APPENDIX 1. SEARCH STRATEGY.

In Appendix A is the full electronic search strategies in:

- MEDLINE (Table SI)
- SCOPUS (Table SII)
- CENTRAL (Table SIII)

Table SI. Complete search strategy in the electronic database MEDLINE structured according to the PICO (Population Intervention Comparison Outcome) method

Search	PICO	Query
1	P	Search ((((((((("stroke"[MeSH Terms] OR "Stroke"[Title/Abstract]) OR "Cerebral Apoplexy"[Title/Abstract]) OR "Cerebrovascular Apoplexy"[Title/Abstract]) OR "Cerebrovascular Accident"[Title/Abstract]) OR "Cerebrovascular Accidents"[Title/Abstract]) OR "Cerebral Vascular Accident"[Title/Abstract]) OR "Cerebral Vascular Accidents"[Title/Abstract]) OR "CVA"[Title/Abstract]) OR "CVAs"[Title/Abstract])) AND ((("Acute"[Title/Abstract]) OR "Subacute"[Title/Abstract]) OR "Sub-acute"[Title/Abstract])
2	O	Search ((("Muscle, Skeletal"[Mesh] OR "Skeletal Muscle"[Title/Abstract]) OR "Muscular atrophy"[MeSH Terms] OR "Muscular atrophy"[Title/Abstract]) OR "Muscular atrophies"[Title/Abstract]) OR "Muscular atrophia"[Title/Abstract]) OR "Muscle Wasting"[Title/Abstract]) OR "Muscle Degeneration"[Title/Abstract]) OR "Sarcopenia"[MeSH Terms]) OR "Sarcopenia"[Title/Abstract]) OR "Sarcopenic"[Title/Abstract]) OR "Muscle mass"[Title/Abstract]) OR "Lean mass"[Title/Abstract]) OR "Lean tissue"[Title/Abstract]) OR "Muscle Strength"[MeSH Terms]) OR "Muscle Strength"[Title/Abstract]) OR "Muscle Strengths"[Title/Abstract]) OR "Muscular Strength"[Title/Abstract]) OR "Muscular Power"[Title/Abstract]) OR "Muscular Force"[Title/Abstract]) OR "Muscle Power"[Title/Abstract]) OR "Muscle Force"[Title/Abstract]) OR "Muscle Weakness"[MeSH Terms]) OR "Muscle Weakness"[Title/Abstract]) OR "Muscle Weaknesses"[Title/Abstract]) OR "Muscle Weakening"[Title/Abstract]) OR "Muscular Weakness"[Title/Abstract]) OR "Paresis"[MeSH Terms]) OR "Paresis"[Title/Abstract]) OR "Paretic"[Title/Abstract]) OR "Muscle function"[Title/Abstract]) OR "Muscle functions"[Title/Abstract]) OR "Muscle functioning"[Title/Abstract]) OR "Muscle functionality"[Title/Abstract]) OR "Muscle Performance"[Title/Abstract]) OR "Muscle Work"[Title/Abstract]) OR "Muscular Function"[Title/Abstract]) OR "Muscular Work"[Title/Abstract]) OR "Muscular Effort"[Title/Abstract]) OR "Muscle structure"[Title/Abstract]) OR "Muscle structures"[Title/Abstract]) OR "Muscle size"[Title/Abstract]) OR "Muscle sizes"[Title/Abstract]) OR "Muscle volume"[Title/Abstract]) OR "Muscle volumes"[Title/Abstract]) OR "Muscle thickness"[Title/Abstract]) OR "Muscle fibers, Skeletal"[MeSH Terms]) OR "Muscle fibre"[Title/Abstract]) OR "Muscle fibres"[Title/Abstract]) OR "Muscle fiber"[Title/Abstract]) OR "Muscle fibers"[Title/Abstract]) OR "Muscle fibers, Slow-Twitch"[MeSH Terms]) OR "Slow-Twitch"[Title/Abstract]) OR "Muscle fibers, Fast-Twitch"[MeSH Terms]) OR "Fast-Twitch"[Title/Abstract]) OR "Motor unit"[Title/Abstract]) OR "Motor units"[Title/Abstract]))))))))))
3	PO	Search (#1 AND #2)

Search 3 was used to find eligible records

Table SII. Complete search strategy in the electronic database SCOPUS structured according to the PICO (Population Intervention Comparison Outcome) method

