**Appendix**

**Search Strategy**

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| --- | --- | --- | --- |
| Database |  | Search syntax | Citations found |
| 1.

Embase | 1 | (Congestive heart failure OR "congestive cardiac failure" OR "congestive heart insufficiency" OR "cardiac failure" OR "heart decompensation" OR "heart failure" OR "left sided" OR "right sided" OR "myocardial failure"):ti,ab,kw,de | 419863 |
| 2 | Heart failure/exp | 1 |
| 3 | (Resistance training OR resistance exercise OR strength training OR exercise program):ti,ab,kw,de | 49124 |
| 4 | Resistance training/exp | 3123 |
| 5 | (Muscle strength OR “muscle force” OR “power” OR “muscular dynamic strength”):ti,ab,kw,de | 427296 |
| 6 | Muscle strength/exp | 72417 |
| 7 | (#1 OR #2) AND (#3 OR #4) AND (#5 OR #6) | 226 |
| 8 | #7 AND ('crossover procedure':de OR 'double-blind procedure':de OR 'randomized controlled trial':de OR 'single-blind procedure':de OR (random\* OR factorial\* OR crossover\* OR cross NEXT/1 over\* OR placebo\* OR doubl\* NEAR/1 blind\* OR singl\* NEAR/1 blind\* OR assign\* OR allocat\* OR volunteer\*):de,ab,ti) | 102 |
| 9 |  |  |
| 10 |  |  |
| MEDLINE | 1 | (Congestive heart failure OR "congestive cardiac failure" OR "congestive heart insufficiency" OR "cardiac failure" OR "heart decompensation" OR "heart failure" OR "left sided" OR "right sided" OR "myocardial failure").mp | 225152 |
| 2 | Exp Heart failure/ | 112072 |
| 3 | (Resistance training OR resistance exercise OR strength training OR exercise program).mp | 22632 |
| 4 | Exp Resistance training/ | 7234 |
| 5 | (Muscle strength OR muscle force OR muscle power OR muscular dynamic strength).mp | 35708 |
| 6 | Exp Muscle strength/ | 29547 |
| 7 | (1 OR 2) AND (3 OR 4) AND (5 OR 6) | 86 |
| 8 | 7 AND (randomized controlled trial.pt. or controlled clinical trial.pt. or randomi\*ed.ab. or placebo.ab. or drug therapy.fs. or randomly.ab. or trial.ab. or groups.ab. not (exp animals/ not humans.sh.)) | 47 |
| 9 |  |  |
| 10 |  |  |
| 3) CENTRAL | 1 | (Congestive heart failure OR "congestive cardiac failure" OR "congestive heart insufficiency" OR "cardiac failure" OR "heart decompensation" OR "heart failure" OR "left sided" OR "right sided" OR "myocardial failure"):ti,ab,kw | 22357 |
| 2 | [mh “ heart failure”] | 8112 |
| 3 | (Resistance training OR resistance exercise OR strength training OR exercise program):ti,ab,kw | 28075 |
| 4 | [mh "resistance training"] | 2795 |
| 5 | (Muscle strength OR muscle force OR muscle power OR muscular dynamic strength OR strength muscle):ti,ab,kw | 15419 |
| 6 | [mh "muscle strength"] | 4849 |
| 7 | (#1 OR #2) AND (#3 OR #4) AND (#5 OR #6) | 181 |
| 8 | Trials | 178 |
|  |  |  |
| 4)CINAHL | 1 | Congestive heart failure OR "congestive cardiac failure" OR "congestive heart insufficiency" OR "cardiac failure" OR "heart decompensation" OR "heart failure" OR "left sided" OR "right sided" OR "myocardial failure" | 58301 |
| 2 | MH (Heart failure+) | 35082 |
| 3 | Resistance training OR resistance exercise OR strength training OR exercise program | 43293 |
| 4 | MH (Resistance training+) | 3849 |
| 5 | Muscle strength OR muscle force OR muscle power OR muscular dynamic strength | 35862 |
| 6 | MH (muscle strength+) | 21984 |
| 7 | (S1 OR S2) AND (S3 OR S4) AND (S5 OR S6) | 131 |
| 8 | S7 AND ((MH "Clinical Trials+") or (PT Clinical trial) or (TX clinic\* n1 trial\*) or TX ( (singl\* n1 blind\*) or (singl\* n1 mask\*) ) or TX ( (doubl\* n1 blind\*) or (doubl\* n1 mask\*) ) or TX ( (tripl\* n1 blind\*) or (tripl\* n1 mask\*) ) or TX ( (trebl\* n1 blind\*) or (trebl\* n1 mask\*) ) or (TX randomi\* control\* trial\*) or (MH "Random Assignment") or (TX random\* allocat\*) or (TX placebo\*) or (MH "Placebos") or (MH "Quantitative Studies") or (TX allocat\* random\*)) | 90 |
|  |  |  |
| 5) PEDro | 1 | Heart failure  | 910 |
|  | 2 | Resistance training | 24 |