# Report supplementary material 1

# Search strategies

**CENTRAL search strategy**

|  |  |
| --- | --- |
| #1 | MeSH descriptor: [Exercise] explode all trees |
| #2 | MeSH descriptor: [Running] explode all trees |
| #3 | MeSH descriptor: [Walking] explode all trees |
| #4 | MeSH descriptor: [Physical Fitness] explode all trees |
| #5 | MeSH descriptor: [Swimming] explode all trees |
| #6 | MeSH descriptor: [Physical Education and Training] explode all trees |
| #7 | MeSH descriptor: [Yoga] explode all trees |
| #8 | MeSH descriptor: [Dancing] explode all trees |
| #9 | MeSH descriptor: [Exercise Movement Techniques] explode all trees |
| #10 | MeSH descriptor: [Sports] explode all trees |
| #11 | MeSH descriptor: [Cardiorespiratory Fitness] explode all trees |
| #12 | fitness next (regime or program\* or class\* or strategy\*) |
| #13 | (moderate or vigorous) next active\* |
| #14 | physical near/5 (fit\* or train\* or activ\* or endur\*) |
| #15 | exercis\* near5 (fit\* or train\* or activ\* or endur\*) |
| #16 | #1 or #2 or #3 or #4 or #5 or #6 #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 |
| #17 | MeSH descriptor: [General Surgery] explode all trees |
| #18 | MeSH descriptor: [Perioperative Period] explode all trees |
| #19 | MeSH descriptor: [Preoperative Period] explode all trees |
| #20 | MeSH descriptor: [Preoperative Care] explode all trees |
| #21 | MeSH descriptor: [Postoperative Period] explode all trees |
| #22 | MeSH descriptor: [Postoperative Care] explode all trees |
| #23 | surgery or prehabilitation |
| #24 | #17 or #18 or #19 or #20 or #21 or #22 or #23 |
| #25 | promot\* or uptak\* or encourag\* or increas\* or start\* or adher\* or sustain\* or maintain\* |
| #26 | MeSH descriptor: [Health Promotion] explode all trees |
| #27 | #25 or #26 |
| #28 | #16 and #24 |
| #29 | #27 and #28 |

