

## Supplementary file 1. Search terms (Medline)

1. *MH 'Osteoarthritis, Knee'*

2. *osteoarthr\**

3. *degenerative N2 arthritis*

4. *arthrosis*

5. *OA*

6. *2 OR 3 OR 4 OR 5*

7. *MH 'Knee'*

8. *Knee\**

9. *7 OR 8*

10. *6 AND 9*

11. *1 OR 10*

12. *MH 'Resistance Training'*

13. *MH 'Plyometric Exercise'*

14. *MH 'Hydrotherapy'*

15. *MH 'Isometric Contraction' OR 'isotonic contraction'*

16. *(resist\* OR strength\* OR plyomet\* OR isomet\* or isoton\* OR isokinet\* OR weight\*) N5  
(exercis\* OR train\*)*

17. *hydrotherapy\* OR aquat\**

18. *exercis\**

19. *rehabil\**

20. *kinesiotherap\**

21. *physiotherap\**

22. *physical therap\**

23. *muscle strength\**

24. *neuromusc\* N5 (exercis\* OR train\* OR strength\*)*

25. *12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24*

26. *11 AND 25*

## Supplementary file 2. Hierarchy of patient-reported outcome measures

### Patient-reported pain:

1. Global pain
2. Pain on walking
3. Western Ontario and McMaster Osteoarthritis Index (WOMAC) osteoarthritis pain subscore.
4. Composite pain scores other than WOMAC.
5. Pain on activities other than walking.
6. Pain at rest or pain during the night.
7. WOMAC global algofunctional score.
8. Lequesne Osteoarthritis Index global score.
9. Other algofunctional scale

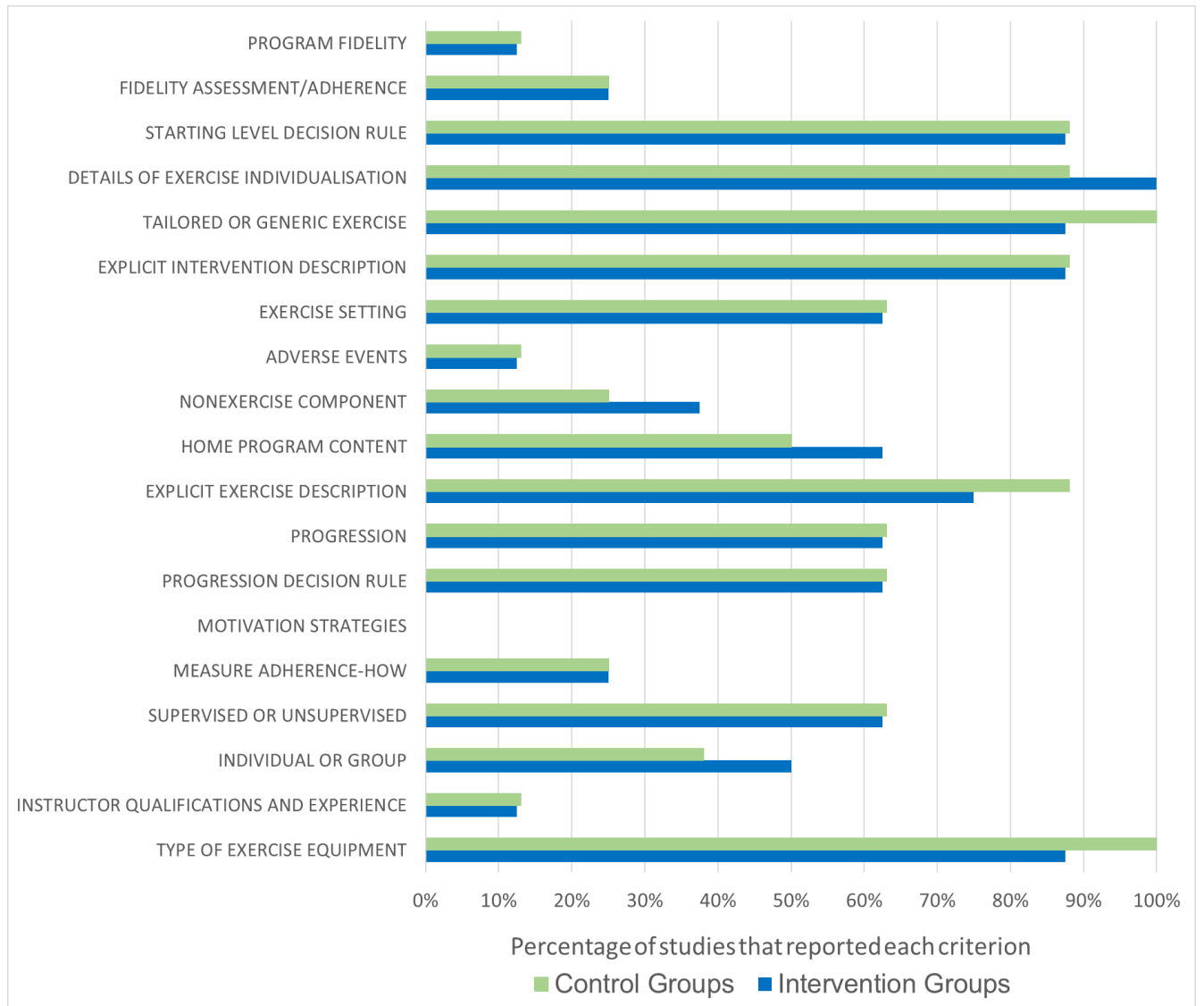
### Patient-reported function:

