups that are at increased risk of CNCP in Canada?



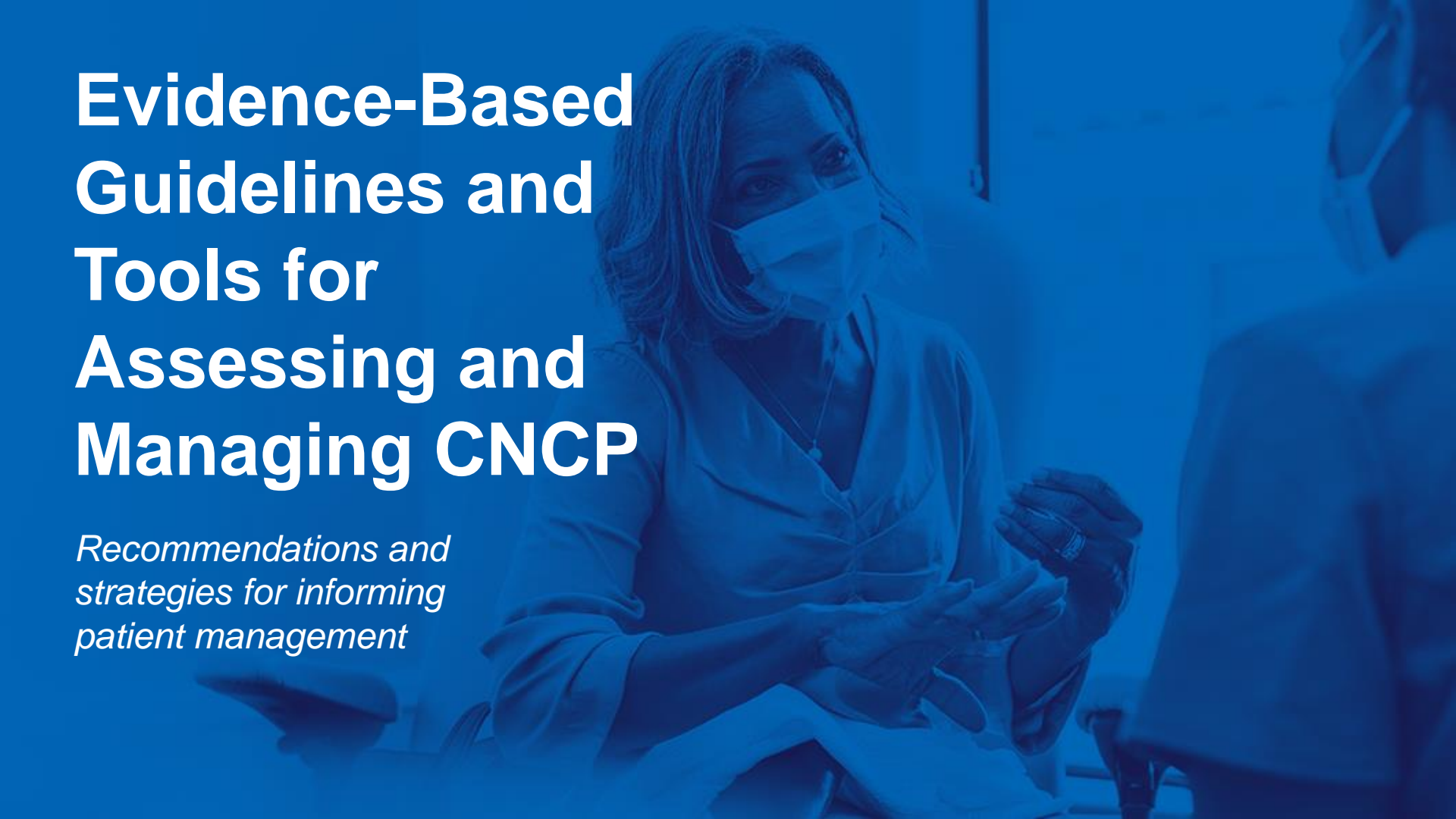


# Quiz

**A:** Some of the population groups that are at increased risk of CNCP in Canada are:

- Drug users
- Low SES
- Indigenous Peoples
- Ethnic minorities
- Women
- Individuals who have experienced trauma



A woman in a white lab coat and face mask is looking down at her hands, which are clasped together. She is in a clinical setting, and another person wearing a face mask is partially visible in the background. The entire image has a blue tint.

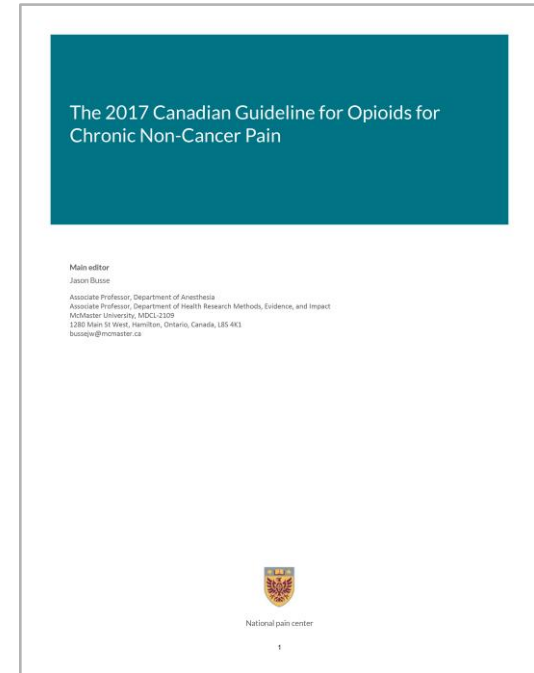
# Evidence-Based Guidelines and Tools for Assessing and Managing CNCP

*Recommendations and  
strategies for informing  
patient management*

# 2017 Canadian CNCP Guidelines

- The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain
- Intended as a basis for decisions around using opioids and managing CNCP
- Recommendations not intended as absolute and should not replace clinical judgment

Busse, Jason, et al. "The 2017 Canadian guideline for opioids for chronic non-cancer pain." Hamilton, ON (2017).



# Key Recommendations

- Optimization of nonopioid pharmacotherapy and non-pharmacologic therapy<sup>a</sup>
- Opioid trial only after optimization of nonopioid and non-drug measures<sup>b</sup>
- Avoidance of opioid therapy in those with a history of or active substance use disorder<sup>a</sup>, or active mental illness<sup>b</sup>
- When initiating opioids — restrict dose to less than 90 mg morphine equivalents daily (MED)<sup>a</sup> and less than 50 mg MED maximum prescribed dose<sup>b</sup>
- Gradual dose taper<sup>b</sup> and multidisciplinary support<sup>a</sup> for those receiving high-dose opioid therapy

<sup>a</sup> Strong Recommendation

<sup>b</sup> Weak Recommendation

Busse, Jason W., et al. "Guideline for opioid therapy and chronic noncancer pain." Cmaj 189.18 (2017): E659-E666.

# Tools to Support Implementation

## Centre for Effective Practice (CEP)

The screenshot shows the CEP website interface for the 'Chronic Non-Cancer Pain' tool. The header includes the CEP logo, navigation links for COVID-19, Clinical Tools, Academic Detailing, Participate, Insights, and About, and a 'Propose a New Tool' button. The main content area features the title 'Chronic Non-Cancer Pain' with a 'Current' status and '22899 Downloads'. It includes an 'Introduction' section with a link to a report, an 'Academic detailing' section with a sign-up link, and a 'Table of contents' with links for Media, EMR, About the Tool, LHM-specific resources, Additional resources, and You might also be interested in. A right-hand sidebar titled 'TOOLS' lists 'Access' options: 'Chronic Non-Cancer Pain Tool', 'Chronic Non-Cancer Pain in the COVID-19 Context', 'Chronic Non-Cancer Pain Tool: Appendix', 'Academic detailing on this topic', and 'EMR form'. At the bottom, there are 'Stay connected or get support' buttons for 'Follow' and 'Give feedback'.

Chronic Non-Cancer Pain (Clinical Products). Centre for Effective Practice. 2018.

