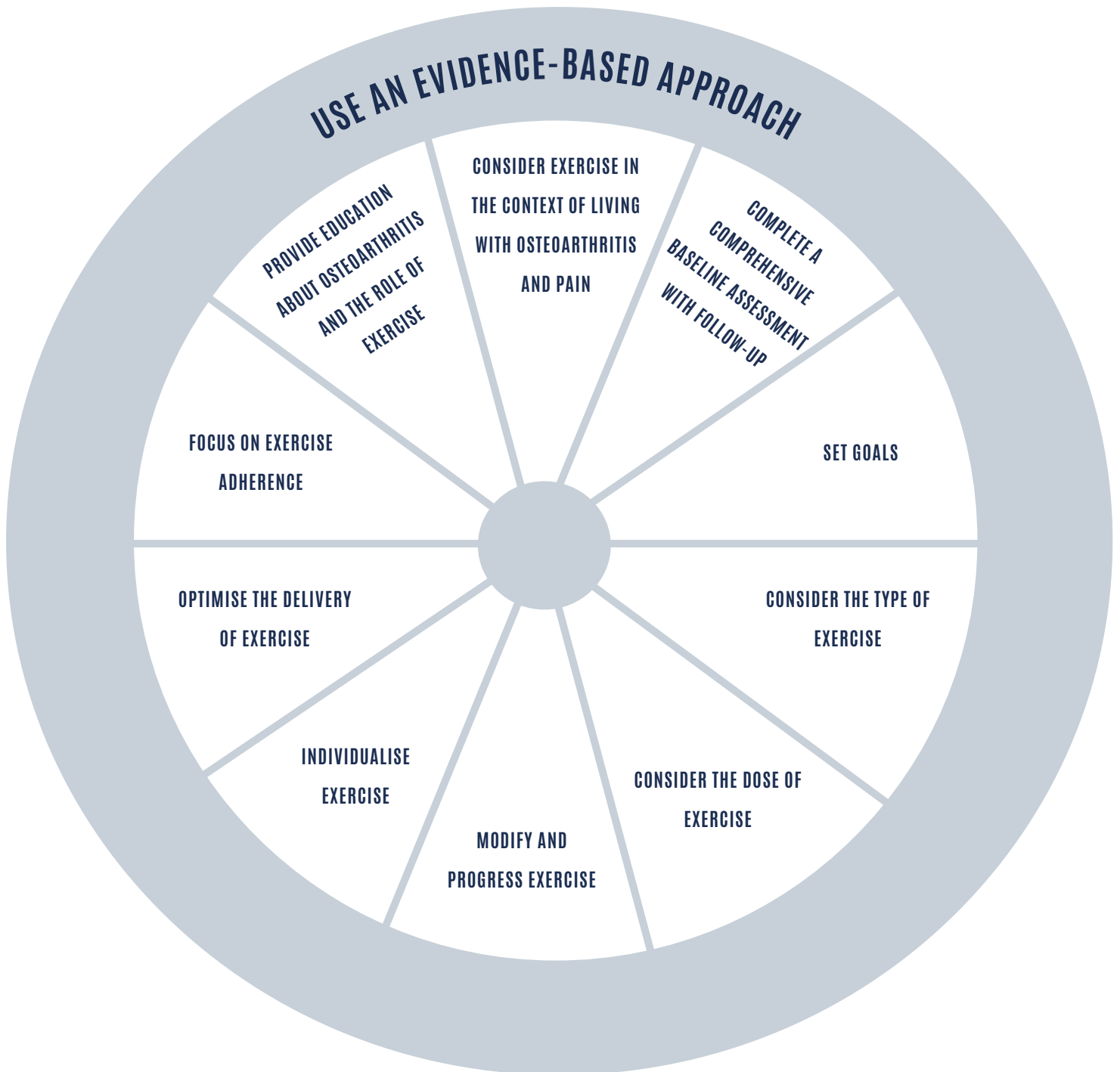




**Recommendations for the  
delivery of therapeutic  
exercise for people with knee  
and/or hip osteoarthritis**

**AN INTERNATIONAL CONSENSUS STUDY  
FROM THE OARSI REHABILITATION DISCUSSION GROUP**

# RECOMMENDATIONS SUMMARY



# 01: USE AN EVIDENCE-BASED APPROACH



1.1 Take into consideration best available evidence.

# 02: CONSIDER EXERCISE IN THE CONTEXT OF LIVING WITH OSTEOARTHRITIS AND PAIN

2.1 Ensure that the program promotes active self-management, and work with the individual to develop an osteoarthritis self-management plan that is sustainable in the long-term.

2.2 Empower the individual to have the skills and knowledge to self-manage their osteoarthritis now and in the future.

2.3 Be confident that a well-designed exercise program will not worsen the condition or prognosis of the individual.

2.4 Provide the individual with strategies for managing short-term increases in pain during and after exercise, including after exercise has been progressed or performed at a higher intensity.

2.5 Include a plan about how to modify the exercise program in response to an osteoarthritis flare up, so the individual is able to continue with the program.

# 03: COMPLETE A COMPREHENSIVE BASELINE ASSESSMENT WITH FOLLOW-UP

3.1 Complete a comprehensive baseline assessment to fully understand the individual's reported difficulties, physical limitations, functional restrictions and impact on participation, as well as any relevant psychosocial factors.

3.2 Check for red flags (indicating serious underlying pathology) and ensure that there are no contraindications to exercise.

3.3 Evaluate the individual's overall health (including comorbidities) and use this information to identify exercise precautions.

3.4 Establish baseline measurements and set targets to determine progress.

3.5 Monitor the individual's response to the exercise program over time.



# 04: SET GOALS



4.1 Collaborate with the individual to establish meaningful and mutually agreeable goals.

4.2 Set functional goals that promote participation in daily activities.

4.3 Create an exercise program that aligns with the individual's goals.

