# **Additional file 1**

### Structure of the search strategy, and the exact terms searched in each database

Table 1 Search strategy for the PubMed database

|  |  |  |
| --- | --- | --- |
| Set 1 (term 1-75) are the **Text Words** (TW) [words found in the title, abstract, MeSH headings and Subheadings, Other Terms field of a record] for the **population** (i.e. older adults)The term “aged” is searched exclusively as a MeSH term (i.e. not as a Text Word) in order to avoid excessive noise. All terms are combined using **OR** | Set 11. aging
2. elderly
3. senior
4. seniors
5. frail elderly
6. nonagenarian
7. nonagenarians
8. old adult
9. old adults
10. old individual
11. old individuals
12. old men
13. old women
14. old people
15. old person
16. old persons
17. old patient
18. old patients
19. old subject
20. old subjects
21. old female
22. old females
23. old male
24. old males
25. older adult
26. older adults
27. older individual
28. older individuals
29. older men
30. older women
31. older people
32. older person
33. older persons
34. older patient
35. older patients
36. older subject
37. older subjects
38. older female
39. older females
40. older male
41. older males
42. geriatric adult
43. geriatric adults
44. geriatric individual
45. geriatric individuals
46. geriatric men
47. geriatric women
48. geriatric people
49. geriatric person
50. geriatric persons
51. geriatric patient
52. geriatric patients
53. geriatric subject
54. geriatric subjects
55. geriatric female
56. geriatric females
57. geriatric male
58. geriatric males
59. Aged adult
60. Aged adults
61. Aged individual
62. Aged individuals
63. Aged men
64. Aged women
65. Aged people
66. Aged person
67. Aged persons
68. Aged patient
69. Aged patients
70. Aged subject
71. Aged subjects
72. Aged female
73. Aged females
74. Aged male
75. Aged males
76. Aged MeSH
 | **Population (P)** |
| Set 2 (term 77-90) are the **Text Words** (TW) [words found in the title, abstract, MeSH headings and Subheadings, Other Terms field of a record] for the **Intervention** (i.e. resistance training). They are combined using **OR** | Set 21. weight lifting
2. progressive strength training
3. progressive resistance training
4. weight exercise
5. weight training
6. power exercise
7. power training
8. strengthening exercise
9. strength exercise
10. strength training
11. resistive exercise
12. resistance exercise
13. resistive training
14. resistance training
 | **Intervention (P)** |
| Set 3 (term 91-112), 4 (term 113-115) and 5 (term 116-124) are the **Text Words** (TW) [words found in the title, abstract, MeSH headings and Subheadings, Other Terms field of a record] for the **outcome** (i.e. self-reported disability/function). Set 4 and 5 is combined by AND in set 8.Set 3 and 6 are combined using **OR** | Set 31. activities of daily living
2. ADL
3. IADL
4. BADL
5. PADL
6. health related quality of life
7. HRQoL
8. quality of life
9. QOL
10. questionnair\*
11. self-rated
12. self-report\*
13. disab\*
14. physical health status
15. functional fitness
16. functional gain
17. late life disability index
18. late life function index
19. oars
20. gars
21. health assessment quesionnaire
22. nhanes adl

set 41. physical\*
2. funct\*
3. Mobility

Set 51. independen\*
2. dependen\*
3. limit\*
4. abilit\*
5. funct\*
6. autonomy
7. perform\*
8. capacit\*
9. impair\*

set 61. set 4 **AND** set 5
 | **Outcome (O)** |
| Set 7 (term 126-128), are the terms searched in **Title field** (TI) [words found in the TITLE of a record] for the **Study designs** that are **excluded from this review** (i.e. reviews, meta-analysis and case-reports). They are combined using **OR** | Set 71. review
2. meta analysis
3. case report
 | **Study Design (SD)** |
| Set 8 is the combination of **Population (P), intervention (I) & outcome (O)**. They are combined by **AND**Set 9 is the combination of set 8 and 7 combined by **NOT** [the combined search of P, I and O restricted from studies mentioning a study-designs, which is excluded in the review, in its title) | Set 81. P **AND** I **AND** O

