

Full search strategies

This supplementary file outlines our full list of search strategies used throughout the review across multiple databases and time points. These are outlined below.

| PICOS                                                                                   | Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Population<br>(older adults)                                                            | Participants are community-dwelling older adults (male or female) who are 60 years or older. Studies will be considered if the mean age is at least 60 years.<br><br>Exclusion criteria :<br>(1) Hospitalised or institutional-based older adults<br>(2) Study that only includes people with a specific disease or condition (e.g., Parkinson’s disease, stroke)                                                                                                                                                                                                                                     |
| Intervention<br>(video-supported home exercise)                                         | The intervention is a home-based exercise programme delivered using pre-recorded instructional videos. The videos can be accessed online (e.g., websites, apps) or offline (e.g., CD, DVD, flash disc) and played at home using a television, CD/DVD player, computer, laptop, tablet, or mobile phone/smartphone. Exercise programmes may be supplemented with home visits or in-person interactions with practitioners.<br><br>Exclusion criteria:<br>(1) virtual reality video;<br>(2) video game-based exercise; or<br>(3) synchronous video-based exercise (e.g., videoconferencing, video call) |
| Comparator<br>(no intervention or non-exercise intervention)                            | There is at least one control group or comparator that:<br>(1) Receive no intervention. No intervention means participants were told to continue with their everyday routines and received no intervention at all; or<br>(2) Receive non-exercise or non-physical therapy interventions. This can be verbal or written educational intervention (e.g., a leaflet, books, a link to physical activity promotion web, or physical activity guidelines).<br><br>Exclusion criteria: The study without a control group will be excluded.                                                                  |
| Outcomes<br>(physical performance, fear of falling, number of falls, number of fallers) | The primary outcome is physical performance (other terms may be physical function, functional ability, or functional performance)<br>Secondary outcomes are fall-related variables including fear of falling, number of falls, and number of people who fall.                                                                                                                                                                                                                                                                                                                                         |
| Study design                                                                            | All randomised controlled trials (RCTs) including randomised pilot and randomised feasibility-controlled trials, randomised crossover trials, and cluster randomised controlled trials.                                                                                                                                                                                                                                                                                                                                                                                                               |

List of searches

1. MEDLINE (via Ovid)
2. EMBASE (via Ovid)
3. CINAHL
4. PsycINFO (via OVID)
5. The Cochrane Central Register of Controlled Trials (Cochrane Library)
6. TRIP
7. PEDro
8. Ethos
9. ProQuest

1. MEDLINE (via Ovid)

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Search 1

Date searched: 17 May 2023

Records downloaded: 1066

|    |                                                                                              |           |
|----|----------------------------------------------------------------------------------------------|-----------|
| 1  | aged/ or "aged, 80 and over"/ or frail elderly/                                              | 3,444,504 |
| 2  | "older adult*".ab,ti.                                                                        | 114,285   |
| 3  | "elder*".ab,ti.                                                                              | 298,577   |
| 4  | "senior*".ab,ti.                                                                             | 50,564    |
| 5  | "geriatric*".ab,ti.                                                                          | 57,438    |
| 6  | older people.ab,ti.                                                                          | 36,506    |
| 7  | older.ab,ti.                                                                                 | 543,259   |
| 8  | aged 65.ab,ti.                                                                               | 32,633    |
| 9  | older person.ab,ti.                                                                          | 1,601     |
| 10 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9                                                    | 3,820,835 |
| 11 | "exercise*".ab,ti.                                                                           | 343,939   |
| 12 | "training*".ab,ti.                                                                           | 533,080   |
| 13 | "home*".ab,ti.                                                                               | 612,932   |
| 14 | physical activity.ab,ti.                                                                     | 140,586   |
| 15 | "program*".ab,ti.                                                                            | 1,057,679 |
| 16 | 11 or 12 or 13 or 14 or 15                                                                   | 2,326,382 |
| 17 | "video*".ab,ti.                                                                              | 163,929   |
| 18 | taped.ab,ti.                                                                                 | 3,515     |
| 19 | "DVD*".ab,ti.                                                                                | 2,068     |
| 20 | "website*".ab,ti.                                                                            | 38,399    |
| 21 | web-based.ab,ti.                                                                             | 41,882    |
| 22 | remote.ab,ti.                                                                                | 93,258    |
| 23 | "tablet*".ab,ti.                                                                             | 62,039    |
| 24 | "ipad*".ab,ti.                                                                               | 1,861     |
| 25 | "smartphone*".ab,ti.                                                                         | 21,307    |
| 26 | "phone*".ab,ti.                                                                              | 48,030    |
| 27 | "youtube*".ab,ti.                                                                            | 3,602     |
| 28 | "computer*".ab,ti.                                                                           | 336,450   |
| 29 | "television*".ab,ti.                                                                         | 15,595    |
| 30 | "application*".ab,ti.                                                                        | 1,558,716 |
| 31 | ehealth.ab,ti.                                                                               | 4,108     |
| 32 | mhealth.ab,ti.                                                                               | 5,340     |
| 33 | 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 | 2,264,013 |
| 34 | "physical perform*".ab,ti.                                                                   | 13,033    |
| 35 | "physical function*".ab,ti.                                                                  | 31,894    |
| 36 | "functional perform*".ab,ti.                                                                 | 5,447     |
| 37 | "functional abilit*".ab,ti.                                                                  | 8,024     |
| 38 | balance.ab,ti.                                                                               | 266,181   |
| 39 | strength.ab,ti.                                                                              | 366,969   |