4.4 Communicate exercise goals clearly to the individual in terms of the type, frequency, intensity, time/duration of exercise.

4.5 Set realistic expectations about the outcomes of exercise, including timeframes.

# 05: CONSIDER THE TYPE OF EXERCISE

5.1 Consider various kinds of exercise including aerobic, strengthening, neuromuscular training, flexibility training and balance training.

5.2 Select exercises that will directly address the impairments or functional limitations of the individual.

5.3 Provide a simple exercise program that relies on inexpensive and readily obtainable equipment, and can be easily reproduced at home.

5.4 Incorporate strategies to increase general physical activity levels for the individual if they are insufficiently physically active.



# 06: CONSIDER THE DOSE OF EXERCISE

6.1. Provide a sufficient dose of exercise (in terms of frequency, intensity, time/duration) to provide physiological benefits and clinically meaningful changes in line with the individual's goals.

6.2. Encourage the individual to exercise two or more times per week.

6.3. Determine an appropriate starting exercise dose for the individual.

6.4. Encourage a "long-term" rather than "episodic" approach to exercise participation.





# 07: MODIFY AND PROGRESS EXERCISE

7.1. Progress exercise appropriately for the individual, providing ways to incrementally increase or decrease the difficulty of the exercise.

7.2. Modify or progress exercises according to the individual's response (e.g. in response to an increase in muscle strength, or when the exercise has become too easy).

7.3. Progress the exercise program gradually, as long as the individual does not experience significant increases in pain or discomfort.

7.4. Modify exercise in response to any problem that the individual encounters (e.g. provide alternative exercises).

7.5. Provide clear guidance on when and how to modify and progress exercises.

# 08: INDIVIDUALISE EXERCISE



8.1. Ensure that the exercise program is tailored to the individual, taking into consideration any co-existing medical conditions, their level of pain, their physical and cognitive ability to participate in exercise, and their ability to perform the exercise on their own without supervision.