Set 91. Set 8 **NOT** set 7
 | **Combination of P & I & O & SD** |

Table 2 Search strategy for the Embase database

|  |  |  |
| --- | --- | --- |
| Set 1 (term 1-75) are the terms searched in **the multiple purpose field (mp)** [words found in the title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word of a record] for the **population** (i.e. older adults)Set 2 (term 76-81) are the **Subject Terms** for the **population** (i.e. older adults). They are combined used **OR** | Set 11. aging
2. elderly
3. senior
4. seniors
5. frail elderly
6. nonagenarian
7. nonagenarians
8. old adult
9. old adults
10. old individual
11. old individuals
12. old men
13. old women
14. old people
15. old person
16. old persons
17. old patient
18. old patients
19. old subject
20. old subjects
21. old female
22. old females
23. old male
24. old males
25. older adult
26. older adults
27. older individual
28. older individuals
29. older men
30. older women
31. older people
32. older person
33. older persons
34. older patient
35. older patients
36. older subject
37. older subjects
38. older female
39. older females
40. older male
41. older males
42. geriatric adult
43. geriatric adults
44. geriatric individual
45. geriatric individuals
46. geriatric men
47. geriatric women
48. geriatric people
49. geriatric person
50. geriatric persons
51. geriatric patient
52. geriatric patients
53. geriatric subject
54. geriatric subjects
55. geriatric female
56. geriatric females
57. geriatric male
58. geriatric males
59. Aged adult
60. Aged adults
61. Aged individual
62. Aged individuals
63. Aged men
64. Aged women
65. Aged people
66. Aged person
67. Aged persons
68. Aged patient
69. Aged patients
70. Aged subject
71. Aged subjects
72. Aged female
73. Aged females
74. Aged male
75. Aged males

Set 21. aged/
2. aging/
3. very elderly/
4. frail elderly/
5. geritrics/
6. geriatric patients/
 | **Population (P)** |
| Set 3 (term 82-95) are the terms searched in **the multiple purpose field (mp)** [words found in the title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word of a record] for the i**ntervention** (i.e. resistance training). Set 4 (term 96) is the **Subject Term** for the **Intervention** (i.e. resistance training). All terms are combined using **OR** | Set 31. weight lifting
2. progressive strength training
3. progressive resistance training
4. weight exercise
5. weight training
6. power exercise
7. power training
8. strengthening exercise
9. strength exercise
10. strength training
11. resistive exercise
12. resistance exercise
13. resistive training
14. resistance training

Set 41. resistance training/
 | **Intervention (P)** |
| Set 5 (term 97-118), 6 (term 119-121) and 7 (term 122-130) are the terms searched in **the multiple purpose field (mp)** [words found in the title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word of a record] for the **outcome** (i.e. self-reported disability/function). Set 6 and 7 is combined by AND in set 8.Set 9 (term 131-134) are the **Subject Terms** for the **outcome** (i.e. self-reported disability/function. Set 5, 8 and 9 are combined using **OR** | Set 51. activities of daily living
2. ADL
3. IADL
4. BADL
5. PADL
6. health related quality of life
7. HRQoL
8. quality of life
9. QOL
10. questionnair\*
11. self-rated
12. self-report\*
13. disab\*
14. physical health status
15. functional fitness
16. functional gain
17. late life disability index
18. late life function index
19. oars
20. gars
21. health assessment quesionnaire
22. nhanes adl

set 61. physical\*
2. funct\*
3. Mobility

Set 71. independen\*
2. dependen\*
3. limit\*
4. abilit\*
5. funct\*
6. autonomy
7. perform\*
8. capacit\*
9. impair\*

set 8set 6 AND set 7set 91. “quality of life"/
2. “quality of life assessment"/
3. “quality of life index"/
4. exp “daily life activity”/
 | **Outcome (O)** |
| Set 10 is the combination of **Population (P), intervention (I) & outcome (O)**. They are combined using **AND** | Set 11P **AND** I **AND** O | **Combination of P & I & O** |

