

Online Supplementary File 1A. Interview guide for the patient group

Topic	Main question	Supplementary probing questions
Treatment for hip osteoarthritis (THA surgery)	What do you think about surgery as treatment for hip osteoarthritis?	<ol style="list-style-type: none"> 1. When and why did you start considering surgery as a treatment option? 2. How was the decision of surgery taken? 3. When do you know when you are ready for surgery? (physically and mentally) 4. How do you think the information was about the surgery, including risks and other treatments? 5. What expectations do you have for the surgery? 6. What do you consider to be the advantages of surgery? 7. What do you consider to be the disadvantages of surgery? 8. What is the main reason/motivation to undergo surgery? (or declining surgery)
Treatment for hip osteoarthritis (exercise)	What do you think about exercise as treatment for hip osteoarthritis?	<ol style="list-style-type: none"> 9. What treatments have you otherwise tried before surgery? (type, systematics and durations) 10. How have your experiences been with exercise? (type, systematic, duration and effect) 11. How have your experiences been with other treatments? (effect) 12. What do you consider to be the advantages of exercise? 13. What do you consider to be the disadvantages of exercise?
Participation in a clinical trial	CASE DESCRIPTION (Detailed information about the PROHIP trial)	<ol style="list-style-type: none"> 14. What do you think about participating in a trial where you are randomly being assigned to surgery (total hip arthroplasty) or exercise (with the option of later surgery if needed)? 15. What do you consider to be of importance to whether you would participate in the trial? 16. What would affect your considerations about participating in the trial?
Patient material and information	How would you prefer to receive information about this trial?	<ol style="list-style-type: none"> 17. When do you think, it is best to present the information about the trial for potential participants? 18. What do you think the patient information should contain?
Exercise protocol	If you were to participate in 12-weeks of exercise, how do think this should be?	<ol style="list-style-type: none"> 19. What do you think about resistance training in machines? 20. What significance do the physical frames have for you? (location, duration, and environment) <ul style="list-style-type: none"> • How many times a week is it possible for you to exercise? • How long would you spend on one training session? 21. What significance does it have for you, if you have to drive for the training sessions? 22. What significance does it have for you whether a physiotherapist supervises the training sessions? 23. How do you think you can continue to exercise on your own after a 12-week training program?

Outcomes	If we were to measure the effect of your surgery/exercise program – What do you consider is the most important thing to measure upon?	24. What else do you think is important to measure upon? 25. What is your main problem right now (due to hip osteoarthritis)? 26. How would you describe whether a surgery has been successful? 27. How would you describe whether an exercise program has been successful? 28. What do you think about the questionnaires you filled out? (Relevance, number of items, etc.)
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Online Supplementary File 1B. Interview guide for the clinician group

Topic	Main question	Supplementary probing questions
Treatment for hip osteoarthritis (surgery)	What do you think about surgery as treatment for hip osteoarthritis?	<ol style="list-style-type: none"> 1. How do you experience the patients' perception of surgery (THA) as treatment for hip osteoarthritis? 2. What do you experience patients with hip osteoarthritis indicate as main reason/motivation to undergo surgery? 3. What do you consider to be the advantages of surgery? 4. What do you consider to be the disadvantages of surgery? 5. When do you think a patient with hip osteoarthritis is eligible for a THA?
Treatment for hip osteoarthritis (exercise)	What do you think about exercise as treatment for hip osteoarthritis?	<ol style="list-style-type: none"> 6. How do you experience the patients' perception of exercise as treatment for hip osteoarthritis? 7. What do you experience patients with hip osteoarthritis indicate as main reason/motivation in choosing exercise rather than surgery? 8. What do you consider to be the advantages of exercise? 9. What do you consider to be the disadvantages of exercise? 10. When do you think a patient with hip osteoarthritis should try exercise instead of getting a THA? 11. How do you interpret the results of this trial?²⁰ 12. How have you experienced the debate on surgery (total knee arthroplasty) and exercise? 11. How do you think this debate affects the patients? 12. What do you consider to be the advantages of this debate? 13. What do you consider to be disadvantages of this debate?
Participation in a clinical trial	<p>CASE DESCRIPTION</p> <p>(Detailed information about the PROHIP trial)</p>	<ol style="list-style-type: none"> 14. What is your perception of a trial, in which patients are randomly assigned to surgery (THA) or exercise (with the option of later surgery if needed)? 15. What challenges do you consider there are in recruiting for a trial, in which patients are randomized to THA or resistance training? 16. How do you think it is ensured that clinician (e.g. orthopedic surgeons, physiotherapists, and nurses) do not color the patients' decision to participate? 17. How are orthopedic surgeons and physiotherapists motivated to participate in the trial? 18. How is collaboration between surgeons and physiotherapists in relation to the project created? 19. How would you conduct the screening and recruitment procedure in this trial? 20. What do you consider as of importance for whether patients with hip osteoarthritis will participate in the study?
Patient material and information	How do you think the patient information regarding the trial should be presented for potential participants?	<ol style="list-style-type: none"> 21. When do you think, it is best to present the information about the trial for potential participants?