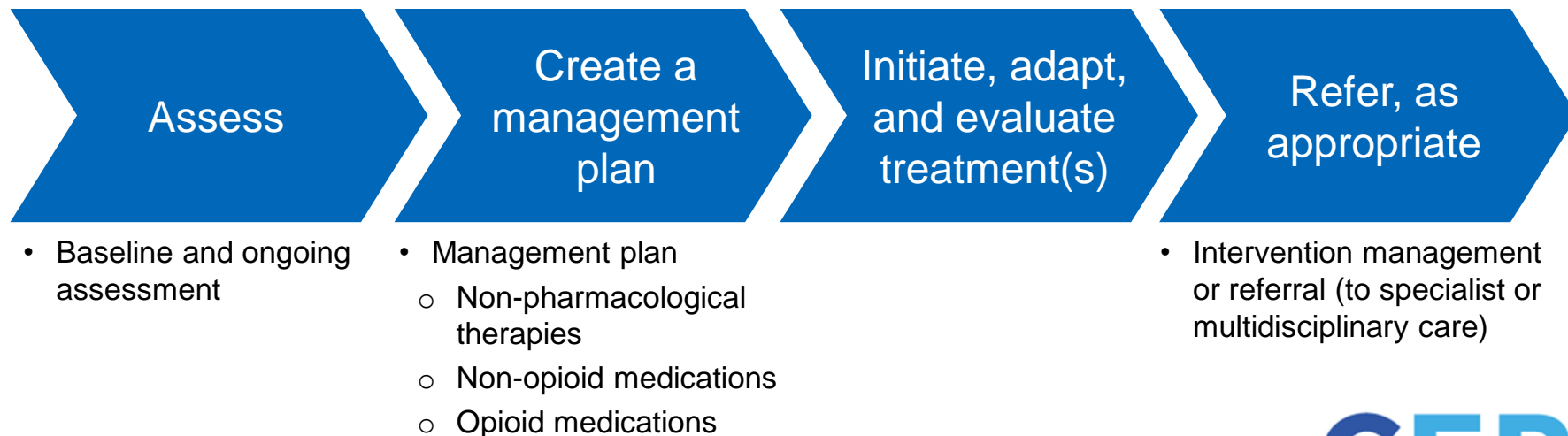
# Centre for Effective Practice

- Designed to help primary care providers manage patients with CNCP
- Tool reflects 2017 Canadian Guideline recommendations
- Covers:
  - Baseline and ongoing assessment
  - Non-pharmacological therapy
  - Non-opioid medications
  - Opioid medications
  - Intervention management and referral

Management of Chronic Non-Cancer Pain. Centre for Effective Practice. 2020.



# General Approach to Assessment and Management



Management of Chronic Non-Cancer Pain. Centre for Effective Practice. 2020

CEP

# Baseline and Ongoing Assessment

- Pain condition and physical examination
- Functional and social history
- Mental health assessment
- Substance use history and opioid risk assessment
- Yellow flags



# Brief Pain Inventory

STUDY ID #: \_\_\_\_\_ DO NOT WRITE ABOVE THIS LINE HOSPITAL #: \_\_\_\_\_


**Brief Pain Inventory (Short Form)**

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Time: \_\_\_\_\_

Name: \_\_\_\_\_  
Last First Middle Initial

1. Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?  
 1 Yes 2 No

2. On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



3. Please rate your pain by circling the one number that best describes your pain at its worst in the last 24 hours.  
 0 1 2 3 4 5 6 7 8 9 10  
 No Pain Pain as bad as you can imagine

4. Please rate your pain by circling the one number that best describes your pain at its least in the last 24 hours.  
 0 1 2 3 4 5 6 7 8 9 10  
 No Pain Pain as bad as you can imagine

5. Please rate your pain by circling the one number that best describes your pain on the average.  
 0 1 2 3 4 5 6 7 8 9 10  
 No Pain Pain as bad as you can imagine

6. Please rate your pain by circling the one number that tells how much pain you have right now.  
 0 1 2 3 4 5 6 7 8 9 10  
 No Pain Pain as bad as you can imagine

Page 1 of 2

STUDY ID #: \_\_\_\_\_ DO NOT WRITE ABOVE THIS LINE HOSPITAL #: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Time: \_\_\_\_\_

Name: \_\_\_\_\_  
Last First Middle Initial

7. What treatments or medications are you receiving for your pain?  
 \_\_\_\_\_  
 \_\_\_\_\_

8. In the last 24 hours, how much relief have pain treatments or medications provided? Please circle the one percentage that most shows how much relief you have received.  
 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%  
 No Complete  
 Relief Relief

9. Circle the one number that describes how, during the past 24 hours, pain has interfered with your:

**A. General Activity**  
 0 1 2 3 4 5 6 7 8 9 10  
 Does not Completely  
 Interfere Interfere

**B. Mood**  
 0 1 2 3 4 5 6 7 8 9 10  
 Does not Completely  
 Interfere Interfere

**C. Walking Ability**  
 0 1 2 3 4 5 6 7 8 9 10  
 Does not Completely  
 Interfere Interfere

**D. Normal Work (includes both work outside the home and housework)**  
 0 1 2 3 4 5 6 7 8 9 10  
 Does not Completely  
 Interfere Interfere

**E. Relations with other people**  
 0 1 2 3 4 5 6 7 8 9 10  
 Does not Completely  
 Interfere Interfere

**F. Sleep**  
 0 1 2 3 4 5 6 7 8 9 10  
 Does not Completely  
 Interfere Interfere

**G. Enjoyment of life**  
 0 1 2 3 4 5 6 7 8 9 10  
 Does not Completely  
 Interfere Interfere

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 Pain Research Group  
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# Treatment Options

## Pharmacological

- Opioid
- Non-Opioid

## Non-Pharmacological

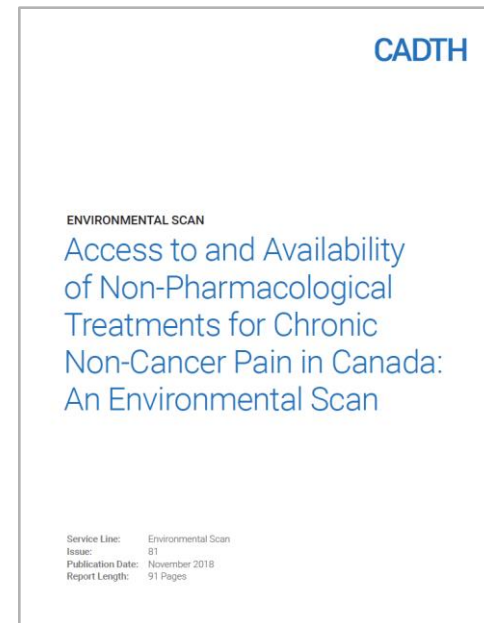
- Physical
- Psychological
- Preventive



CADTH. [Non-Pharmacological Methods for Managing Chronic Pain](#): Published online 2020.  
CADTH. [Non-Opioid Options for Managing Adult Chronic Pain](#). Published online 2020.  
[Centre for Effective Practice \(CEP\) Providers | Chronic Non-Cancer Pain](#).

# Access and Availability

- Generally, non-drug treatments are less accessible and available, particularly in rural, remote, and non-specialty settings
- Access limited by long wait times (e.g., for pain clinics; multidisciplinary care), lack of public funding, lack of coordination and continuity of care, and referrals
- These are common trends observed in other industrialized countries irrespective of the health care system
- Lack of utilization of guidance to inform non-pharmacological treatment
- Need for guidance (including for tailored treatment) expressed by practitioners



CADTH. [Access to and Availability of Non-Pharmacological Treatments for Chronic Non-Cancer Pain in Canada: An Environmental Scan](#). 2018.

# Non-Drug Ways to Manage Chronic Pain

CADTH ([chronicpain](#))



**Physical**



**Psychological**



**Preventive**

# Non-Opioid and Non-Drug Strategies

## Non-Drug Ways to Manage Your Chronic Pain

When adults are living with chronic pain, it is recommended that they first try non-drug pain management methods and/or non-opioid pain medications. Many people use more than one method to manage pain. When used alone, opioids can be ineffective and come with serious side effects and risks.

**Physical**

**Exercise**

Exercise is good for you. It also helps reduce chronic pain. Depending on your type of pain, some movements may be easier for you than others. You may prefer aerobic exercise, like walking or swimming. Or you may prefer strength-based exercises, like weightlifting or resistance training. A general rule of thumb is to begin with gentle movements and gradually build up your tolerance. Find a movement that you enjoy. Talk with your health care provider about what exercises might work for you.