Table 3 Search strategy for the Web of Science database

|  |  |  |
| --- | --- | --- |
| Set 1 (term 1-75) are the terms searched in **the Topic field** [words found in the title, abstract, author keywords, and Keywords Plus of a record] for the **population** (i.e. older adults)They are combined used **OR** | Set 11. aging
2. elderly
3. senior
4. seniors
5. frail elderly
6. nonagenarian
7. nonagenarians
8. old adult
9. old adults
10. old individual
11. old individuals
12. old men
13. old women
14. old people
15. old person
16. old persons
17. old patient
18. old patients
19. old subject
20. old subjects
21. old female
22. old females
23. old male
24. old males
25. older adult
26. older adults
27. older individual
28. older individuals
29. older men
30. older women
31. older people
32. older person
33. older persons
34. older patient
35. older patients
36. older subject
37. older subjects
38. older female
39. older females
40. older male
41. older males
42. geriatric adult
43. geriatric adults
44. geriatric individual
45. geriatric individuals
46. geriatric men
47. geriatric women
48. geriatric people
49. geriatric person
50. geriatric persons
51. geriatric patient
52. geriatric patients
53. geriatric subject
54. geriatric subjects
55. geriatric female
56. geriatric females
57. geriatric male
58. geriatric males
59. Aged adult
60. Aged adults
61. Aged individual
62. Aged individuals
63. Aged men
64. Aged women
65. Aged people
66. Aged person
67. Aged persons
68. Aged patient
69. Aged patients
70. Aged subject
71. Aged subjects
72. Aged female
73. Aged females
74. Aged male
75. Aged males
 | **Population (P)** |
| Set 2 (term 77-90) are the terms searched in **the Topic field** [words found in the title, abstract, author keywords, and Keywords Plus of a record] for the i**ntervention** (i.e. resistance training). They are combined using **OR** | Set 21. weight lifting
2. progressive strength training
3. progressive resistance training
4. weight exercise
5. weight training
6. power exercise
7. power training
8. strengthening exercise
9. strength exercise
10. strength training
11. resistive exercise
12. resistance exercise
13. resistive training
14. resistance training
 | **Intervention (P)** |
| Set 3 (term 90-111), 4 (term 112-114) and 5 (term 115-123) are the terms searched in **the Topic field** [words found in the title, abstract, author keywords, and Keywords Plus of a record] for the **outcome** (i.e. self-reported disability/function). Set 4 and 5 is combined by AND in set 6.Set 3 and 6 are combined using **OR** | Set 31. activities of daily living
2. ADL
3. IADL
4. BADL
5. PADL
6. health related quality of life
7. HRQoL
8. quality of life
9. QOL
10. questionnair\*
11. self-rated
12. self-report\*
13. disab\*
14. physical health status
15. functional fitness
16. functional gain
17. late life disability index
18. late life function index
19. oars
20. gars
21. health assessment quesionnaire
22. nhanes adl

set 41. physical\*
2. funct\*
3. Mobility

Set 51. independen\*
2. dependen\*
3. limit\*
4. abilit\*
5. funct\*
6. autonomy
7. perform\*
8. capacit\*
9. impair\*

set 61. set 4 AND set 5
 | **Outcome (O)** |
| Set 7 (term 125-127), are the terms searched in **the Topic field** [words found in the title, abstract, author keywords, and Keywords Plus of a record] for the **Study designs** that are **excluded from this review** (i.e. reviews, meta-analysis and case-reports). They are combined using **OR** | Set 71. review
2. meta analysis
3. case report
 | **Study Design (SD)** |
| Set 8 is the combination of **Population (P), intervention (I) & outcome (O)**. They are combined by **AND**Set 9 is the combination of set 8 and 7 combined by **NOT** [the combined search of P, I and O restricted from studies mentioning a study-designs, which is excluded in the review, in its title) | Set 81. P **AND** I **AND** O