|    |                                                    |           |
|----|----------------------------------------------------|-----------|
| 40 | "fall*".ab,ti.                                     | 243,741   |
| 41 | "mobilit*".ab,ti.                                  | 176,655   |
| 42 | "physical abilit*".ab,ti.                          | 1,841     |
| 43 | 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 | 1,052,376 |
| 44 | 10 and 16 and 33 and 43                            | 3,439     |
| 45 | "random*".ab,ti.                                   | 1,408,604 |
| 46 | 44 and 45                                          | 1,090     |
| 47 | limit 46 to yr="2000 -Current"                     | 1,066     |

Updating the search

Before publication, the search was updated to reflect more recent literature, building upon the initial search conducted in 2023. The same strategy and keywords were used, but the publication date was restricted to articles published between 1 January 2023, and 12 March 2025, to capture any additional relevant studies.  
Date searched: 17 March 2025  
Additional records downloaded: 306

2. EMBASE (via Ovid)

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Search 1

Date searched: 17 May 2023  
Records downloaded: 1373

|    |                                                 |           |
|----|-------------------------------------------------|-----------|
| 1  | aged/ or "aged, 80 and over"/ or frail elderly/ | 3,567,609 |
| 2  | "older adult*".ab,ti.                           | 146,669   |
| 3  | "elder*".ab,ti.                                 | 426,746   |
| 4  | "senior*".ab,ti.                                | 72,230    |
| 5  | "geriatric*".ab,ti.                             | 91,835    |
| 6  | older people.ab,ti.                             | 45,369    |
| 7  | older.ab,ti.                                    | 768,725   |
| 8  | aged 65.ab,ti.                                  | 46,552    |
| 9  | older person.ab,ti.                             | 2,164     |
| 10 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9       | 4,142,389 |
| 11 | "exercise*".ab,ti.                              | 466,485   |
| 12 | "training*".ab,ti.                              | 714,978   |
| 13 | "home*".ab,ti.                                  | 831,106   |
| 14 | physical activity.ab,ti.                        | 191,545   |
| 15 | "program*".ab,ti.                               | 1,412,611 |
| 16 | 11 or 12 or 13 or 14 or 15                      | 3,099,891 |
| 17 | "video*".ab,ti.                                 | 236,696   |
| 18 | taped.ab,ti.                                    | 5,069     |
| 19 | "DVD*".ab,ti.                                   | 3,618     |
| 20 | "website*".ab,ti.                               | 57,567    |
| 21 | web-based.ab,ti.                                | 58,419    |
| 22 | remote.ab,ti.                                   | 115,703   |
| 23 | "tablet*".ab,ti.                                | 104,620   |

|    |                                                                                              |           |
|----|----------------------------------------------------------------------------------------------|-----------|
| 24 | "ipad*".ab,ti.                                                                               | 3,852     |
| 25 | "smartphone*".ab,ti.                                                                         | 27,682    |
| 26 | "phone*".ab,ti.                                                                              | 74,374    |
| 27 | "youtube*".ab,ti.                                                                            | 4,784     |
| 28 | "computer*".ab,ti.                                                                           | 417,759   |
| 29 | "television*".ab,ti.                                                                         | 17,241    |
| 30 | "application*".ab,ti.                                                                        | 1,786,674 |
| 31 | ehealth.ab,ti.                                                                               | 4,704     |
| 32 | mhealth.ab,ti.                                                                               | 5,640     |
| 33 | 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 | 2,739,416 |
| 34 | "physical perform*".ab,ti.                                                                   | 17,789    |
| 35 | "physical function*".ab,ti.                                                                  | 50,470    |
| 36 | "functional perform*".ab,ti.                                                                 | 7,337     |
| 37 | "functional abilit*".ab,ti.                                                                  | 11,817    |
| 38 | balance.ab,ti.                                                                               | 340,192   |
| 39 | strength.ab,ti.                                                                              | 425,307   |
| 40 | "fall*".ab,ti.                                                                               | 318,485   |
| 41 | "mobilit*".ab,ti.                                                                            | 207,407   |
| 42 | "physical abilit*".ab,ti.                                                                    | 2,707     |
| 43 | 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42                                           | 1,293,496 |
| 44 | 10 and 16 and 33 and 43                                                                      | 4,890     |
| 45 | "random*".ab,ti.                                                                             | 1,954,348 |
| 46 | 44 and 45                                                                                    | 1,396     |
| 47 | limit 46 to yr="2000 -Current"                                                               | 1,373     |

Search 2

Before publication, the search was updated to reflect more recent literature, building upon the initial search conducted in 2023. The same strategy and keywords were used, but the publication date was restricted to articles published between 1 January 2023, and 14 March 2025, to capture any additional relevant studies.