1. Global disability score.
2. Walking disability.
3. WOMAC disability subscore.
4. Composite disability scores other than WOMAC.
5. Disability other than walking.
6. WOMAC global scale.
7. Lequesne Osteoarthritis Index global score.
8. Other algofunctional scale.

### Patient-reported Quality of Life:

1. Short Form (SF)-36, Mental Component Summary (MCS).
2. SF-12 MCS
3. EuroQoL.
4. Sickness Impact Profile (SIP)
5. Nottingham Health Profile (NHP)
6. Other quality of life scales.

**Supplementary file 3.** Consensus on Exercises Reporting Template (CERT) for the intervention and control groups.



**Supplementary file 4. Risk of bias (PEDro) score**

<b>Study</b>	<b>Quality</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>Total</b>
Ashok et al <sup>38</sup>	Low	0	1	0	1	0	0	0	1	1	1	1	6*
Bennell et al <sup>18</sup>	High	1	1	1	1	0	0	1	0	1	1	1	7
Callaghan et al <sup>40</sup>	Low	1	1	0	0	0	0	1	0	0	1	1	4
Chaipinyo et al <sup>35</sup>	High	1	1	1	1	0	0	1	1	0	1	1	7
Olagbegi et al <sup>36</sup>	Low	1	1	0	1	0	0	0	0	1	1	1	5*
Ozdinler et al <sup>39</sup>	Low	0	1	0	1	0	0	0	1	0	1	1	5
Singh et al <sup>37</sup>	Low	0	1	0	1	0	0	1	1	0	1	1	6
Verma et al <sup>19</sup>	Low	0	1	1	1	0	0	0	1	1	1	1	7*