**Research shows exercise may lower pain for people with many types of chronic pain, such as:**

- low back pain
- neck pain
- hip osteoarthritis
- headache
- pelvic pain syndrome or prostatic/infected prostate
- sciatica
- fibromyalgia
- musculoskeletal arthritis
- neck pain

**Psychological**

**Manual Therapy**

Manual therapy is a treatment where a health care provider uses their hands to manipulate and mobilize parts of the body. It can also involve the rubbing and kneading of muscles and joints, which is known as massage therapy. Manual therapies can help you to relax and control your pain, and are performed by a trained health care provider, such as a physiotherapist, massage therapist, or chiropractor.

**Research shows manual therapy may lower pain for people with:**

- low back pain (spine manipulation and massage)
- neck pain (massage)
- tension headaches (spine manipulation)

**Preventive**

**Acupuncture**

Acupuncture has been used to treat pain in China for thousands of years. It is thought that acupuncture needles cause the body to release natural chemicals that lower our perception of pain. Acupuncture should only be performed by a health care provider who has received appropriate training.

**Research shows acupuncture may lower pain for people with:**

- low back pain
- hip osteoarthritis
- headache
- pelvic pain syndrome or prostatic/infected prostate
- sciatica
- myofascial pain

Non-Drug Ways to Manage Your Chronic Pain: Physical 1

## Non-Pharmacological Methods for Managing Chronic Pain: Physical Methods

A summary of the evidence for clinicians (e.g., physicians, physiotherapists, nurses, nurse practitioners, pharmacists, occupational therapists, massage therapists, and chiropractors) because of the prevalence and burden of chronic pain, and because relying on opioids alone carries substantial risks and may be ineffective, health care providers are looking for the best multiphased approach to pain treatment. The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain<sup>1</sup> recommends optimizing non-opioid pharmacotherapy and non-pharmacological therapy before treating opioids for patients with chronic, non-cancer pain.

Pain medications commonly work by mimicking the body's own pain relief system; many non-pharmacological therapies work by producing these chemicals naturally or by mitigating the adverse stimuli causing the pain. Non-pharmacological therapies can be divided into three categories: psychological, physical, and preventive. These therapies can be used on their own or in combination with pharmacotherapy, which is often more effective when prescribed in conjunction with these non-pharmacological therapies. To help support evidence-informed decision-making regarding the management of chronic pain, CADTH has reviewed and summarized the evidence from various sources for some of the interventions that fall into these three categories.

Here you'll find the evidence highlights and practical considerations for some interventions that fall into the physical category. Physical methods involve a patient using their own body to help reduce or safely manage pain; these include exercise, acupuncture, and manual therapy. For online access to all of the clinician and patient handouts for non-pharmacological methods for managing chronic pain, visit [www.cadth.ca/chronicpain](http://www.cadth.ca/chronicpain).

**Bottom Line**

**Exercise**

Exercise may lower pain for people with many types of chronic pain, such as low back pain, knee osteoarthritis, hip osteoarthritis, fibromyalgia, musculoskeletal arthritis, and neck pain.<sup>2</sup>

**Acupuncture**

Acupuncture may lower pain for people with low back pain, hip osteoarthritis, osteoarthritis, headache, shoulder pain, pelvic pain syndrome or prostatic, sciatica, and myofascial pain.<sup>3</sup>

**Manual Therapy**

Manual therapy may lower pain for people with chronic low back pain (spine manipulation and massage), neck pain (massage), and tension headaches (spinal manipulation).<sup>4</sup>

\* Note that there is uncertainty in these findings as the strength or quality of the evidence varied (depending on the patient population, the duration of each intervention, and the length of follow-up for each intervention). More research is needed.

Non-Pharmacological Methods for Managing Chronic Pain: Physical Methods 1

## Non-Opioid Options for Managing Adult Chronic Pain

Canada is in the midst of an opioid crisis. And even with growing awareness of the risks, opioids continue to be used extensively in the management of pain. The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain recommends optimizing non-opioid pharmacotherapy and non-pharmacological therapy rather than prescribing a trial of opioids for patients with chronic, non-cancer pain (who are not currently taking opioids).

The challenge with this recommendation is knowing what the evidence says about the many different non-opioid options for treating pain. Are they effective? Are they safe? Are they readily available to patients?

To help support decisions about managing pain, CADTH has been reviewing the evidence on different treatment options for various types of pain through our Rapid Response Service. Here, you'll find the highlights of many of these evidence reviews – all in one place.

For more information about CADTH's work related to pain management or opioids, please visit [www.cadth.ca/pain](http://www.cadth.ca/pain) and [www.cadth.ca/opioids](http://www.cadth.ca/opioids).

Non-Opioid Options for Managing Adult Chronic Pain 1

CADTH. [Non-Pharmacological Methods for Managing Chronic Pain](#): Published online 2020.  
 CADTH. [Non-Opioid Options for Managing Adult Chronic Pain](#). Published online 2020.

# Clinician Tool

## Chronic Pain Prescription Pad to Support Self-Management

**Thinking Outside the Medicine Cabinet:  
Non-Drug Ways to Manage Chronic Pain** CADTH

CADTH completed a series of evidence reviews to appraise and summarize the research on the effectiveness of non-drug methods for the treatment of chronic, non-cancer pain. These reviews were used to develop a series of printable patient handouts and clinician evidence summaries, which can be found at [cadth.ca/chronicpain](http://cadth.ca/chronicpain). Clinician summaries include "practical considerations," which are useful tips and strategies for recommending the use of each non-drug method to patients.

**Evidence Bottom Line**  
**Physical Methods**

- Exercise**  
Exercise may lower pain for people with many types of chronic pain, such as low back pain, knee osteoarthritis, hip osteoarthritis, fibromyalgia, rheumatoid arthritis, and neck pain.\*
- Acupuncture**  
Acupuncture may lower pain for people with low back pain, hip osteoarthritis, osteoarthritis, headache, shoulder pain, pelvic pain syndrome or prostatitis, sciatica, and myofascial pain.\*
- Manual Therapy**  
Manual therapy may lower pain for people with chronic low back pain (spine manipulation and massage), neck pain (massage), and tension headaches (spine manipulation).†

**Psychological Methods**

- Mindfulness**  
Mindfulness may lower pain for people with low back pain and fibromyalgia.\*
- Cognitive Behavioural Therapy (CBT)**  
CBT may lower pain for people with low back pain, neck pain, knee osteoarthritis, and fibromyalgia.\*
- Yoga**  
Yoga may lower pain for people with low back pain and primary dysmenorrhea.\*

This page is to be filled out by a health care provider.

**CADTH**

Types of information to include are:  
• name and contact information for a clinician who specializes in chronic pain  
• specific recommendations (e.g., Exercise: walking 30 mins, 5 times per week)  
View the clinician evidence summaries ([cadth.ca/chronicpain](http://cadth.ca/chronicpain)) for useful tips and strategies when prescribing non-drug methods for managing pain.

**Patient's name:** \_\_\_\_\_

Methods for managing chronic pain can be grouped into drug and non-drug categories. Pain medications commonly work by mimicking the body's own pain relief system; many non-drug methods work by naturally producing these chemicals naturally. Non-drug therapies can be divided into three categories: psychological, physical, and preventive. These can be used on their own or in combination with medication. It is recommended that patients start by trying one of the many non-drug options for safely managing chronic pain. Everyone responds differently to these methods, so discuss your pain management goals with your health care provider to find something that works for you.

Research has found the following non-drug methods may lower chronic pain.

**Physical methods:**

Exercise \_\_\_\_\_

Acupuncture \_\_\_\_\_

Manual therapies such as spinal manipulation and massage \_\_\_\_\_

Other \_\_\_\_\_

**Psychological methods:**

Cognitive behavioural therapy \_\_\_\_\_

Mindfulness \_\_\_\_\_

Yoga \_\_\_\_\_

Other \_\_\_\_\_

**Preventive methods:**

Tights and braces \_\_\_\_\_

Maintaining a healthy weight (through diet and exercise) \_\_\_\_\_

Orthotics \_\_\_\_\_

Other \_\_\_\_\_

**Additional information:**

Accompanying patient handouts provided explaining the previously outlined methods to manage pain, or referral to [cadth.ca/chronicpain](http://cadth.ca/chronicpain) to view these handouts online


**Health care provider's signature:** \_\_\_\_\_

\_\_\_\_\_

CADTH. [Thinking Outside the Medicine Cabinet – Non-Drug Ways to Manage Chronic Pain](https://www.cadth.ca/chronicpain). Published online 2020.