**MEDLINE search strategy**

|  |  |
| --- | --- |
| 1 | exp exercise/  |
| 2 | running/  |
| 3 | walking/  |
| 4 | physical fitness/  |
| 5 | swimming/  |
| 6 | (fitness adj class\*).ti,ab.  |
| 7 | exp "physical education and training"/  |
| 8 | exp sports/  |
| 9 | yoga/  |
| 10 | fitness centers/  |
| 11 | recreation/  |
| 12 | Motor Activity/  |
| 13 | (fitness adj (regime\* or program\*)).ti,ab.  |
| 14 | cardiorespiratory fitness/  |
| 15 | ((moderate or vigorous\*) adj activ\*).ti,ab.  |
| 16 | (led walk\* or health walk\*).ti,ab.  |
| 17 | (physical adj5 (fit\* or train\* or activ\* or endur\*)).ti,ab.  |
| 18 | (exercis\* adj5 (fit\* or train\* or activ\* or endur\*)).ti,ab.  |
| 19 | general surgery/ or perioperative period/ or perioperative care/ or preoperative period/ or preoperative care/ or postoperative period/ or postoperative care/  |
| 20 | surgery.ti,ab. or prehabilitation.mp.  |
| 21 | (promot\* or uptak\* or encourag\* or increas\* or start\* or adher\* or sustain\* or maintain\*).ti,ab.  |
| 22 | exp health promotion/  |
| 23 | (fitness adj strateg\*).ti,ab.  |
| 24 | dancing/  |
| 25 | aerobic exercise/  |
| 26 | keep fit.ti,ab.  |
| 27 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 23 or 24 or 25 or 26  |
| 28 | 19 or 20  |
| 29 | 21 or 22  |
| 30 | 27 and 28  |
| 31 | 29 and 30  |
| 32 | randomized controlled trial.pt.  |
| 33 | controlled clinical trial.pt.  |
| 34 | (randomized or randomised or placebo or randomly or trial).ab.  |
| 35 | random allocation/ or clinical trial/ or single-blind method/ or double-blind method/ or control groups/  |
| 36 | Intervention studies/  |
| 37 | evaluation studies/  |
| 38 | program evaluation/  |
| 39 | Comparative study.pt.  |
| 40 | quasi-experiment$.ti,ab.  |
| 41 | (pre test or pretest or (posttest or post test)).ti,ab.  |
| 42 | trial.ti.  |
| 43 | (time adj series).ti,ab.  |
| 44 | (pre test or pretest or (posttest or post test)).ti,ab.  |
| 45 | ((evaluat$ or intervention or interventional) adj8 (control or controlled or study or program$ or comparison or "before and after" or comparative)).ti,ab.  |
| 46 | ((intervention or interventional) adj8 (effect\* or evaluat\* or outcome\*)).ti,ab.  |
| 47 | ((process or program\*) adj3 (effect\* or evaluat\*)).ti,ab.  |
| 48 | (controlled before or "before and after stud$" or follow up assessment).ti,ab.  |
| 49 | 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  |
| 50 | 31 and 49  |
| 51 | animals/ not (humans/ and animals/)  |
| 52 | 50 not 51  |
| 53 | case study/  |
| 54 | 49 or 53  |
| 55 | 31 and 54  |
| 56 | clinical trial/  |
| 57 | 54 or 56  |
| 58 | 31 and 57  |
| 59 | Cohort Studies/  |
| 60 | Longitudinal Studies/  |
| 61 | Interrupted Time Series Analysis/  |
| 62 | 49 or 53 or 56 or 59 or 60 or 61  |
| 63 | 31 and 62  |
| 64 | randomized controlled trial.pt.  |
| 65 | controlled clinical tiral.pt.  |
| 66 | multicenter study.pt.  |
| 67 | pragmatic clinical trial.pt.  |
| 68 | (randomis\* or randomiz\* or randomly).ti,ab.  |
| 69 | groups.ab.  |
| 70 | (trial or multicenter or multi center or multicentre or mult centre).ti.  |
| 71 | (intervention? or effect? or impact? or controlled or control group? or (before adj5 after) or (pre adj5 post) or ((pretest or pre test) and (posttest or post test)) or quasiexperiment\* or quasi experiment\* or pseudo experiment\* or psedoexperiment\* or evaluat\* or time series or time point? or repeated measure\*).ti,ab.  |
| 72 | non-randomized controlled trials as topic/  |
| 73 | Interrupted Time Series Analysis/  |
| 74 | controlled before-after studies/  |
| 75 | 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74  |
| 76 | 31 and 75  |
| 77 | 53 or 56 or 59 or 60 or 75  |
| 78 | controlled clinical trial.pt.  |
| 79 | 77 or 78  |
| 80 | 31 and 79  |
| 81 | animals/ not (humans/ and animals/)  |
| 82 | 80 not 81  |
| 83 | (exercis\* or run\* or walk\* or swim\* or danc\* or pilates or yoga or sports or fitness\*).ti,ab.  |
| 84 | (exercis\* or run\* or walk\* or swim\* or danc\* or pilates or yoga or sports or fitness\*).mp.  |
| 85 | 27 or 83  |
| 86 | 28 and 85  |
| 87 | 29 and 86  |
| 88 | 79 and 87  |
| 89 | 88 not 81  |
| 90 | 27 or 84  |
| 91 | 28 and 90  |
| 92 | 29 and 91  |
| 93 | 79 and 92  |
| 94 | 93 not 81  |
| 95 | cardiorespiratory fitness.mp.  |
| 96 | 90 or 95  |
| 97 | 28 and 96  |
| 98 | 29 and 97  |
| 99 | 79 and 98  |
| 100 | 99 not 81  |