Search	PICO	Query
1	P	Search ((TITLE-ABS-KEY (stroke)) OR (TITLE-ABS-KEY ("Cerebrovascular Apoplexy")) OR (TITLE-ABS-KEY ("Cerebral Apoplexy")) OR (TITLE-ABS-KEY ("Cerebrovascular Accident")) OR (TITLE-ABS-KEY ("Cerebrovascular Accidents")) OR (TITLE-ABS-KEY ("Cerebral Vascular Accident")) OR (TITLE-ABS-KEY ("Cerebral Vascular Accidents")) OR (TITLE-ABS-KEY (cva)) OR (TITLE-ABS-KEY (cvas))) AND ((TITLE-ABS-KEY (acute)) OR (TITLE-ABS-KEY (subacute)) OR (TITLE-ABS-KEY (sub-acute)))
2	O	(TITLE-ABS-KEY ("Skeletal muscle")) OR (TITLE-ABS-KEY ("Muscular atrophy")) OR (TITLE-ABS-KEY ("Muscular atrophies")) OR (TITLE-ABS-KEY ("Muscular atrophia")) OR (TITLE-ABS-KEY ("Muscle Wasting")) OR (TITLE-ABS-KEY ("Muscle Degeneration")) OR (TITLE-ABS-KEY ("Sarcopenia")) OR (TITLE-ABS-KEY (sarcopenic)) OR (TITLE-ABS-KEY ("Muscle Mass")) OR (TITLE-ABS-KEY ("Lean mass")) OR (TITLE-ABS-KEY ("Lean tissue")) OR (TITLE-ABS-KEY ("Muscle strength")) OR (TITLE-ABS-KEY ("Muscle strengths")) OR (TITLE-ABS-KEY ("Muscular Strength")) OR (TITLE-ABS-KEY ("Muscle Force")) OR (TITLE-ABS-KEY ("Muscular Force")) OR (TITLE-ABS-KEY ("Muscle Power")) OR (TITLE-ABS-KEY ("Muscular Power")) OR (TITLE-ABS-KEY ("Muscle weakness")) OR (TITLE-ABS-KEY ("Muscle weaknesses")) OR (TITLE-ABS-KEY ("Muscle Weakening")) OR (TITLE-ABS-KEY ("Muscular Weakness")) OR (TITLE-ABS-KEY ("Paresis")) OR (TITLE-ABS-KEY ("Paretic")) OR (TITLE-ABS-KEY ("Muscle function")) OR (TITLE-ABS-KEY ("Muscle functions")) OR (TITLE-ABS-KEY ("Muscle functioning")) OR (TITLE-ABS-KEY ("Muscle functionality")) OR (TITLE-ABS-KEY ("Muscle Performance")) OR (TITLE-ABS-KEY ("Muscle Work")) OR (TITLE-ABS-KEY ("Muscular Function")) OR (TITLE-ABS-KEY ("Muscular Work")) OR (TITLE-ABS-KEY ("Muscular Effort")) OR (TITLE-ABS-KEY ("Muscle structure")) OR (TITLE-ABS-KEY ("Muscle structures")) OR (TITLE-ABS-KEY ("Muscle size")) OR (TITLE-ABS-KEY ("Muscle sizes")) OR (TITLE-ABS-KEY ("Muscle volume")) OR (TITLE-ABS-KEY ("Muscle volumes")) OR (TITLE-ABS-KEY ("muscle thickness")) OR (TITLE-ABS-KEY ("Muscle fibre")) OR (TITLE-ABS-KEY ("Muscle fibres")) OR (TITLE-ABS-KEY ("Muscle fiber")) OR (TITLE-ABS-KEY ("Muscle fibers")) OR (TITLE-ABS-KEY ("Slow-Twitch")) OR (TITLE-ABS-KEY ("Fast-Twitch")) OR (TITLE-ABS-KEY ("Motor unit")) OR (TITLE-ABS-KEY ("Motor units"))
3	PO	Search (#1 AND #2)

Search 3 was used to find eligible records

Table SIII. Complete search strategy in the electronic Cochrane Central Register of Controlled Trials (CENTRAL) according to the PICO (Population Intervention Comparison Outcome) method