# RxFiles Pain Mini-Book


- CNCP Treatment Colour Chart – tool to help individualize and optimize therapy for individuals with CNCP
- Prescribing Opioids Safety chart
- Opioid Tapering chart and template



**Pain Management & Opioids**  
Addressing Important Challenges and  
Introducing a Chronic Pain & Opioids Mini-Book  
FALL 2017

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**TWO WORTHY GOALS**



**Pain management is often a challenge** and even more so in the context of the current concerns around opioids. Two decades ago, the prevailing priority was second pain management. Today, the pendulum for many has swung towards patient safety. Both are worthy goals! Sometimes these goals seem to compete and be at odds. Our goal is to present a balanced approach.

Much of the current "opioid crisis" is driven by regulated crime and illicit manufacturing. However, it is also important to consider fully the potential safety issues around prescription opioids. There is a lot to be learned from recent evidence and our collective clinical experience. Chronic pain is complex, as is a potential role for opioids. Opioids offer net benefits for some, but harm for others. Coordinated strategies and prescribing safeguards will hopefully help protect both patient and society.

It sometimes seems that for every crisis, we create an equal and opposite crisis to deal with it. In the case of the "opioid crisis" there is the risk that an opioid may not be prescribed adequately when it is indicated, such as during initial management of acute injury. Sometimes this is the result of media and societal pressure. Sometimes it is the result of perceived pressure from policy makers and regulating bodies. Sometimes, it is just the result of frustration with the extra hands. In addition, if patients on high doses are forced to discontinue or taper too rapidly, they may seek illicit opioids to deal with the withdrawal, putting themselves at even greater risk.

The latest 2017 Opioid Prescribing Guideline for Chronic Non-Cancer Pain (CNCP) provides 10 recommendations for opioids in CNCP. These are challenges with any attempt to summarize and seek simplicity. This attention to the details, the strength of the recommendations and the guiding remarks will be essential to getting the whole picture.

To address some of these challenges, our upcoming academic detailing sessions and supporting materials, such as the RxFiles Pain Mini-Book, will try to explore the evidence, clarify a few misunderstandings and discuss potential "best practice" approaches around opioids and pain.

The illicit manufacturing and distribution of opioids, although a major part of the larger "opioid crisis", is largely beyond the scope of this discussion.

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**RETHINKING OUR APPROACH...**

**Opioid Stewardship**

Let's ensure opioids are necessary, safe and effective.

**The Risk of Over-Reaction**

See the RxFiles Pain Mini-Book




**Benefits & Harms**

Drug	SNRI	Gabapentinoids	Preparol	Atypical Antipsychotics	Opioids*	Strong (ME/DTG) Opioids	Carbids	Other
SNRI	✓							
Gabapentinoids		✓						
Preparol			✓					
Atypical Antipsychotics				✓				
Opioids*					✓			
Strong (ME/DTG) Opioids						✓		
Carbids							✓	
Other								✓

**Overall:** • Potential benefits and harms of each treatment option can vary considerably depending on the patient (including their mindset), the condition, and the dose/intensity of the intervention. Ensure an adequate trial of the medication, individualization of therapy is key!  
 • No adequate trial will generally require a titration period (days/weeks) and an evaluation period; assess both benefit and harms.  
 • It is important to emphasize the value of a long-term, holistic approach, focusing on incremental gains in function, no matter how small.  
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Pain Management & Opioids - RxFiles

46 Assessing and Managing Chronic Non-Cancer Pain





# Case 1

A good candidate for  
exclusive non-opioid therapy





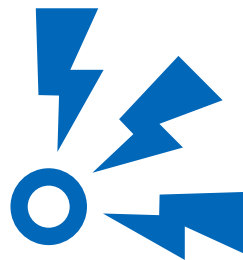
## Case 1

# Patient Profile

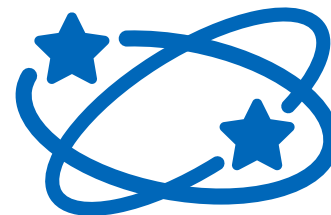
Age: 75 years Sex: Female



Experiencing side effects from current medication including weight gain, sleep disturbances



Diagnosed with chronic fibromyalgia 3 years ago



Recent complaints of persistent pain and dizziness limiting ability to conduct activities of daily living

## Case 1

# Overview



### Medical Conditions

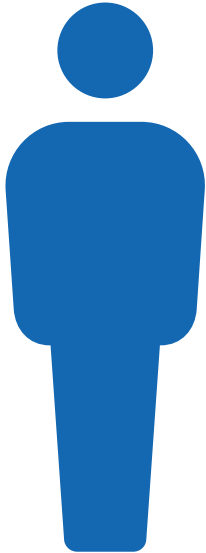
- Chronic fibromyalgia
- Obesity
- Hypertension
- Type 2 diabetes (well managed)
- Insomnia

### Select Labs / Vitals

- A1C 7.2%
- CrCl 68 mL/min
- BP 124/79
- BMI 32

## Case 1

# Overview

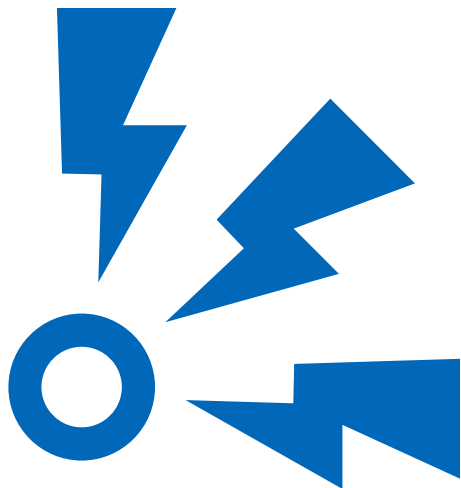


### Functional Status

- Lives alone
- Recently stopped volunteering and reduced social activity (weekly walks)
- Pain 8/10 (VAS) household chores; 5/10 at rest
- BPI (70/100)
- Shifting musculoskeletal pains in legs, back, and arms

## Case 1

# Overview



### **Dominant pain mechanism:**

- Nociceptive (central sensitization)

## Case 1

# Additional Information

- Patient describes horrible pain all day, burning sensation and a feeling that she is on fire. Increased sensitivity to cold air and water
- Tired all the time — sometimes in bed for 1 or 2 days consecutively if she does too much
- Difficulty sleeping due to pain resulting in daytime drowsiness, needs daily nap to complete ADLs
- Persistent severe pain and functional limitations despite drug treatment, particularly with repeated movements
- Bothered by side effects (dizziness) of current medications
- Increased demands to care for spouse
- Has not been offered non-pharmacological strategies

## Case 1

# Dominant Pain Mechanism

## Nociplastic (Central Sensitization)

### Symptoms and Signs

- Diffuse/non-anatomic areas of pain/tenderness on palpation
- Disproportionate pattern of pain provocation in response to multiple/nonspecific aggravating/easing factors
- Pain disproportionate to the nature and extent of injury/pathology
- Strong association with maladaptive psychosocial factors (e.g., negative moods, poor self-efficacy, maladaptive beliefs, and pain behaviours, altered family/work/social life, and medical conflict)

Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: part 1 of 3: symptoms and signs of central sensitisation in patients with low back ( $\pm$  leg) pain. *Man Ther.* 2012;17(4):336-344. doi:10.1016/j.math.2012.03.013

## Case 1

# EULAR Fibromyalgia Recommendations

- Focus first on non-pharmacological modalities (strong recommendation for exercise, weak for other modalities)
- Consider psychological therapies (i.e., cognitive behavioural therapy) for those with mood disorder or unhelpful coping strategies (weak recommendation)
- Pharmacological treatment should be considered for those with severe pain (duloxetine, pregabalin, tramadol) or sleep disturbance (amitriptyline, cyclobenzaprine, pregabalin) (weak recommendation)
- Multimodal rehabilitation programs should be considered for those with severe disability (weak recommendation)

Macfarlane GJ, Kronisch C, Dean LE, et al. EULAR revised recommendations for the management of fibromyalgia. *Ann Rheum Dis.* 2017;76(2):318-328. doi:10.1136/annrheumdis-2016-209724

## Case 1

# Current Therapy

### **Non-opioid drug treatments:**

Pregabalin 150 mg BID

Metformin 1,000 mg BID

Hydrochlorothiazide 25 mg daily

Melatonin 3 mg QHS

Acetaminophen 1000 mg TID

Lorazepam 0.5 mg QHS

### **Opioids:**

None

### **Non-pharmacological strategies:**

None



## Case 1

# Opioid Therapy?

## Answer: No

Reason: No evidence for benefit in fibromyalgia  
Instead of opioids, provider may want to consider opportunities to optimize non-opioid therapy (including non-pharmacological treatment options)



Macfarlane GJ, Kronisch C, Dean LE, et al. EULAR revised recommendations for the management of fibromyalgia. *Ann Rheum Dis.* 2017;76(2):318-328. doi:10.1136/annrheumdis-2016-209724  
Busse, Jason, et al. "The 2017 Canadian guideline for opioids for chronic non-cancer pain." Hamilton, ON (2017).

