

## Module 3: Lecture 9. Graded exercise prescription

### Introduction

Physical activity and exercise are recommended for general population health, with well recognised guidelines regarding recommended levels (ACSM, 2023). In people living with chronic pain, these health benefits are also important to achieve. In addition, exercise can positively impact pain. However the usual general population barriers and facilitators to being active apply in the pain population and there are additional challenges and considerations related to pain. Pain is commonly cited as a barrier to participation in meeting physical activity guidelines and/or participating in exercise with people fearful of aggravating pain and many believing that exercise will cause damage. Knowing how to optimize physical activity and exercise through programme design, agreeing on an appropriate exercise dose (frequency, intensity, type and time), pacing, knowing when to rest and when to progress exercise can be challenging and physiotherapists are ideally placed to guide individuals living with pain through this process.

### Learning Outcomes Mapped to EFIC Pain Physiotherapy Curriculum

By the end of the session participants should be able to:

#### Assessment

1. Demonstrate ability to utilise a person-centred approach and achieve an understanding of how pain affects the physical function, Physical activity and exercise participation
2. Demonstrate knowledge of key elements of assessing physical function, physical activity and exercise participation in daily life (functional tests and capacity evaluations)
3. Demonstrate knowledge of key elements of pre exercise screening
4. Demonstrate critical selection of appropriate valid and reliable physical and psychological assessment and outcome measures across International Classification of Functioning, Disability and Health (ICF) domains

#### Treatment

5. Demonstrate and apply knowledge of evidence based physical activity and exercise prescription in the management of chronic pain
6. Demonstrate ability to modify physical activity and exercise as necessary based on factors including pain state
7. Recognise the importance of identifying and addressing psychosocial factors regarding ability to comply with individualised exercise prescription and physical activity/ activities of daily living (ADLs) e.g. fear avoidance, catastrophizing
8. Demonstrate ability to incorporate patient education in exercise prescription regarding, goal setting, coping, pacing, motivation, graded activity, graded exposure

### Preparation

Recommend review ACSM Physical Activity Guidelines

## Content

Evidence regarding benefits of physical activity and exercise and optimal dose for pain management

Consideration of challenges of prescribing exercise for people living with pain- interactive Q & A with participants

Pre Exercise Screening guidelines

Setting goals, Choosing target programme outcomes

Special Considerations for Exercise Prescription for Pain Population

Closing Q & A Participants will be encouraged to actively contribute to the session by sharing their own knowledge and experience regarding PA promotion and Exercise Prescription

## Follow up / suggestions for processing and practice

Revisit fundamental principles of prescribing different categories of exercise (strength, aerobic, flexibility, neuromuscular exercise). All still apply but some unique considerations are required for people living with pain in terms of pre exercise screening and exercise programme design and delivery.

## Reference material

American College of Sports Medicine Physical Activity Guidelines <https://www.acsm.org/education-resources/trending-topics-resources/physical-activity-guidelines> last accessed January, 2023

Boutevillain L, Dupeyron A, Rouch C, Richard E, Coudeyre E. Facilitators and barriers to physical activity in people with chronic low back pain: A qualitative study. PLoS One, 2017. 12(7): p. e0179826.

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. 4: p. Cd011279.

Physiopedia: Exercise and Activity in Pain Management. <https://www.physio-pedia.com/> last accessed January, 2023

Vaegter HB, Jones MD. Exercise-induced hypoalgesia after acute and regular exercise: experimental and clinical manifestations and possible mechanisms in individuals with and without pain. Pain Rep, 2020. 5(5): p.e823.

Vorensky M, Murray T, McGovern AF, Patel YY, Rao S, Batavia M. Effect of integrated exercise therapy and psychosocial interventions on self-efficacy in patients with chronic low back pain: A systematic review. J Psychosom Res. 2022 Dec 25;165:111126. doi: 10.1016/j.jpsychores.2022.111126. Epub ahead of print. PMID: 36610335.

Ram AK, Summers SJ, Booth J, Gibbs MT, Jones MD. Higher intensity exercise reduces disability more than lower intensity exercise in adults with chronic low back pain: A systematic review and meta-analysis. *Musculoskeletal Care*. 2023 Jan 16. doi: 10.1002/msc.1734. Epub ahead of print. PMID: 36647210.

Taulaniemi A, Kankaanpää M, Rinne M, Tokola K, Parkkari J, Suni JH. Fear-avoidance beliefs are associated with exercise adherence: secondary analysis of a randomised controlled trial (RCT) among female healthcare workers with recurrent low back pain. *BMC Sports Sci Med Rehabil*. 2020 May 4;12:28. doi: 10.1186/s13102-020-00177-w. PMID: 32391158; PMCID: PMC7197113.