**Embase search strategy**

|  |  |
| --- | --- |
| 1 | exp exercise/  |
| 2 | running/  |
| 3 | walking/  |
| 4 | fitness/  |
| 5 | swimming/  |
| 6 | (fitness adj class\*).ti,ab.  |
| 7 | physical education/  |
| 8 | sport/  |
| 9 | yoga/  |
| 10 | pilates/  |
| 11 | recreation/  |
| 12 | motor activity/  |
| 13 | (fitness adj (regime\* or program\*)).ti,ab.  |
| 14 | cardiorespiratory fitness/  |
| 15 | ((moderate or vigorous\*) adj activ\*).ti,ab.  |
| 16 | (led walk\* or health walk\*).ti,ab.  |
| 17 | (physical adj5 (fit\* or train\* or activ\* or endur\*)).ti,ab.  |
| 18 | (exercis\* adj5 (fit\* or train\* or activ\* or endur\*)).ti,ab.  |
| 19 | (fitness adj strateg\*).ti,ab.  |
| 20 | dancing/  |
| 21 | aerobic exercise/  |
| 22 | keep fit.ti,ab.  |
| 23 | general surgery/  |
| 24 | perioperative period/  |
| 25 | preoperative period/  |
| 26 | preoperative care/  |
| 27 | postoperative period/  |
| 28 | postoperative care/  |
| 29 | (surgery or prehabilitation).ti,ab.  |
| 30 | (promot\* or uptak\* or encourag\* or increas\* or start\* or adher\* or sustain\* or maintain\*).ti,ab.  |
| 31 | exp health promotion/  |
| 32 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22  |
| 33 | 23 or 24 or 25 or 26 or 28 or 29  |
| 34 | 30 or 31  |
| 35 | 32 and 33  |
| 36 | 34 and 35  |
| 37 | randomized controlled trial/  |
| 38 | controlled clinical trial/  |
| 39 | quasi experimental study/  |
| 40 | pretest posttest control group design/  |
| 41 | time series analysis/  |
| 42 | experimental design/  |
| 43 | multicenter study/  |
| 44 | case study/  |
| 45 | cohort analysis/  |
| 46 | longitudinal study/  |
| 47 | (randomized or randomised or placebo or randomly or trial).ti,ab.  |
| 48 | groups.ab.  |
| 49 | (intervention? or effect? or impact? or controlled or control group? or (before adj5 after) or (pre adj5 post) or ((pretest or pre test) and (posttest or post test)) or quasiexperiment\* or quasi experiment\* or pseudo experiment\* or psedoexperiment\* or evaluat\* or time series or time point? or repeated measure\*).ti,ab.  |
| 50 | (trial or multicenter or multi center or multicentre or multi centre).ti.  |
| 51 | exp animals/ or exp invertbrate/ or animal experiment/ or animal model/ or animal tissue/ or animal cell/ or nonhuman/  |
| 52 | human/ or normal human/ or human cell.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]  |
| 53 | 51 not (52 and 51)  |
| 54 | 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  |
| 55 | 36 and 54  |
| 56 | 55 not 53  |