## Case 1

# Preferred Non-Pharmacological Treatment for Fibromyalgia

- Patient has persistent pain and functional limitations
- Non-pharmacological approaches have not yet been trialled

A discussion of evidence-based non-pharmacological options should be considered.

## Case 1

# Non-Drug Treatments for Fibromyalgia

Cornerstone of treatment is non-pharmacological and psychosocial interventions (should be considered and offered in all patients).



## Case 1

# Non-Drug Treatments for Fibromyalgia

## Exercise

Exercise may lower pain for people with many types of chronic pain, such as low back pain, knee osteoarthritis, hip osteoarthritis, fibromyalgia, rheumatoid arthritis, and neck pain.<sup>1</sup>

Exercise: Aerobic (e.g., walking), strengthening, core stabilizing, therapeutic aquatic exercise; yoga; Tai Chi  
\*Graduated exercise program<sup>3</sup>

## Cognitive Behavioral Therapy (CBT)

CBT may lower pain for people with low back pain, neck pain, knee osteoarthritis, and fibromyalgia.<sup>2</sup>

Psychological: CBT, Mindfulness; Self-management programs<sup>3</sup>

<sup>1</sup>CADTH. [Non-Pharmacological Methods for Managing Chronic Pain: Physical Methods](#). Published online 2020.

<sup>2</sup>CADTH. [Non-Pharmacological Methods for Managing Chronic Pain: Psychological Methods](#). Published online 2020.

<sup>3</sup>Centre for Effective Practice (CEP). Providers | Chronic Non-Cancer Pain. <https://cep.health/clinical-products/chronic-non-cancer-pain/>

## Case 1

# Non-Drug Treatments for Fibromyalgia

## Mindfulness

Mindfulness may lower pain for people with low back pain and fibromyalgia<sup>1</sup>

## Hyperbaric Oxygen<sup>2</sup>

<sup>1</sup>CADTH. [Non-Pharmacological Methods for Managing Chronic Pain: Psychological Methods](#). Published online 2020.

<sup>2</sup>CADTH. [Non-Opioid Options for Managing Adult Chronic Pain](#). Published online 2020.

## Case 1

# What about current non-opioid drug treatments?

- Patient reports persistent sleep problems due to pain, and dizziness that she attributes to her current medication
- It is important in Fibromyalgia patients to closely monitor and re-evaluate drug therapy, especially in older patients who are at increased risk of side effects

If patient is open to trialling non-pharmacological treatments and pain and other symptoms improve, consider whether re-evaluation of current drug therapies (i.e., dose reduction) is warranted

## Case 1

# Monitoring

Patient's treatment should be monitored closely (using validated scales) for benefits and side effects, particularly related to her functional status

### **What if she doesn't see a benefit...**

If non-pharmacological treatments trialled do not improve the patient's condition, consider trying an alternative non-pharmacological approach with evidence of benefit in fibromyalgia



## Case 1

# Patient Resources

Self-management approaches and formal non-pharmacological therapy can both play a role in the patient's overall care plan

### Non-Drug Ways to Manage Your Chronic Pain

CADTH

When adults are living with chronic pain, it is recommended that they first try non-drug pain management methods and/or non-opioid pain medications. Many people use more than one method to manage pain. When used alone, opioids can be ineffective and come with serious side effects and risks.

Physical Psychological Preventive

 The human body has a natural ability to manage pain. Physical methods of pain management involve using your own body to help reduce pain. There are many ways to do this, such as on your own through movement or with the help of a health care provider who can perform a therapy on your body. Exercise, acupuncture, and manual therapy are some physical methods that may help to safely manage chronic pain.

<https://cadth.ca/tools/non-drug-ways-manage-chronic-pain> See: Resources for People Living With Chronic Pain

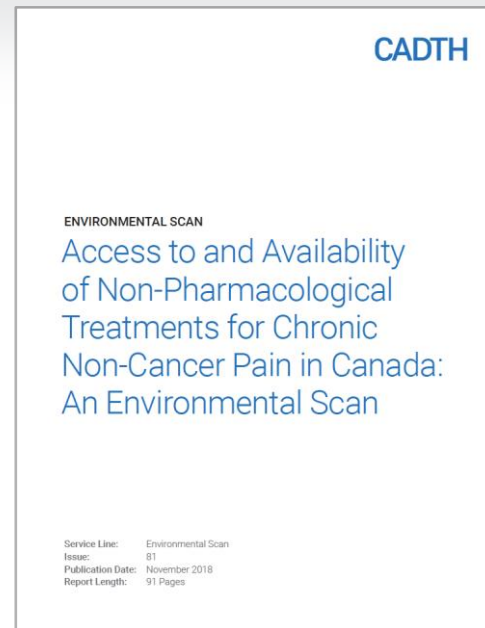


## Case 1

# Access and Availability

May need to consider limited availability of non-pharmacological treatments

Factors such as wait times (particularly for specialty care), lack of public funding, and issues regarding referrals and coordination/continuity of care may apply



Access to and Availability of Non-Pharmacological Treatments for Chronic Non-Cancer Pain in Canada: An Environmental Scan. CADTH. 2018.

## Case 1

# Addressing Access Issues

- Consider referral to multidisciplinary practitioners and services, even if not available in a clinical or program setting
- Consider self-management approaches and other low-cost strategies with evidence for benefit in fibromyalgia



Access to and Availability of Non-Pharmacological Treatments for Chronic Non-Cancer Pain in Canada: An Environmental Scan. CADTH. 2018.

## Case 1




# Clinician Tool to Support Self-Management

**Thinking Outside the Medicine Cabinet:  
Non-Drug Ways to Manage Chronic Pain** **CADTH**




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**Evidence Bottom Line**

**Physical Methods**

- **Exercise**  
Exercise may lower pain for people with many types of chronic pain, such as low back pain, knee osteoarthritis, hip osteoarthritis, fibromyalgia, rheumatoid arthritis, and neck pain.\*
- **Acupuncture**  
Acupuncture may lower pain for people with low back pain, hip osteoarthritis, osteoarthritis, headache, shoulder pain, pelvic pain syndrome or prostatitis, sciatica, and myofascial pain.\*
- **Manual Therapy**  
Manual therapy may lower pain for people with chronic low back pain (spine manipulation and massage), neck pain (massage), and tension headaches (spine manipulation).\*

**Psychological Methods**

- **Mindfulness**  
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- **Yoga**  
Yoga may lower pain for people with low back pain and primary dysmenorrhea.\*

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**Patient's name:** \_\_\_\_\_

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Research has found the following non-drug methods may lower chronic pain:

**Physical methods:**

- Exercise \_\_\_\_\_
- Acupuncture \_\_\_\_\_
- Manual therapies such as spinal manipulation and massage: \_\_\_\_\_
- Other: \_\_\_\_\_

**Psychological methods:**

- Cognitive behavioural therapy: \_\_\_\_\_
- Mindfulness: \_\_\_\_\_
- Yoga: \_\_\_\_\_
- Other: \_\_\_\_\_

**Preventive methods:**

- Splints and braces: \_\_\_\_\_
- Maintaining a healthy weight (through diet and exercise): \_\_\_\_\_
- Orthotics: \_\_\_\_\_
- Other: \_\_\_\_\_