Search	PICO	Query
1	P	MeSH descriptor: [Stroke] 1 tree(s) exploded
2	P	("stroke"): ti, ab, kw
3	P	("Cerebrovascular Accident"): ti, ab, kw
4	P	("Cerebrovascular Accidents"): ti, ab, kw
5	P	("Cerebral Vascular Accident"): ti, ab, kw
6	P	("Cerebral Vascular Accidents"): ti, ab, kw
7	P	("Cerebral Apoplexy"): ti, ab, kw
8	P	("Cerebrovascular Apoplexy"): ti, ab, kw
9	P	("CVA"): ti, ab, kw
10	P	("CVAs"): ti, ab, kw
11	P	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10
12	P	("Acute"): ti, ab, kw
13	P	("Subacute"): ti, ab, kw
14	P	("Sub-acute"): ti, ab kw
15	P	#12 OR #13 OR #14
16	P	#11 AND #15
17	O	MeSH descriptor: [Muscle, Skeletal] explode all trees
18	O	("Skeletal muscle"): ti, ab, kw
19	O	MeSH descriptor: [Muscular Atrophy] explode all trees
20	O	("Muscular Atrophy"): ti, ab, kw
21	O	("Muscular Atrophies"): ti, ab, kw
22	O	("Muscular Atrophia"): ti, ab, kw
23	O	("Muscle Wasting"): ti, ab, kw
24	O	("Muscle Degeneration"): ti, ab, kw
25	O	MeSH descriptor: [Sarcopenia] explode all trees
26	O	("Sarcopenia"): ti, ab, kw
27	O	("Sarcopenic"): ti, ab, kw
28	O	("Muscle Mass"): ti, ab, kw
29	O	("Lean Mass"): ti, ab, kw
30	O	("Lean Tissue"): ti, ab, kw
31	O	MeSH descriptor [Muscle Strength] explode all trees
32	O	("Muscle Strength"): ti, ab, kw
33	O	("Muscle Strengths"): ti, ab, kw
34	O	("Muscular Strength"): ti, ab, kw
35	O	("Muscle Force"): ti, ab, kw
36	O	("Muscular Force"): ti, ab, kw
37	O	("Muscle Power"): ti, ab, kw
38	O	("Muscular Power"): ti, ab, kw
39	O	MeSH descriptor: [Muscle Weakness] explode all trees
40	O	("Muscle Weakness"): ti, ab, kw
41	O	("Muscle Weaknesses"): ti, ab, kw
42	O	("Mucle Weakening"): ti, ab, kw
43	O	("Muscular Weakness"): ti, ab, kw
44	O	MeSH descriptor: [Paresis] explode all trees
45	O	("Paresis"): ti, ab, kw
46	O	("Paretic"): ti, ab, kw
47	O	("Muscle Function"): ti, ab, kw
48	O	("Muscle Functions"): ti, ab, kw
49	O	("Muscle Functioning"): ti, ab, kw
50	O	("Muscle Functionality"): ti, ab, kw
51	O	("Muscle Performance"): ti, ab, kw
52	O	("Muscle Work"): ti, ab, kw
53	O	("Muscular Function"): ti, ab, kw
54	O	("Muscular Work"): ti, ab, kw
55	O	("Muscular Effort"): ti, ab, kw
56	O	("Muscle Structure"): ti, ab, kw
57	O	("Muscular Structures"): ti, ab, kw
58	O	("Muscle Size"): ti, ab, kw
59	O	("Muscle Sizes"): ti, ab, kw
60	O	("Muscle Volume"): ti, ab, kw
61	O	("Muscle Volumes"): ti, ab, kw
62	O	("Muscle Thickness"): ti, ab, kw
63	O	MeSH descriptor: [Muscle Cells] explode all trees
64	O	("Muscle Fibre"): ti, ab, kw
65	O	("Muscle Fibres"): ti, ab, kw
66	O	("Muscle Fiber"): ti, ab, kw
67	O	("Muscle Fibers"): ti, ab, kw
68	O	MeSH descriptor : [Muscle Fibers, Fast-Twitch] explode all trees
69	O	("Fast-Twitch"): ti, ab, kw
70	O	MeSH descriptor : [Muscle Fibers, Slow-Twitch] explode all trees
71	O	("Slow-Twitch"): ti, ab, kw
72	O	MeSH descriptor: [Recruitment, Neurophysiological] explode all trees
73	O	("Motor Unit"): ti, ab, kw
74	O	("Motor Units"): ti, ab,kw
75	O	#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 OR #42 OR #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 OR #70 OR #71 OR #72 OR #73 OR #74
76	PO	#16 AND #75

Table SIII (Continued). Complete search strategy in the electronic Cochrane Central Register of Controlled Trials (CENTRAL) according to the PICO (Population Intervention Comparison Outcome) method

Search 76 was used to find eligible records

APPENDIX 2. RISK OF BIAS ASSESSMENT-JUDGEMENT CRITERIA.