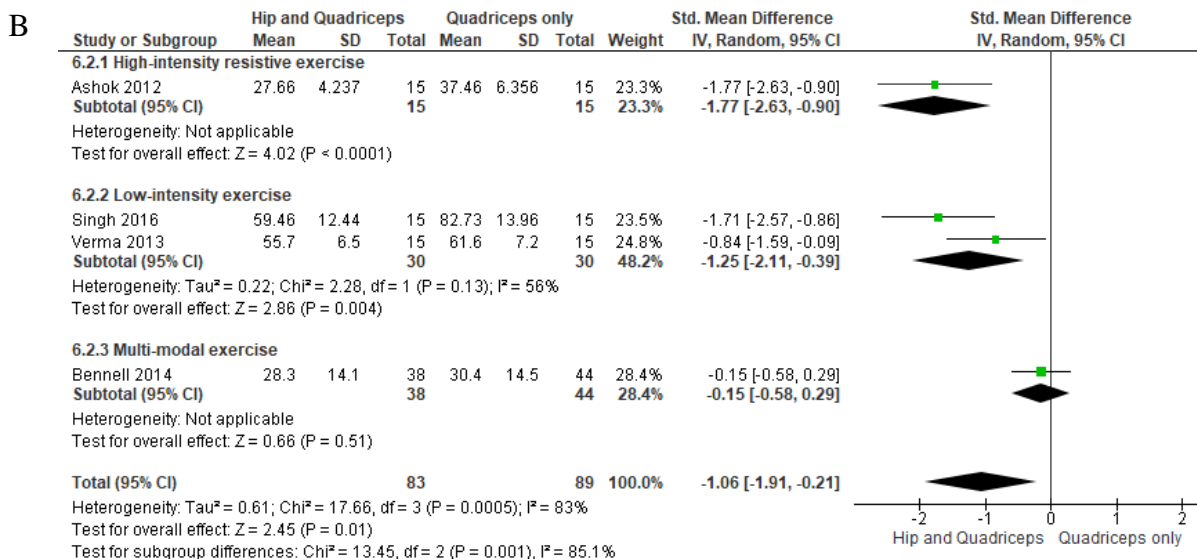
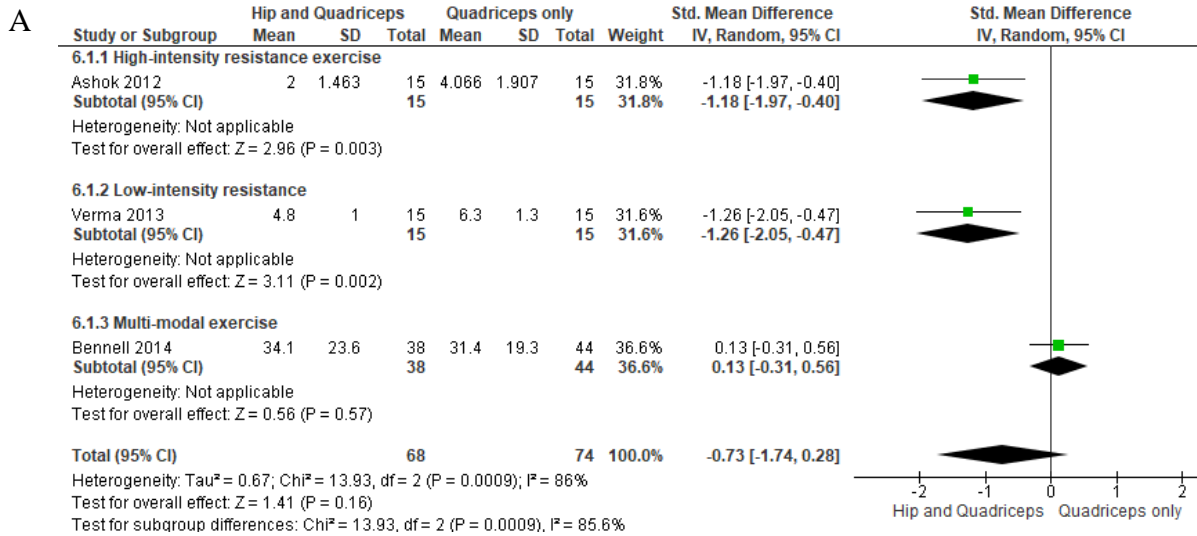
\* Study rated by authors (ACH, MD)