Date searched: 17 March 2025

Additional records downloaded: 369

3. CINAHL

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Date searched: 17 May 2023

Records downloaded: 552

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Searching on abstract and title using these keywords:                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Older adults OR older people OR older person OR (older women or aging women or elderly women) OR (older men or older males or elderly men) OR elderly OR senior OR geriatric OR aged 65 OR aged OR (frailty or frail elderly) AND<br>Exercise OR training OR home OR physical activity OR program* AND<br>Video* OR taped OR DVD* OR website* OR web-based OR remote OR tablet* OR computer* OR ipad* OR phone* OR television OR TV or smartphone* or youtube* or application or ehealth or mhealth or digital health AND |

|                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical perform* OR physical function OR functional perform* OR functional ability*<br>OR balance OR strength OR fall OR mobilit* OR physical ability* AND<br>Random* |
| Limiters - Published Date: 20000101-20231231<br>Expanders - Apply equivalent subjects<br>Search modes - Boolean/Phrase                                                 |

Before publication, the search was updated to reflect more recent literature, building upon the initial search conducted in 2023. The same strategy and keywords were used, but the publication date was restricted to articles published between 1 January 2023, and 17 March 2025, to capture any additional relevant studies.

Date searched: 17 March 2025

Additional records downloaded: 85

4. PsycINFO (via Ovid)

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Search 1

Date searched: 17 May 2023

Records downloaded: 134

|    |                                                 |        |
|----|-------------------------------------------------|--------|
| 1  | aged/ or "aged, 80 and over"/ or frail elderly/ | 1828   |
| 2  | "older adult*".ab,ti.                           | 60768  |
| 3  | "elder*".ab,ti.                                 | 71222  |
| 4  | "senior*".ab,ti.                                | 30650  |
| 5  | "geriatric*".ab,ti.                             | 17345  |
| 6  | older people.ab,ti.                             | 16145  |
| 7  | older.ab,ti.                                    | 179499 |
| 8  | aged 65.ab,ti.                                  | 10047  |
| 9  | older person.ab,ti.                             | 1014   |
| 10 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9       | 264256 |
| 11 | "exercise*".ab,ti.                              | 73941  |
| 12 | "training*".ab,ti.                              | 293168 |
| 13 | "home*".ab,ti.                                  | 180821 |
| 14 | physical activity.ab,ti.                        | 40601  |
| 15 | "program*".ab,ti.                               | 443385 |
| 16 | 11 or 12 or 13 or 14 or 15                      | 876444 |
| 17 | "video*".ab,ti.                                 | 74306  |
| 18 | taped.ab,ti.                                    | 3879   |
| 19 | "DVD*".ab,ti.                                   | 1324   |
| 20 | "website*".ab,ti.                               | 15143  |
| 21 | web-based.ab,ti.                                | 15612  |
| 22 | remote.ab,ti.                                   | 14398  |
| 23 | "tablet*".ab,ti.                                | 5896   |
| 24 | "ipad*".ab,ti.                                  | 1316   |
| 25 | "smartphone*".ab,ti.                            | 6585   |
| 26 | "phone*".ab,ti.                                 | 30920  |

|    |                                                                                              |        |
|----|----------------------------------------------------------------------------------------------|--------|
| 27 | "youtube*".ab,ti.                                                                            | 1659   |
| 28 | "computer*".ab,ti.                                                                           | 97864  |
| 29 | "television*".ab,ti.                                                                         | 16366  |
| 30 | "application*".ab,ti.                                                                        | 189872 |
| 31 | ehealth.ab,ti.                                                                               | 1013   |
| 32 | mhealth.ab,ti.                                                                               | 1133   |
| 33 | 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 | 432307 |
| 34 | "physical perform*".ab,ti.                                                                   | 1978   |
| 35 | "physical function*".ab,ti.                                                                  | 7483   |
| 36 | "functional perform*".ab,ti.                                                                 | 1118   |
| 37 | "functional abilit*".ab,ti.                                                                  | 2761   |
| 38 | balance.ab,ti.                                                                               | 49858  |
| 39 | strength.ab,ti.                                                                              | 68472  |
| 40 | "fall*".ab,ti.                                                                               | 55423  |
| 41 | "mobilit*".ab,ti.                                                                            | 22426  |
| 42 | "physical abilit*".ab,ti.                                                                    | 1041   |
| 43 | 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42                                           | 199402 |
| 44 | 10 and 16 and 33 and 43                                                                      | 618    |
| 45 | "random*".ab,ti.                                                                             | 236116 |
| 46 | 44 and 45                                                                                    | 137    |
| 47 | limit 46 to yr="2000 -Current"                                                               | 134    |