**Additional information:**

- Accompanying patient handouts provided explaining the previously outlined methods to manage pain, or referral to [cadth.ca/chronicpain](http://cadth.ca/chronicpain) to view these handouts online

**Health care provider's signature:** \_\_\_\_\_  
Date: \_\_\_\_\_

# Case 2

**Patient prescribed opioids  
post-surgery with persistent  
use and non-optimized  
non-opioid therapy**



## Case 2

# Patient Profile

Age: 55 years Sex: Female



Traumatic back injury  
due to car accident



Surgery to address injury



Persistent pain 1 year after surgery.  
Currently taking opioids as “nothing  
else works” and therefore hesitant  
to reduce or stop

## Case 2

# Overview

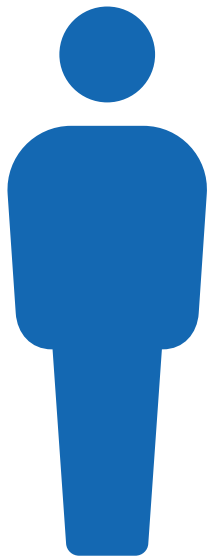


### Medical Conditions

- Previous spinal cord surgery after car accident
- Chronic pain for 1+ years
- Unmanaged anxiety and depression

## Case 2

# Overview

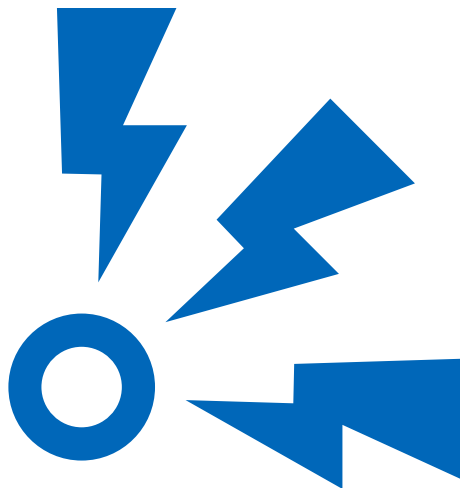


### Functional Status

- Lives alone
- Brief Pain Index (BPI) (70/90)
- Pain is 7/10 (VAS)

## Case 2

# Overview



**Dominant pain mechanism:**

- Nociceptive



## Case 2

# Additional Information

- Pain is constant but most severe in the morning
- Patient describes pain as intolerable
- Pain affecting relationships
- Limited ability to conduct activities of daily living
- Recent escalation of anxiety and depression
- Sleep is greatly affected

## Case 2

# Current Therapy

### Non-opioid drug treatments:

- Clonazepam 1 mg QHS
- Past trials of morphine, NSAIDs, amitriptyline, and nabilone unsuccessful

### Opioids:

- Past trials of morphine
- Oxycodone ER 40 mg BID

### Non-pharmacological strategies:

None

## Case 2

# Dominant Pain Mechanism

### **Nociceptive Symptoms and Signs**

- Pain localized to the area of injury or dysfunction (somatic referral)
- Intermittent and sharp pain with movement or mechanical provocation
- Constant dull ache or throbbing at rest
- Associated with dysesthesias (e.g., crawling sensation)
- Clear, proportionate relationship with aggravating/easing factors
- Absence of:
  - Night pain / disturbed sleep
  - Antalgic (i.e., pain relieving) postures / movement patterns
  - Pain described as burning, shooting, sharp or “electric shock like”

Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: part 3 of 3: symptoms and signs of nociceptive pain in patients with low back (± leg) pain. *Man Ther.* 2012;17(4):352-357. doi:10.1016/j.math.2012.03.002

## Case 2

# Current Therapy

### Non-opioid drug treatments:

- Clonazepam 1 mg QHS
- Past trials of morphine, NSAIDs, amitriptyline, and nabilone unsuccessful

### Opioids:

- Past trials of morphine
- Oxycodone ER 40 mg BID

### Non-pharmacological strategies:

None

## Case 2

# Optimizing Non-Opioid Drug Tx

- Increased risk of side effects of respiratory depression and overdose with concurrent use of opioid and benzodiazepine
- Consider eventual tapering and discontinuation of clonazepam

Duloxetine (SNRI) is effective for pain control among people with low back pain; consider openness to trialling this medication

Gaseem, Amir, et al. "Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of Physicians." *Annals of internal medicine* 166.7 (2017): 514-530.

## Case 2

# Optimizing Non-Opioid Drug Tx

- Patient's depression and anxiety is poorly managed and may be contributing to poor pain control. Further assessment of depression and anxiety is warranted
- Patient reports persistent sleep deprivation

If open to a trial of Duloxetine it may also help to address patients' anxiety and depression



Gaseem, Amir, et al. "Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of Physicians." *Annals of internal medicine* 166.7 (2017): 514-530.

## Case 2

# Non-Pharmaceutical Options

Physical	Psychological	Preventive	Other
<sup>3</sup> ▲ Occupational therapy (using biopsychosocial approach)	<sup>2,3</sup> ▲ Yoga	<sup>3</sup> ▲, <sup>5</sup> Body weight modifications	<sup>3</sup> ▲ Magnesium (Oral or IV)
<sup>1,3,4</sup> ▲ Manual Therapy	<sup>2,3</sup> ●, <sup>4</sup> Cognitive Behavioural Therapy (CBT)	<sup>3</sup> ▲, <sup>5</sup> Customized or prefabricated shoe inserts	<sup>4</sup> Self Management Programs
<sup>3</sup> ▲ Physiotherapy	<sup>2,4</sup> Mindfulness		<sup>4</sup> TENS
<sup>1,3</sup> ●, <sup>4</sup> Exercise Types of exercise with evidence for benefit: <sup>4</sup> Strengthening exercise; Core stabilizing exercise; Yoga; Therapeutic aquatic exercise	<sup>4</sup> Acceptance and Commitment Therapy (ACT)		<sup>4</sup> Low-level laser therapy
<sup>1</sup> Acupuncture	<sup>4</sup> Respondent Therapy	<sup>3</sup> ● Reasonable amount of evidence ▲ Some evidence to indicate effectiveness <sup>1,2,4</sup> Level of evidence varies, see primary source	
	<sup>4</sup> Behavioural Therapies		

<sup>1</sup>CADTH. [Non-Pharmacological Methods for Managing Chronic Pain: Physical Methods](#). Published online 2020. <sup>2</sup>CADTH. [Non-Pharmacological Methods for Managing Chronic Pain: Psychological Methods](#). Published online 2020. <sup>3</sup>CADTH. [Non-Opioid Options for Managing Adult Chronic Pain](#). Published online 2020. <sup>4</sup>Centre for Effective Practice (CEP) Providers | [Chronic Non-Cancer Pain](#). <sup>5</sup>CADTH. [Non-Pharmacological Methods for Managing Chronic Pain: Preventive Methods](#). Published online 2020.

## Case 2

# Optimizing Non-Pharmaceutical Therapy

- Patient is not currently utilizing any non-pharmacological strategies to complement care
- There is evidence for a benefit of physical and psychological non-pharmacological therapies in low back pain

Discuss whether the patient could incorporate some form of exercise and psychological support into their therapy



## Case 2

# Opioid Therapy?

**Answer: May be opportunity to taper and discontinue**

**Reason:** Unclear benefit and therefore limited role for opioids in chronic low back pain and concern about potential harms

Based on patient's current status there may be an opportunity to optimize non-opioid drug therapy and non-pharmacological treatment options



## Case 2

# Issues with Current Opioid Therapy

- Opioid dose is above 90 mg morphine equivalent dose daily (risk of opioid use disorder, overdose)
- Limited benefit from opioid but resistant to change
- Recommendation to explore rotation and tapering, considering patient preferences in mgmt

## Case 2

# Addressing Opioid Use

**Given lack of benefit from current opioid therapy and the risk of opioid use disorder and other harms, good opportunity to discuss reasons for resistance to change with patient. If appropriate recommend tapering and other treatment options.**

There may be an opportunity to discuss harms and provide risk reduction (naloxone kit) and education

## Case 2

# Tools for Tapering

- Shared decision-making
- Interdisciplinary care
- SMART goals
- Consideration of harms
- Outlines general approach
- Withdrawal management
- Template for tapering plan and follow-up

## Talking points:

“Chronic pain is a complex disease and opioids alone cannot adequately address all of your pain related needs”

CEP

Providers

### Opioid Tapering Template

This tool is to support primary care providers in discussing the value of opioid tapering with all adult patients currently prescribed an opioid and to support their patients in reducing opioid dosages in a safe and effective way.