**Supplementary file 5.** Quality of evidence for each meta-analysis (GRADE)

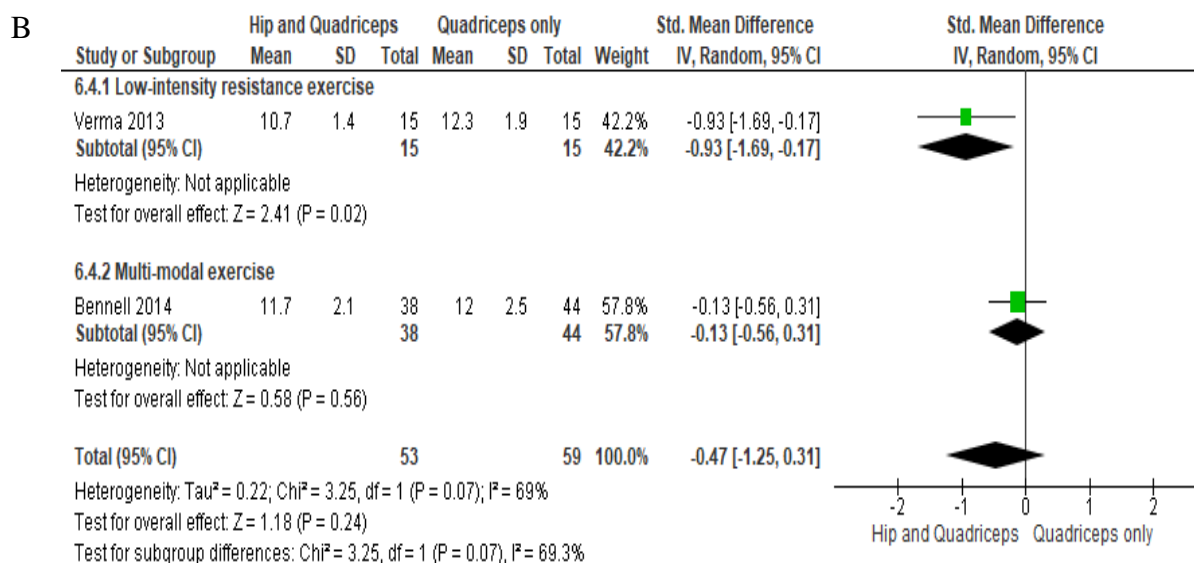
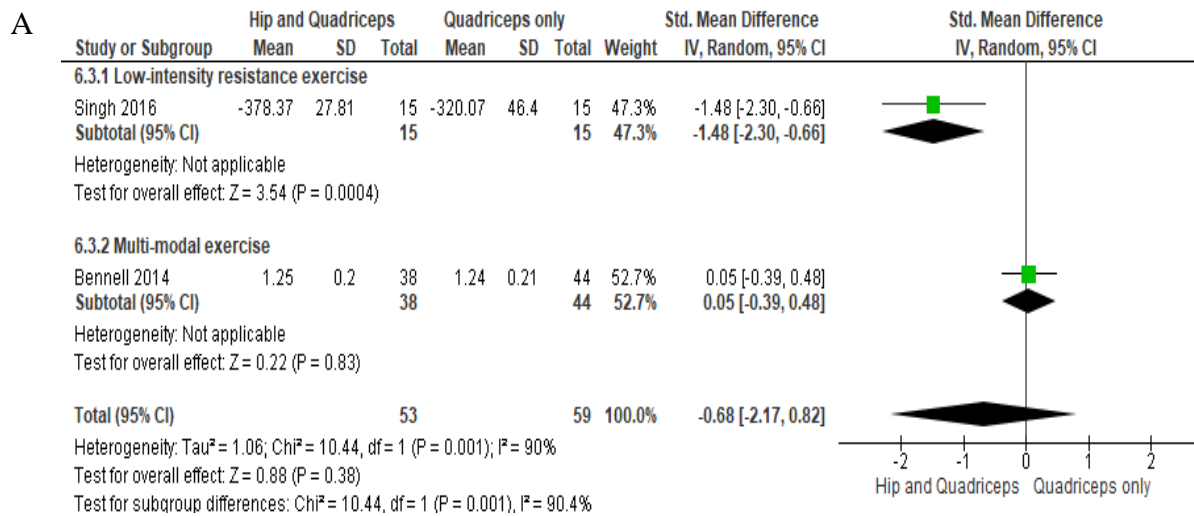
Outcome	Meta-analysis		Risk of bias*	Inconsistency <sup>§</sup>	Indirectness <sup>†</sup>	Imprecision <sup>‡</sup>	Level of Evidence
<b><i>Patient-reported outcomes:</i></b>							
Pain	Overall:	High-intensity resistance <sup>38</sup> ; low-intensity resistance <sup>19</sup> ; FNM <sup>35,36</sup> ; multi-modal <sup>18</sup>	X	X	X		very low
	<i>Sub-group analysis:</i>	FNM <sup>35,36</sup>		X	X	X	very low
Function	Overall:	High-intensity resistance <sup>38</sup> ; low intensity resistance <sup>19,37</sup> ; FNM <sup>35</sup> ; multi-modal <sup>18</sup>	X	X	X	X	very low
	<i>Sub-group analysis:</i>	Low-intensity resistance exercise <sup>19,37</sup>	X	X		X	very low
<b><i>Physical function tests:</i></b>							
Walk test	Overall:	Low-intensity resistance <sup>37</sup> ; FNM <sup>35,36</sup> ; multimodal <sup>18</sup>		X	X	X	very low
	<i>Sub-group analysis:</i>	FNM <sup>35,36</sup>			X	X	low
Sit to stand	Overall:	Low-intensity resistance <sup>19</sup> ; FNM <sup>35</sup> ; multi-modal <sup>18</sup>		X	X	X	very low
Stair negotiation	Overall:	FNM <sup>35,39</sup> ; multi-modal <sup>18</sup>		X	X	X	very low
	<i>Sub-group analysis</i>	FNM <sup>35,39</sup>				X	moderate
Balance step-test	Overall:	Low-intensity resistance <sup>19</sup> ; multi-modal <sup>18</sup>		X	X	X	very low