Search 2

Before publication, the search was updated to reflect more recent literature, building upon the initial search conducted in 2023. The same strategy and keywords were used, but the publication date was restricted to articles published between January 2023, and 17 March 2025, to capture any additional relevant studies.

Date searched: 17 March 2025

Additional records downloaded: 24

5. CENTRAL (Cochrane Library)

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Search 1

Date searched: 17 May 2023

Records downloaded: 2170

|    |                                                                                                                                                                                                        |        |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| #1 | Older adult* OR older person OR older people OR elderly OR geriatric OR senior* OR aged 65                                                                                                             | 146512 |
| #2 | Exercise* OR training OR home OR physical activity OR program*                                                                                                                                         | 342321 |
| #3 | Video* OR taped OR DVD* OR website OR web-based OR remote OR tablet* OR ipad* OR smartphone* OR phone* OR youtube* OR computer* OR television* OR application* OR ehealth OR mhealth OR digital health | 239200 |

|    |                                                                                                                                                       |         |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| #4 | Balance OR strength OR fall* OR mobilit* OR physical perform* OR physical function* OR physical ability* OR functional perform* OR functional abilit* | 186206  |
| #5 | Random*                                                                                                                                               | 1220919 |
| #6 | #1 AND #2 AND #3 AND #4 AND #5<br>With publication year from 2000 to 2023, in Trials                                                                  | 2170    |

Search 2

Before publication, the search was updated to reflect more recent literature, building upon the initial search conducted in 2023. The same strategy and keywords were used, but the publication date was restricted to articles published between January 2023, and December 2025, to capture any additional relevant studies.

Date searched: 17 March 2025

Additional records downloaded: 995

6. PEDro

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Date searched: 17 May 2023

Records downloaded: 40

|                                          |
|------------------------------------------|
| <b>Search strategy:</b>                  |
| Title and abstract: Video-based exercise |
| Subdiscipline: Gerontology               |
| Method: clinical trial                   |
| Published since: 2000                    |

The search was updated on 17 March 2025 using the same strategy and keywords. The publication date was limited to articles published from 1 January 2023 to 3 March 2025.

Additional records downloaded: 3

7. TRIP

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Date searched: 17 May 2023

Records downloaded: 309

|                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Search strategy:</b>                                                                                                                                                                                                                                                                                                                                                                    |
| (Older adult* OR older person OR older people OR elder OR geriatric OR senior* OR aged 65) AND (Exercise* OR training OR home OR physical activity OR program*) AND (Video* OR taped OR DVD* OR website OR web-based OR remote OR tablet* OR ipad* OR smartphone* OR phone* OR youtube* OR computer* OR television* OR application* OR ehealth OR mhealth OR digital health) AND (Random*) |
| In controlled trials published from 2000 to 2023                                                                                                                                                                                                                                                                                                                                           |

The search was updated on 17 March 2025 using the same strategy and keywords. The publication date was limited to articles published from 2023 to 2025.

Additional records downloaded: 2

8. Ethos

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Date searched: 17 May 2023

Records downloaded: 2

|                                     |
|-------------------------------------|
| <b>Search strategy:</b>             |
| Older adult* AND video AND exercise |

The search was updated on 17 March 2025 using the same strategy and keywords. The publication date was limited to articles published from 2023 to 2025.

Additional records downloaded: 0

9. ProQuest Thesis and Dissertation

The search was conducted on 17 May 2023 and was updated on 17 March 2025.

Date searched: 17 May 2023

Records downloaded: 54

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Search strategy:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| abstract(Older adult* OR older person OR older people OR elder OR geriatric OR senior* OR aged 65) AND abstract(Exercise* OR training OR home OR physical activity OR program*) AND abstract(Video* OR taped OR DVD* OR website OR web-based OR remote OR tablet* OR ipad* OR smartphone* OR phone* OR youtube* OR computer* OR television* OR application* OR ehealth OR mhealth OR digital health) AND abstract(Balance OR strength OR fall* OR mobilite* OR physical perform* OR physical function* OR physical ability* OR functional perform* OR functional abilit*) AND abstract(random*) |
| Limiters: full text, dissertation & thesis, English language, published since 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

The search was updated on 17 March 2025 using the same strategy and keywords. The publication date was limited to articles published from 2023 to 2025.

Additional records downloaded: 3