



Appendix B: Non-pharmacological Treatment Modalities for Pain

Lifestyle Interventions and Strategies²³

A good overall management tool for non-pharmacological management can be found at the [CEP Management of Chronic Non-Cancer Pain: Non-Pharmacological Therapies](#).

Nutritional Support

- Nutrition plays a key role in fighting infection, healing, managing chronic conditions that involve pain, and optimizing overall health and well-being.^{24,25} The evidence base for therapeutic diets varies depending on the condition.
- Emerging research suggests an association between some chronic pain conditions such as fibromyalgia and a disordered gut “microbiome” (the totality of microorganisms including bacteria, viruses, protozoa and fungi). Understanding of the role of gut microbiota in pain is still in the early stages with varying levels of support, though emerging evidence suggests that dysregulation of gut microbiota participates in visceral pain, inflammatory pain, neuropathic pain, migraine and opioid tolerance.²⁶
- Consider the impact of acute and chronic pain on the patient’s ability to plan, shop for, and prepare healthy meals. Pain can also impact appetite, dietary intake, and nutritional status.
- Registered Dietitians at HealthLink BC (8-1-1) offer nutrition assessments, advice and guidance, counselling, care plans and therapeutic diets care coordination.

Sleep

There is increasing evidence that pain and sleep have a bidirectional relationship. Poor sleep commonly occurs in those with chronic pain and may in turn lead to additional fatigue and exacerbate pain.²⁷ both non-pharmacological and pharmacological interventions can help those with pain obtain a better sleep.^{8,27} When appropriate, assess for obstructive sleep apnea. The Centre for Effective Practice (CEP) has a well-resourced and pragmatic tool for primary care clinicians to assist patients with chronic insomnia. [cep.health/clinical-products/insomnia-management-of-chronic-insomnia-tool/](#) “Say Good Night to Insomnia” by Dr. Gregg Jacobs is an excellent patient resource for a drug free approach to chronic insomnia.

Breath

Pain, especially acute pain, can cause breath holding and hyperventilation which may accentuate the pain. More consideration is now being given to the importance of “breath work” as an integral component of self-management of pain.^{28,29} While the exact mechanism is not well understood, the effect of “paced slow deep breathing” on vagal nerve stimulation may contribute to modulating pain as well as improving the V/Q match and improving oxygenation. See [Resources: Resources for Patients](#) for breathing techniques and integration with meditation and yoga practices.

The Victoria Hospice Society has an excellent pdf summary of breathing and relaxation techniques. ([victoriahospice.org/wp-content/uploads/2019/07/26188-vichospice_relax_bro_sept14](#))

Mindfulness-Based Interventions

- Mindfulness meditation is demonstrated to work by paying attention, on purpose, in the present moment and non-judgementally, and increasing awareness of one’s external surroundings and inner sensations, allowing the individual to step back and reframe experiences.³⁰ Clinical use of mindfulness has included applications in substance use disorders, tobacco cessation, stress reduction, and treatment of chronic pain.³⁰ The goal of this approach is to reduce pain, increase functioning and improve the quality of life, by empowering the patient with skills to live a productive life despite the presence of discomfort or disability.
- Multiple reviews of mindfulness interventions suggest there are varying levels of evidence evaluating different outcomes.^{30,31}

- Refer to Pain Education material on [Pain BC's Live Plan Be](#) or the [Toronto Academic Pain Medicine Institute](#) for information on mind-body therapies and techniques.
- Specific therapeutic approaches such as Cognitive Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) are good options to consider for some patients.

Physical Activity and Therapeutic Movement

- Recent systematic reviews suggest physical activity alone can decrease severity of pain and improve physical function in adults with chronic non-cancer pain.³² Physical activity can improve symptoms of stiffness³³, fatigue³⁴, health-related fitness³³, and/or quality of life^{34,35} in those with fibromyalgia and depression as well as self-efficacy and social function for patients with chronic hip and knee pain from osteoarthritis.³⁶
- The main goal is restoration of movement and activity. There is no optimal type of physical activity for chronic pain³⁷ and interventions should be individualized.
- Spending time in nature has a wide range of positive effects on human health. A B.C. specific program in conjunction with BC Parks Foundation called [PaRx](#) encourages clinicians to formally prescribe time in nature.
- Consider referring to allied health care providers, especially those with expertise in exercise prescription for chronic pain conditions, for customized, supervised, physical activity programs tailored to individuals' health status and goals and physical activity levels and preferences.