PRO, patient-reported outcome. FNM, functional neuromuscular. Overall = includes all different types of hip strengthening exercises. X\* = majority of studies were of low quality (PEDRO ≤6). X<sup>§</sup> = (I<sup>2</sup> ≥50%). X<sup>†</sup> = clinical heterogeneity, variations in exercise for hip exercises, or comparison exercises across the studies included in the meta-analysis. X<sup>‡</sup> = indicates that upper or lower confidence interval was 0.5 in either direction.

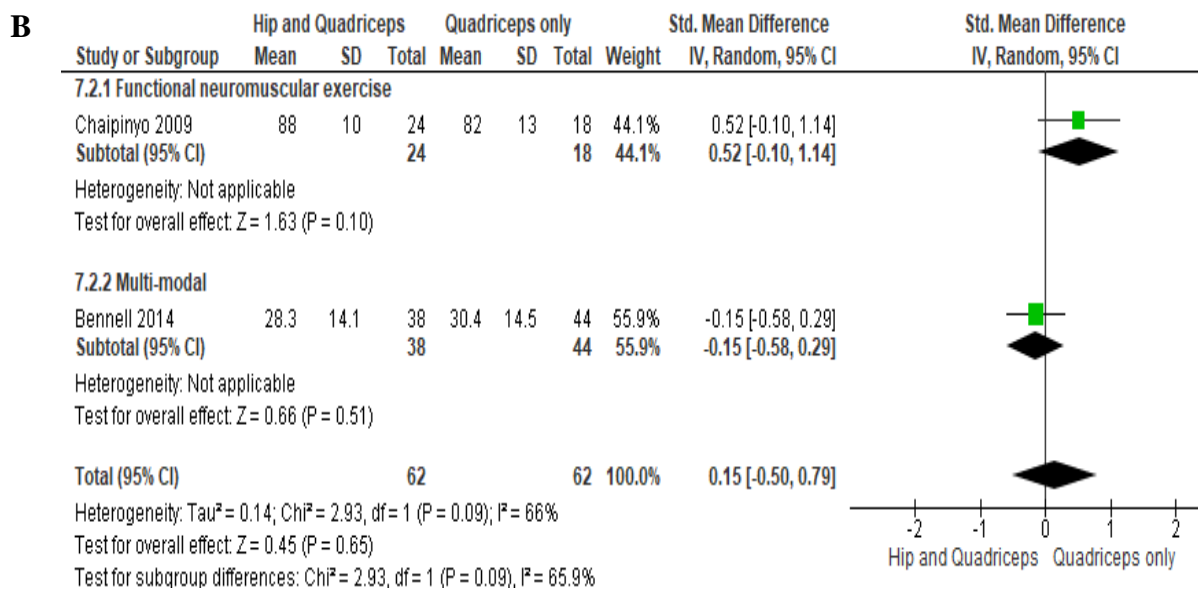
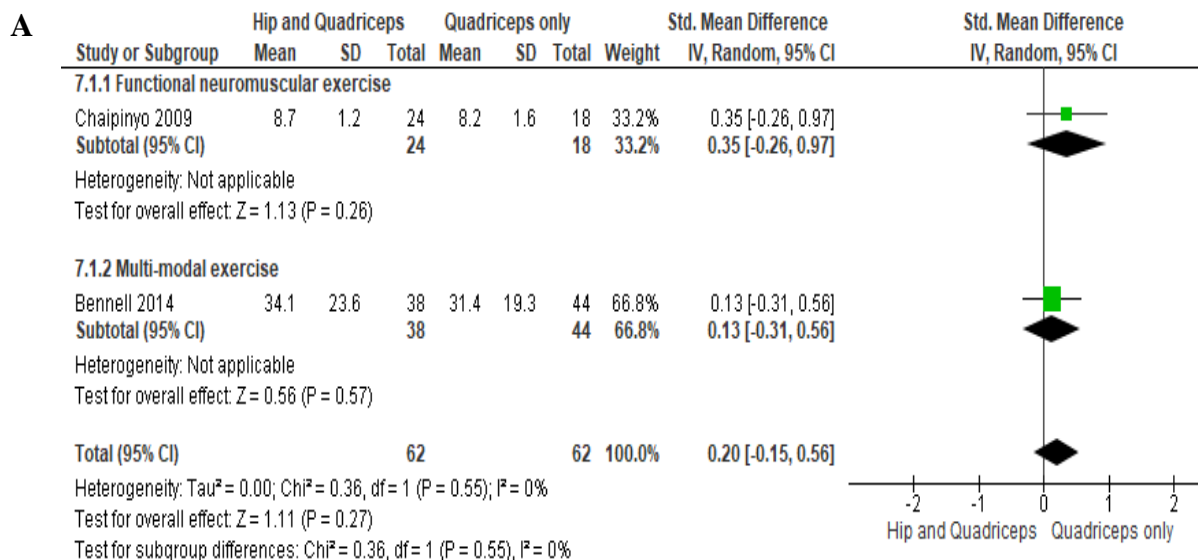
**Supplementary file 6. Patient-reported outcomes in medial KOA. A, pain. B, function.**



**Supplementary file 7. Physical function tests in medial KOA. A, walking. B, sit to stand.**



**Supplementary file 8.** Sensitivity analysis of high-quality trials. Patient reported outcomes.  
A, pain. B, function.





**Supplementary file 9.** Sensitivity analysis of high-quality trials. Physical function tests. A, Walking. B, sit to stand.