Table SIV. Overview of the judgement criteria to assess risk of bias

Domain	Risk	Judgement criteria
Sampling bias	High	Recruitment of volunteers; a convenience sample; patients in only one centre; a specific target population within the eligibility criteria of this systematic review; patients with health problems other than stroke that could affect muscle characteristics.
	Unclear	Insufficient information to permit judgement of "Low risk" or "High risk"; or recruitment of the sample was not addressed.
	Low	The random sample is a truly representation of the target population.
Confounding bias	High	At least one of the following pre-specified confounding variables was not appropriately identified or not controlled for: Significant age differences between participants at study onset; intake of nutritional supplements (vitamin D, proteins), malnutrition or nutritional interventions; any comorbidity which occurred during the study that might influence the outcome measures of interest; the smoking or non-smoking status of the participants; the level of physical activity (e.g. amount of physical therapy,...) or mobility status (e.g. walking ability, wheelchair-bound) of the participants.
	Unclear	Insufficient information to permit judgement of "Low risk" or "High risk".
	Low	Researchers identified the following pre-specified confounding variables and used an appropriate analysis method that controlled for them: Significant age differences between participants at study onset; intake of nutritional supplements (vitamin D, proteins), malnutrition or nutritional interventions; any comorbidity which occurred during the study that might influence the outcome measures of interest; the smoking or non-smoking status of the participants; the level of physical activity (e.g. amount of physical therapy,...) or mobility status (e.g. walking ability, wheelchair-bound) of the participants.
Performance bias	High	A concurrent intervention or an unintended exposure was overlooked and might have caused bias results; or the study was unfaithful to the assessment protocol (e.g. not the same assessor, not the same time of the day, not the same instrument,…).
	Unclear	Insufficient information to permit judgement of "Low risk" or "High risk".
	Low	Researchers ruled out any impact from a concurrent intervention or an unintended exposure that might bias results; or the study maintained fidelity to the assessment protocol (e.g. same assessor, same time of the day, same instrument,...).
Detection bias	High	Validity, reliability or responsiveness of one or more outcomes was low that we expect serious confounding; or the outcome measurements of interest are not implemented consistently across all study participants.
	Unclear	Insufficient information to permit judgement of "Low risk" or "High risk".
	Low	All outcome measurements of interest are valid, reliable and responsive measures and implemented consistently across all study participants.
Attrition bias	High	Reason for missing data likely to be related to true outcome; Subjects lost to follow up likely to introduce bias (number lost more than 20% or description of those lost suggested different from those followed); Potentially inappropriate application of simple imputation.
	Unclear	Insufficient reporting of attrition/exclusions to permit judgement of "Low risk" or "High risk" (e.g. number not stated, no reasons for missing data provided); or the study did not address this outcome.
	Low	No missing data; Missing data have been imputed using appropriate methods; Reason for missing outcome data unlikely to be related to true outcome; Subjects lost to follow up unlikely to introduce bias (number lost less than or equal to 20% or description of those lost suggested no different from those followed).
Reporting bias	High	Not all of the study's pre-specified primary outcomes have been reported; One or more primary outcomes were reported using measurements, analysis methods or subsets of the data (e.g. subscales) that were not pre-specified; One or more reported primary outcomes were not pre-specified (unless clear justification for their reporting is provided, such as an unexpected adverse effect).
	Unclear	Insufficient information to permit judgement of "Low risk" or "High risk".
	Low	The study protocol is available and all of the study's pre-specified outcomes that are of interest in the review have been reported in the pre-specified way; The study protocol is not available but it is clear that the published reports include all expected outcomes, including those that were pre-specified (convincing text of this nature may be uncommon).