#### Section A: Important considerations for opioid tapering

- Clinicians should engage patients in shared decision-making, including consideration of the patient's values, goals, concerns and preferences prior to tapering.<sup>1,2</sup>
- When possible, an interdisciplinary team approach should be used during the tapering process to support complementary non-pharmacological and pharmacological management.<sup>1,2</sup>
- For patients starting or continuing an opioid trial, discuss and document patients' goals on a regular basis. (SMART goals: Specific, Measurable, Agreed-upon, Realistic, Time-based).
- Consider the potential opioid harms and safety concerns.



Opioid Tapering Protocol  
[www.deprescribingnetwork.ca/tapering](http://www.deprescribingnetwork.ca/tapering)



Opioid Tapering Template

## Case 2

# Motivational Approach

- Elicit *and listen carefully; consider linking together pros and cons (if any)*
  - “Tell me about the upsides and downsides you see from your opioids”
- Provide *individualized benefits and risks to review with patients*
  - “It seems from the level of pain you are reporting that you are getting minimal relief from the opioids you are taking and there might be some potentially beneficial non-opioid alternatives that we haven’t yet considered”
- Elicit
  - “How do you feel now knowing some of this information?”

## Case 2

# Motivational Approach

### Avoid

“Righting Reflex” e.g., “We need to reduce your dose of opioids because the guidelines recommend it”



# Case 3

**Chronic neuropathic pain  
secondary to illness**



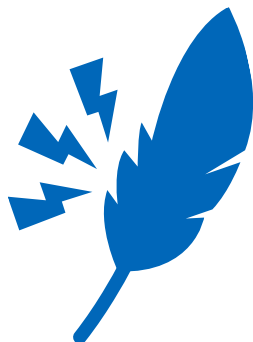
## Case 3

# Patient Profile

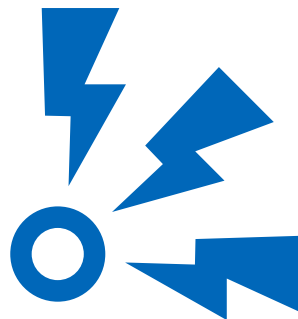
Age: 80 years Sex: Male



Impaired physical function and quality of life



Allodynia and heat hyperalgesia



Diagnosed with post-herpetic neuralgia and experiencing flank pain and headaches for approx. 6 months



Recent complaints of worsening stress and anxiety due to pain and itching



## Case 3

# Overview



### Medical conditions

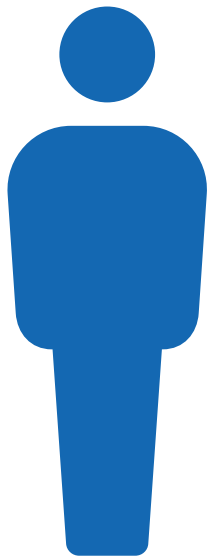
- Post-herpetic neuralgia
- Generalized anxiety disorder
- Type II diabetes (well controlled)

### Select labs / vitals

- A1C 6.7%
- CrCl 70 mL/min

## Case 3

# Overview

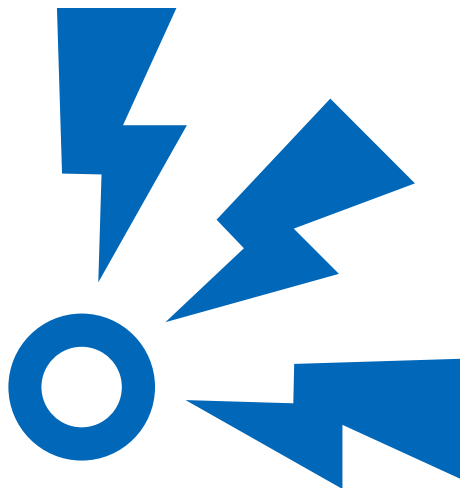


### **Functional status**

- Lives with spouse
- Pain is 8/10 (VAS)
- Patient reported quality of life is poor
- DN4 score of 6

## Case 3

# Overview



### **Dominant pain mechanism:**

- Peripheral neuropathic

## Case 3

# Douleur Neuropathique 4 (DN4)

- Patient scored 6/10
- Neuropathic pain likely

Bouhassira, Didier, et al. "Comparison of pain syndromes associated with nervous or somatic lesions and development of a new neuropathic pain diagnostic questionnaire (DN4)." *pain* 114.1-2 (2005): 29-36

### DN4 - QUESTIONNAIRE

To estimate the probability of neuropathic pain, please answer yes or no for each item of the following four questions.

#### INTERVIEW OF THE PATIENT

**QUESTION 1:**  
Does the pain have one or more of the following characteristics? YES NO

Burning .....	<input type="checkbox"/>	<input type="checkbox"/>
Painful cold .....	<input type="checkbox"/>	<input type="checkbox"/>
Electric shocks .....	<input type="checkbox"/>	<input type="checkbox"/>

**QUESTION 2:**  
Is the pain associated with one or more of the following symptoms in the same area? YES NO

Tingling .....	<input type="checkbox"/>	<input type="checkbox"/>
Pins and needles .....	<input type="checkbox"/>	<input type="checkbox"/>
Numbness .....	<input type="checkbox"/>	<input type="checkbox"/>
Itching .....	<input type="checkbox"/>	<input type="checkbox"/>

#### EXAMINATION OF THE PATIENT

**QUESTION 3:**  
Is the pain located in an area where the physical examination may reveal one or more of the following characteristics? YES NO

Hypoesthesia to touch .....	<input type="checkbox"/>	<input type="checkbox"/>
Hypoesthesia to pinprick .....	<input type="checkbox"/>	<input type="checkbox"/>

**QUESTION 4:**  
In the painful area, can the pain be caused or increased by: YES NO

Brushing? .....	<input type="checkbox"/>	<input type="checkbox"/>
-----------------	--------------------------	--------------------------

YES = 1 point  
NO = 0 points

Patient's Score: /10

## Case 3

# Dominant Pain Mechanism

## (Peripheral) Neuropathic

### Symptoms and Signs

- Pain referred in a dermatomal or cutaneous distribution
- History of nerve injury, pathology, or mechanical compromise
- Pain/symptom provocation with mechanical/movement tests (e.g., active/passive, neurodynamic) that move/load/compress neural tissue

Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: part 2 of 3: symptoms and signs of peripheral neuropathic pain in patients with low back ( $\pm$  leg) pain. *Man Ther.* 2012;17(4):345-351. doi:10.1016/j.math.2012.03.003

## Case 3

# Additional Information

- Pain not responsive to NSAIDs or acetaminophen and is interested in alternative pharmacological treatment
- Partial response to other current non-opioid drug treatments; recent addition of amitriptyline to drug therapy has not improved symptoms
- Pain, particularly headaches, interfering with sleep
- Ability to engage in exercise and social life limited since onset of pain
- Symptoms daily, worse at night

## Case 3

# Current Therapy

### **Non-opioid drug treatments:**

Amitriptyline 75 mg QHS  
(started 3 months ago)

Gabapentin 300 mg TID

Lidocaine patches (topical) (5%)

Metformin 1,000 mg BID

Sitagliptin 100 mg daily

### **Opioids:**

None

### **Non-pharmacological strategies:**

None

## Case 3

# Opioid Therapy?

## Answer: No

**Reason:** Additional non-opioid drug treatments available and not yet trialled

Instead of opioids, provider may want to consider opportunities to optimize non-opioid therapy (including non-pharmacological treatment options)





## Case 3

# Non-Opioid Options

Psychological	Non-opioid drug Tx	Other
Acceptance and Commitment Therapy	Carbamazepine	Transcutaneous electrical nerve stimulation (TENS)
	Gabapentin	
	Pregabalin	
	Tricyclic antidepressants	
	Duloxetine	
	Topical and medical cannabinoids	

Treatments are suggested for neuropathic pain, not specifically post-herpetic neuralgia

