Supplemental Material

Table 1. Study quality on the PEDro scale

Study	1	2	3	4	5	6	7	8	9	10	11	Total
1. Coroian et al, 2017[12]	✓	✓		✓			✓	✓	✓	✓	✓	6
2. Gharib & Mohamed, 2017[13]	✓	✓		✓				✓		✓	✓	7
3. Singhal et al, 2017[14]	✓	✓		✓						✓	✓	4
4. Chen et al, 2015[15]	✓	✓		✓						✓	✓	4
5. Sen et al, 2015[16]	✓	✓		✓				✓		✓	✓	5
6. Lee et al, 2013[17]	✓	✓		✓				✓		✓	✓	5
7. Milot et al, 2013[18]	✓	✓		✓			✓	✓	✓	✓	✓	7
8. Sekhar et al, 2013[19]	✓	✓		✓				✓		✓	✓	5
9. Shimodozono et al, 2010[20]	✓			✓				✓		✓	✓	4
10. Kim et al, 2008[21]		✓		✓				✓		✓	✓	5
11. Seo et al, 2003[22]				✓						✓	✓	3
12. Kim et al, 2001[23]	✓	✓		✓			✓	✓	✓	✓	✓	7
13. Engardt et al, 1995[24]				✓				✓	✓	✓	✓	5

1: eligibility criteria and source of participants; 2: random allocation; 3: concealed allocation; 4: baseline comparability; 5: blinded participants; 6: blinded therapists;7: blind assessors; 8: adequate follow-up; 9: intention-to-treat analysis; 10: between-group comparisons; 11: point estimates and variability.

*Item 1 does not contribute to the total score

Electronic Supplementary File 1: Search strategy MEDLINE via PUBMED

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1. Randomized Controlled Trials/
2. Random allocation/
3. Controlled Clinical Trials/
4. Control groups/
5. Clinical trials/ or clinical trials, phase i/ or clinical trials, phase ii/ or clinical trials, phase iii/ or clinical trials, phase iv/
6. Clinical Trials Data Monitoring Committees/
7. Double-blind method/
8. Single-blind method/
9. Placebos/
10. Placebo effect/
11. Cross-over studies/
12. Multicenter Studies/
13. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12
14. Strokes
15. Cerebrovascular Accident
16. Cerebrovascular Accidents
17. CVA (Cerebrovascular Accident)
18. CVAs (Cerebrovascular Accident)
19. Cerebrovascular Apoplexy
20. Apoplexy, Cerebrovascular
21. Vascular Accident, Brain
22. Brain Vascular Accident
23. Brain Vascular Accidents
24. Vascular Accidents, Brain
25. Cerebrovascular Stroke
26. Cerebrovascular Strokes
27. Stroke, Cerebrovascular
28. Strokes, Cerebrovascular
29. Apoplexy
30. Cerebral Stroke
31. Cerebral Strokes

32. Stroke, Cerebral
33. Strokes, Cerebral
34. Stroke, Acute
35. Acute Stroke
36. Acute Strokes
37. Strokes, Acute
38. Cerebrovascular Accident, Acute
39. Acute Cerebrovascular Accident
40. Acute Cerebrovascular Accidents
41. Cerebrovascular Accidents, Acute
42. 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38 OR 39 OR 40 OR 41
43. Dynamometer, Muscle Strength
44. Dynamometers, Muscle Strength
45. Muscle Strength Dynamometers
46. Muscle Strength Dynamometer
47. Training, Resistance
48. Strength Training
49. Training, Strength
50. Weight-Lifting Strengthening Program
51. Strengthening Program, Weight-Lifting
52. Strengthening Programs, Weight-Lifting
53. Weight Lifting Strengthening Program
54. Weight-Lifting Strengthening Programs
55. Weight-Lifting Exercise Program
56. Exercise Program, Weight-Lifting
57. Exercise Programs, Weight-Lifting
58. Weight Lifting Exercise Program
59. Weight-Lifting Exercise Programs
60. Weight-Bearing Strengthening Program
61. Strengthening Program, Weight-Bearing
62. Strengthening Programs, Weight-Bearing
63. Weight Bearing Strengthening Program