Set 91. Set 8 **NOT** set 7
 | **Combination of P & I & O & SD** |

Table 4 Search strategy for the SPORTDiscus and CINAHL databases

|  |  |  |
| --- | --- | --- |
| Set 1 (term 1-75) are the terms searched in **Title** (TI) and **Abstract** Fields(AB) [words found in the TITLE or ABSTRACT of a record] for the **population** (i.e. older adults)Set 2 (term 76-79) are the **Subject Terms (SU)** for the **population** (i.e. older adults). They are combined used **OR** | Set 11. aging
2. elderly
3. senior
4. seniors
5. frail elderly
6. nonagenarian
7. nonagenarians
8. old adult
9. old adults
10. old individual
11. old individuals
12. old men
13. old women
14. old people
15. old person
16. old persons
17. old patient
18. old patients
19. old subject
20. old subjects
21. old female
22. old females
23. old male
24. old males
25. older adult
26. older adults
27. older individual
28. older individuals
29. older men
30. older women
31. older people
32. older person
33. older persons
34. older patient
35. older patients
36. older subject
37. older subjects
38. older female
39. older females
40. older male
41. older males
42. geriatric adult
43. geriatric adults
44. geriatric individual
45. geriatric individuals
46. geriatric men
47. geriatric women
48. geriatric people
49. geriatric person
50. geriatric persons
51. geriatric patient
52. geriatric patients
53. geriatric subject
54. geriatric subjects
55. geriatric female
56. geriatric females
57. geriatric male
58. geriatric males
59. Aged adult
60. Aged adults
61. Aged individual
62. Aged individuals
63. Aged men
64. Aged women
65. Aged people
66. Aged person
67. Aged persons
68. Aged patient
69. Aged patients
70. Aged subject
71. Aged subjects
72. Aged female
73. Aged females
74. Aged male
75. Aged males

Set 21. Aged [SU]
2. elderly [SU]
3. aged, 80 and over [SU]
4. frail elderly [SU]
 | **Population (P)** |
| Set 3 (term 80-93) are the terms searched in **Title** (TI) and **Abstract** Fields(AB) [words found in the TITLE or ABSTRACT of a record] for the **Intervention** (i.e. resistance training). Set 4 (term 94-95) are the **Subject Terms (SU)** for the **Intervention** (i.e. resistance training). They are combined using **OR** | Set 31. weight lifting
2. progressive strength training
3. progressive resistance training
4. weight exercise
5. weight training
6. power exercise
7. power training
8. strengthening exercise
9. strength exercise
10. strength training
11. resistive exercise
12. resistance exercise
13. resistive training
14. resistance training

Set 41. SU exercise therapy
2. SU resistance training
 | **Intervention (P)** |
| Set 5 (term 96-117), 6 (term 118-120) and 7 (term 121-129) are the terms searched in **Title** (TI) and **Abstract** Fields(AB) [words found in the TITLE or ABSTRACT of a record] for the **outcome** (i.e. self-reported disability/function). Set 6 and 7 is combined by AND in set 8.Set 9 (term 130-134) are the **Subject Terms** (SU) for the **outcome** (i.e. self-reported disability/function. Set 5, 8 and 9 are combined using **OR** | Set 51. activities of daily living
2. ADL
3. IADL
4. BADL
5. PADL
6. health related quality of life
7. HRQoL
8. quality of life
9. QOL
10. questionnair\*
11. self-rated
12. self-report\*
13. disab\*
14. physical health status
15. functional fitness
16. functional gain
17. late life disability index
18. late life function index
19. oars
20. gars
21. health assessment quesionnaire
22. nhanes adl

set 61. physical\*
2. funct\*
3. Mobility

Set 71. independen\*
2. dependen\*
3. limit\*
4. abilit\*
5. funct\*
6. autonomy
7. perform\*
8. capacit\*
9. impair\*

set 8set 6 AND set 7set 91. SU activities of daily living
2. SU quality of life
3. SU geriatric functional assessment
4. SU functional assessment
5. SU questionnaires
 | **Outcome (O)** |
| Set 10 (term 135-137), are the terms searched in **Title** (TI) [words found in the TITLE of a record] for the **Study designs** that are **excluded from this review** (i.e. reviews, meta-analysis and case-reports). They are combined using **OR** | Set 101. review
2. meta analysis
3. case report
 | **Study Design (SD)** |
| Set 11 is the combination of **Population (P), intervention (I) & outcome (O)**. They are combined by **AND**Set 12 is the combination of set 10 and 11 combined by **NOT** [the combined search of P, I and O restricted from studies mentioning a study-designs, which is excluded in the review, in its title) | Set 11P **AND** I **AND** OSet 12Set 11 **NOT** set 10 | **Combination of P & I & O & SD** |