Level of evidence varies, see primary source

[Centre for Effective Practice \(CEP\) Providers | Chronic Non-Cancer Pain.](#)

## Case 3

# Optimizing Non-Opioid Therapy

**Patient's stress and anxiety is poorly managed and may be contributing to poor pain control**

Consider referral to psychological consult with recommendation for acceptance and commitment therapy (ACT) due to chronic symptoms

**While patient is interested in other medications to manage pain, non-opioid and non-pharmacological approaches should be trialed before consideration of opioid therapy**

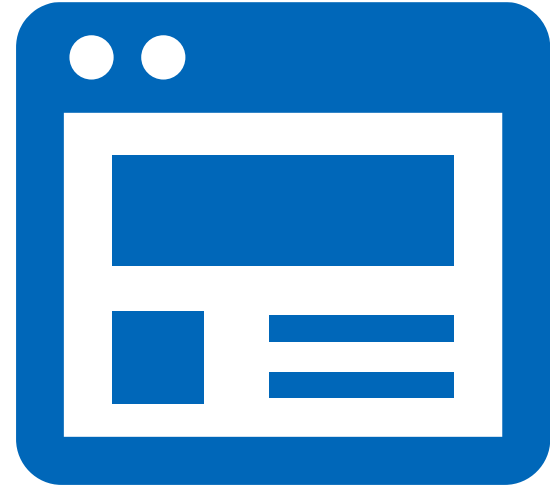
Due to lack of effect of amitriptyline, consider switching amitriptyline to duloxetine, which may address some of the escalating anxiety and post-herpetic neuralgia symptoms

# In Summary

- CNCP affects many Canadians and is a major public health concern
- Not all pain is the same — assessment of the dominant pain mechanism may support optimal tailored care
- Non-pharmacological and non-opioid strategies to treat chronic pain are recommended as first-line therapy
- Access to and availability to non-pharmacological treatments may be limited; however, there is good evidence to support various modalities for many types of pain
- Guidelines and tools, based on the best available evidence, are available to inform pain management, including the use of non-drug strategies, for providers and individuals living with CNCP

# For Key References and Resources of Potential Interest....

See the Supplemental Resource Library available with the course material



# CADTH Pain Resources

The screenshot shows the CADTH website interface. At the top, there is a search bar and a navigation menu with options: About, Collaboration and Outreach, Patient and Community, Contact, My CADTH, and FR. Below the navigation menu, there are dropdown menus for Reports, Resources, Submit a Request, Provide Input, and News & Events. A search bar is present with the placeholder text "What Does The Evidence Say About...". The main content area displays the breadcrumb "Home > Resources > Evidence Bundles > Evidence on Pain Management" and the title "Evidence on Pain Management". Below the title, there is a paragraph of introductory text and a list of resources:

- [Codeine for Pain Related to Osteoarthritis of the Knee and Hip: A Review of Clinical Effectiveness](#) (Summary With Critical Appraisal, December 14, 2020)
- [Codeine for Pain Related to Caesarean Section: A Review of Clinical Effectiveness](#) (Summary With Critical Appraisal, March 3, 2021)
- [Non-Drug Ways to Manage Chronic Pain](#) (Tools, September 8, 2020)
- [Physical Activity for Chronic Pain: A Synopsis of the Evidence](#) (Tools, July 28, 2020)
- [Capsaicin for Acute or Chronic Non-Cancer Pain: A Review of Clinical Effectiveness, Safety, and Cost-Effectiveness](#) (Summary with Critical Appraisal, July 13, 2020)
- [Acute Pain Management: Non-Pharmacological Interventions](#) (Tools, September 17, 2020)
- [Non-Opioid Options for Managing Pain](#) (Tools, July 2020)

[www.cadth.ca/pain](http://www.cadth.ca/pain)

The screenshot shows the CADTH website interface. At the top, there is a search bar and a navigation menu with options: About, Collaboration and Outreach, Patient and Community, Contact, My CADTH, and FR. Below the navigation menu, there are dropdown menus for Reports, Resources, Submit a Request, Provide Input, and News & Events. A search bar is present with the placeholder text "What Does The Evidence Say About...". The main content area displays the breadcrumb "Home > Resources > Evidence Bundles > Evidence on Opioids" and the title "Evidence on Opioids". Below the title, there is a paragraph of introductory text and a list of resources:

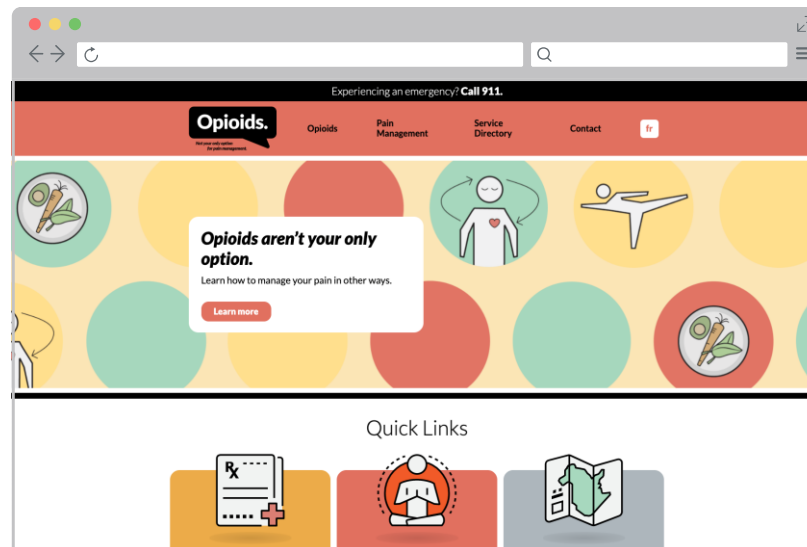
- [Codeine for Pain Related to Osteoarthritis of the Knee and Hip: A Review of Clinical Effectiveness](#) (Summary With Critical Appraisal, December 14, 2020)
- [Non-Drug Ways to Manage Chronic Pain](#) (Tools, September 8, 2020)
- [Injectable Opioid Antagonist Treatment for Patients with Opioid Dependence: A Review of Clinical and Cost-Effectiveness](#) (Summary with Critical Appraisal, May 27, 2020)
- [Treating Opioid Use Disorder](#) (Mind the Research Gaps Tool, November 2019)
- [In Brief: Research for the Treatment of Opioid Addiction](#) (Tool, October 2018)

[www.cadth.ca/opioids](http://www.cadth.ca/opioids)

# Patient Resources

New Brunswick Service Directory

[www.letstalkopioids.ca/patients/](http://www.letstalkopioids.ca/patients/)



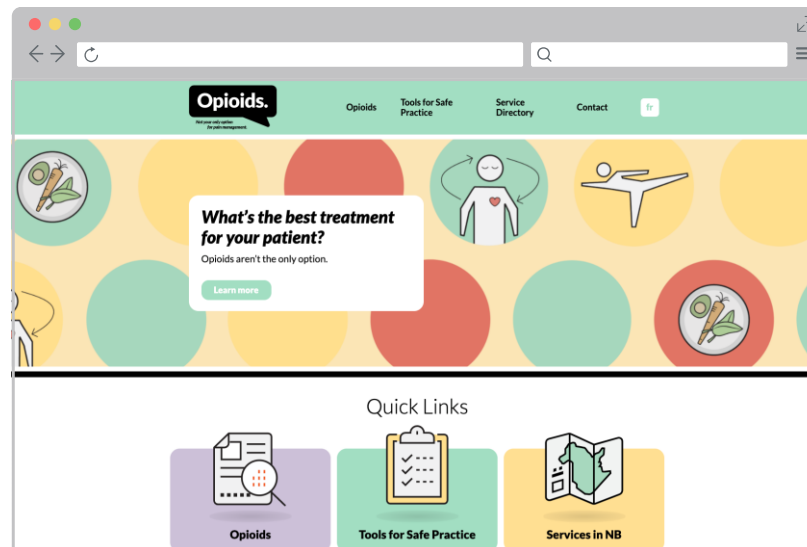
# Provider Resources

Tools for Safe Practice

Service Directory

Information on the Opioid Crisis and  
Alternative Tx options

[www.letstalkopioids.ca/physicians/](http://www.letstalkopioids.ca/physicians/)



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Updates about our flagship annual Symposium, workshops, webinars and other events.

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