64. Weight-Bearing Strengthening Programs
65. Weight-Bearing Exercise Program
66. Exercise Program, Weight-Bearing
67. Exercise Programs, Weight-Bearing
68. Weight Bearing Exercise Program
69. Weight-Bearing Exercise Programs
70. 43 OR 44 OR 45 OR 46 OR 47 OR 48 OR 49 OR 50 OR 51 OR 52 OR 53 OR 54 OR 55 OR 56 OR 57 OR 58 OR 59 OR 60 OR 61 OR 62 OR 63 OR 64 OR 65 OR 66 OR 67 OR 68 OR 69
71. 13 AND 42 AND 70

Electronic Supplementary File 2: Summary of findings:

Isokinetic strength training compared to Conventional Rehabilitation for Stroke

Patient or population: Stroke
Setting: Clinical Rehabilitation
Intervention: Isokinetic strength training
Comparison: Conventional Rehabilitation

Outcomes	**Anticipated absolute effects*** (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	WMD in Conventional Rehabilitation	**WMD in Isokinetic strength training**				
Isokinetic strength - Knee Extension	-	-	-	146 (5 RCTs)	⨁⨁⨁◯ MODERATE [a]	
Timed Up and Go (TUG)	The mean timed Up and Go was **-2.51** seconds	The mean timed Up and Go in the intervention group was 3,23 seconds lower (5,51 lower to 0,96 lower)	-	141 (5 RCTs)	⨁⨁⨁◯ MODERATE [a]	
Gait Speed	-	-	-	137 (5 RCTs)	⨁⨁◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).
CI: Confidence interval; **SMD:** Standardised mean difference; **WMD:** Weighted mean difference

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations
a. Studies without allocation concealment, random allocation, and/or sample size calculation.
b. Meta-analysis with statistical significance in heterogeneity test and high I^2. I^2=43%

Electronic Supplementary File 3. Articles excluded from the full-text eligibility analysis.

Study	Population	Intervention	Study Design	Outcomes
Ghroubi S, Kossemtini W, Mahersi S, Elleuch W, Chaabene M, Elleuch MH. Contribution of isokinetic muscle strengthening in the rehabilitation of obese subjects. Ann Phys Rehabil Med. 2016;59(2):87-93. doi: 10.1016/j.rehab.2016.01.005.	Obese	§	§	§
Kim S, Cho HY, Kim KH, Lee SM. Effects of ankle biofeedback training on strength, balance, and gait in patients with stroke. J Phys Ther Sci. 2016;28(9):2596-2600.	§	Biofeedback training	§	§
Sin M, Kim WS, Park D, Min YS, Kim WJ, Cho K, Paik NJ. Electromyographic analysis of upper limb muscles during standardized isotonic and isokinetic robotic exercise of spastic elbow in patients with stroke. J Electromyogr Kinesiol.	§	§	Nonrandomized trial	§

2014;24(1):11-7. doi: 10.1016/j.jelekin.2013.10.002.				
Chang JJ, Tung WL, Wu WL, Huang MH, Su FC. Effects of robot-aided bilateral force-induced isokinetic arm training combined with conventional rehabilitation on arm motor function in patients with chronic stroke. Arch Phys Med Rehabil 2007;88(10):1332–8.	§	§	Nonrandomized trial	§
Teixeira-Salmela LF, Olney SJ, Nadeau S, Brouwer B. Muscle strengthening and physical conditioning to reduce impairment and disability in chronic stroke survivors. Arch Phys Med Rehabil. 1999;80(10):1211-8.	§	Conventional muscle strengthening	§	§
Sharp SA, Brouwer BJ. Isokinetic strength training of the hemiparetic knee: effects on function and spasticity. Arch Phys Med Rehabil. 1997;78(11):1231-6.	§	§	Nonrandomized self-controlled trial.	§

Note: § = achieves inclusion criteria.