

# Physical Activity for Chronic Pain: A Synopsis of the Evidence

Chronic pain is defined as pain that lasts longer than three months. It can lead to a reduced quality of life, decreased mental health, increased health care utilization, and a reduced ability to fully participate in one's personal and professional life. An estimated one in five Canadian adults experiences chronic pain. There are many pharmacological and non-pharmacological interventions that have been proposed for the management of chronic pain. Physical activity is a non-pharmacological intervention that involves a wide range of activities and can be self-directed and tailored to meet individual needs.

CADTH reviewed the evidence regarding physical activity for knee osteoarthritis and critically appraised an overview of Cochrane Reviews on physical activity for chronic pain in general.

**Bottom Line:**

Low-quality evidence suggests that physical activity may reduce pain and improve function for some adults with chronic pain, while having few adverse events.

## Key Messages From the CADTH Report (Specific to Adults With Knee Osteoarthritis)<sup>1</sup>

- Physical activity may reduce pain and improve function, performance, and health-related quality of life when compared with usual care, no treatment, or sham interventions.
- Limited evidence on adverse events suggests a temporary increase in minor pain with exercise when compared to sham therapy, but no difference in worsening pain, falls, or death.
- Limited evidence suggests that low-impact exercise combining muscle strengthening, stretching, and aerobic elements did not cause serious adverse events in older adults. In addition, it does not affect the frequency of knee replacement surgeries between physical activity and control groups.
- Because of the variety of interventions, lengths of follow-up, and frequency or duration of exercise, it is difficult to draw conclusions regarding the optimal approach to exercise for knee osteoarthritis pain. More research is needed.

## Key Messages From the Cochrane Overview of Cochrane Reviews<sup>2</sup>

- Overall, low-quality<sup>a</sup> evidence suggests that physical activity may reduce pain severity and improve physical function when compared with no intervention for adults with chronic pain.
- Evidence suggests that physical activity may have few adverse events for adults with chronic pain.
- Additional high-quality research is needed.

<sup>a</sup> The low-quality nature of the evidence was mainly due to underpowered studies, short-term interventions, and insufficient follow-up.

## References

1. Physical Activity for Chronic Osteoarthritic Knee Pain: A Review of Clinical Effectiveness. Ottawa: CADTH; 2020 Mar. (CADTH rapid response report: summary with critical appraisal). <https://cadth.ca/physical-activity-chronic-osteoarthritic-knee-pain-review-clinical-effectiveness>
2. Geneen LJ, Moore RA, Clarke C, Martin D, Colvin LA, Smith BH. Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews. Cochrane Database Syst Rev. 2017;1(1):CD011279. <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD011279.pub3/full>

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