8.2. Tailor the exercise program to the individual based on assessment findings.

8.3. Focus on "the whole person" and not just the affected joint(s).

# 09: OPTIMISE THE DELIVERY OF EXERCISE

9.1. Provide instructions that are easy to follow.

9.2. Ensure that the exercise program is well understood by the individual (e.g. ask them to give you a demonstration and provide feedback as necessary).

9.3. Ensure that the individual is confident in their ability to complete the exercise program.

9.4. Create a strong therapeutic alliance. Build trust with the individual.

9.5. Listen to the individual and encourage open dialogue. Allow the individual to ask questions at any time.



# 10: FOCUS ON EXERCISE ADHERENCE



10.1. Motivate the individual to perform and adhere to the exercise program.

10.2. Address barriers and facilitators to exercise early, and work with the individual to develop personalized strategies to promote long-term adherence to their exercise program.

10.3. Ensure that the exercise program is achievable to enhance long-term adherence.

10.4. Provide the individual with feedback on performance and outcomes of exercise.

10.5. Be prepared with alternative options for the individual if adherence to the exercise program is challenging.

10.6. Look at ways that the individual can maintain the exercise program within the community when their treatment has been completed.

# 11: PROVIDE EDUCATION ABOUT OSTEOARTHRITIS AND THE ROLE OF EXERCISE

11.1. Provide advice and education to every individual with osteoarthritis.

11.2. Educate the individual about osteoarthritis, helping them make sense of osteoarthritis and the symptoms they are experiencing from a patient-centred perspective.

11.3. Use a positive approach when educating the individual about osteoarthritis, with lay terminology that is not perceived as harmful, and that reduces fear of exercise.

11.4. Explain the importance of daily physical activity for long-term health.

11.5. Explain the purpose of exercise in the treatment of osteoarthritis.

11.6. Explain the benefits of exercise for improving pain and function, and that exercise is an effective way to cope with osteoarthritis.

11.7. Emphasize that the benefits of exercise for osteoarthritis come with consistent exercise participation over time, like taking a medication to manage other diseases.

11.8. Explain that participating in exercise is not associated with higher risk of joint damage or joint replacement, and that short-term pain with exercise does not indicate damage.

11.9. Ensure that the individual understands the difference between osteoarthritis pain flare ups and expected pain with exercise (e.g. muscle soreness).

11.10. Address any fears that the individual has that are related to exercise.

11.11. Address any misconceptions about the effectiveness of exercise, the safety of exercise and about pain with exercise.



# DEVELOPMENT

These recommendations were developed using a multi-stage, evidence-informed international multi-disciplinary consensus process, briefly summarised below.



## Stage 1: Evidence synthesis

Existing literature about therapeutic exercise for knee and/or hip OA narratively summarised and published (1).



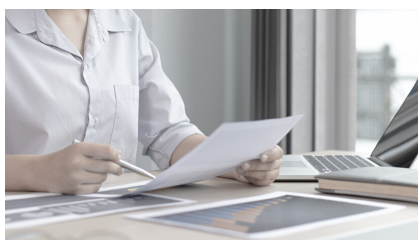
## Stage 2: Statement generation

Proposition statements about implementation of best practice therapeutic exercise for knee and/or hip OA developed by international, multi-disciplinary panel of experts.



## Stage 3: Consensus via e-Delphi technique

E-Delphi survey completed over three rounds with approximately two weeks between each. Only statements that achieved a consensus rating were retained for inclusion.



## Stage 4: Development of final set of recommendations

Remaining statements underwent a final round of cleaning and thematic analysis.

More detail about the development of the recommendations can be found: [publication details].

# ACKNOWLEDGEMENTS

These recommendations were developed by the OARSI Rehabilitation Discussion Group and involved a steering panel together with an international, multi-disciplinary panel of experts that included researchers/academics/clinical academics, health professionals and exercise providers, and people with knee and/or hip osteoarthritis.

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For full details on the development of the recommendations, see: (add reference)

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