Exercise protocol	How do you think the exercise intervention should be conducted in the trial?	22. What exercises do you think are relevant to include in the exercise program? 23. How long do you think one training session should last? 24. How do you think we will get the patients to continue to exercise after the 12-week intervention period?
Outcomes	Which outcome do you consider to be the primary to measure in patients with hip osteoarthritis?	25. Which secondary outcomes do you consider to be important to measure in patients with hip osteoarthritis? 26. What do you experience patients with hip osteoarthritis indicate as being the primary problem (symptoms/limitations) that is of importance to the treatment? 27. How would you describe whether surgery (THA) has been successful? 28. How would you describe whether exercise has been successful?

Online Supplementary File 1C. Interview guide for the decision maker group

Topic	Main question	Supplementary probing questions
Treatment for hip osteoarthritis (surgery)	What do you think about surgery as treatment for hip osteoarthritis?	<ol style="list-style-type: none"> 1. How do you experience the patients' perception of surgery (THA) as treatment for hip osteoarthritis? 2. What do you consider to be the advantages of surgery? 3. What do you consider to be the disadvantages of surgery?
Treatment for hip osteoarthritis (exercise)	What do you think about exercise as treatment for hip osteoarthritis?	<ol style="list-style-type: none"> 4. How do you experience the patients' perception of exercise as treatment for hip osteoarthritis? 5. What do you consider to be the advantages of exercise? 6. What do you consider to be the disadvantages of exercise? 7. How do you interpret the results of this trial?²⁰ 8. How do you think we can avoid this trial to encounter similar diverse attitudes from the "media"/colleagues? 9. How have you experienced the debate on surgery and exercise?
Participation in a clinical trial	CASE DESCRIPTION (Detailed information about the PROHIP trial)	<ol style="list-style-type: none"> 10. What is your perception of a trial, in which patients are randomly assigned to surgery (THA) or exercise (with the option of later surgery if needed)? 11. What challenges do you consider there are in recruiting for a trial, in which patients are randomized to THA or resistance training? 12. In case, the effect of resistance training is lower than surgery (THA), but withholds patients from undergoing surgery because the patients consider the non-surgical treatment as successful - how would you interpret the results? 13. What ethical considerations do you think are in this trial?
Patient material and information	What do you think the patient information should contain?	<ol style="list-style-type: none"> 14. How would you prefer to receive information about this trial? (Content and method) 15. When do you think, it is best to present the information about the trial for potential participants?
Implementation of findings	Which barriers and facilitators, do you think, affect the implementation of the results from the trial into clinical practice?	<ol style="list-style-type: none"> 16. What consequences do you think the trial may have politically in relation to the treatment of patients with hip osteoarthritis? 17. What consequences do you think the trial may have on clinical practice? 18. What challenges do you think there may be in implementing the results from the trial into clinical practice? 19. Which factors do you think will be decisive for a successful implementation of the results from the trial into clinical practice? 20. How do you think that we may optimize the implementation of the results from the trial into clinical practice?