**CINAHL Plus search strategy**

|  |  |
| --- | --- |
| S49  | S46 AND S48   |
| S48  | S30 AND S47   |
| S47  | S28 AND S29   |
| S46  | S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45   |
| S45  | TI (trial or effect\* or impact\* or intervention\* or before N5 after or pre N5 post or ((pretest or "pre-test) and (posttest or "post test")) or quasiexperimen\* or quasi W0 experiment\* or pseudo experiment\* or pseudoexperiment\* or evaluat\* or "time series" or time W0 point\* or repeated W0 measure\*) or AB (trial or effect\* or impact\* or intervention\* or before N5 after or pre N5 post or ((pretest or "pre-test) and (posttest or "post test")) or quasiexperimen\* or quasi W0 experiment\* or pseudo experiment\* or pseudoexperiment\* or evaluat\* or "time series" or time W0 point\* or repeated W0 measure\*)  |
| S44  | TI (randomis\* or randomiz\* or randomly) OR AB (randomis\* or randomiz\* or randomly)   |
| S43  | MH "Case Studies"   |
| S42  | MH "Health Services Research"   |
| S41  | MH "Multicenter Studies"   |
| S40  | MH "Quasi-Experimental Studies"   |
| S39  | MH "Pretest-Posttest Design"   |
| S38  | MH "Experimental Studies"   |
| S37  | MH "Nonrandomized Trials"   |
| S36  | MH "Intervention Trials"   |
| S35  | MH "Clinical Trials"   |
| S34  | MH "Randomized Controlled Trials"   |
| S33  | PT research   |
| S32  | PT clinical trial   |
| S31  | PT randomized controlled trial   |
| S30  | S26 OR S27   |
| S29  | S20 OR S21 OR S22 OR S23 OR S24 OR S25   |
| S28  | S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S22   |
| S27  | MH Health Promotion   |
| S26  | promot\* or uptak\* or encourag\* or increas\* or start\* or adher\* or sustain\* or maintain\*   |
| S25  | surgery or prehabilitation   |
| S24  | MH Postoperative Care   |
| S23  | MH Postoperative Period   |
| S22  | MH Preoperative Care   |
| S21  | MH Preoperative Period   |
| S20  | MH Surgery, Operative   |
| S19  | keep fit   |
| S18  | exercise N5 (fit\* or train\* or activ\* or endur\*)   |
| S17  | physical N5 (fit\* or train\* or activ\* or endur\*)   |
| S16  | led walk\* or health walk\*   |
| S15  | (moderate or vigorous) N0 activ\*   |
| S14  | fitness N0 (class\* or regime\* or program\* or strateg\*)   |
| S13  | MH Aerobic Exercises   |
| S12  | MH Dancing   |
| S11  | MH Cardiorespiratory Fitness   |
| S10  | MH Motor Activity   |
| S9  | MH Recreation   |
| S8  | MH Pilates   |
| S7  | MH Yoga   |
| S6  | MH "Physical Education and Training"   |
| S5  | MH Physical Fitness   |
| S4  | MH Swimming   |
| S3  | MH Walking   |
| S2  | MH Running   |
| S1  | MH Exercise+   |

**SportDiscus**

|  |  |
| --- | --- |
| S43  | S30 AND S42  |
| S42  | S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41  |
| S41  | TI (quasi experiment\* OR quasiexperiment\* OR pseudo experiment\* OR pseudoexperiment\* OR evaluat\* OR time series OR time point? OR repeated measure\*) OR AB (quasi experiment\* OR quasiexperiment\* OR pseudo experiment\* OR pseudoexperiment\* OR evaluat\* OR time series OR time point? OR repeated measure\*)  |
| S40  | TI (pre-test AND (post test OR posttest)) OR AB (pre-test AND (post test or posttest)  |
| S39  | TI (pretest AND (post test OR posttest)) OR AB (pretest AND (post test or posttest))  |
| S38  | TI (intervention? OR effect? OR impact? OR controlled OR control group?) OR AB (intervention? OR effect? OR impact? OR controlled OR control group?)  |
| S37  | TI (“controlled before-after” OR “control\* before and after” OR ((control\* N0 before) AND (control N5 after) OR AB (“controlled before-after” OR “control\* before and after” OR ((control\* N0 before) AND (control N5 after)  |
| S36  | TI “interrupted time series” OR AB “interrupted time series”  |
| S35  | TI (“randomiz\* control\* trials” or “randomis\* control\* trials” OR “random\*") OR AB (“randomiz\* control\* trials” or “randomis\* control\* trials” OR “random\*")  |
| S34  | TI “longitudinal stud\*” OR AB “longitudinal stud\*”  |
| S33  | TI “cohort stud\*” OR AB “cohort stud\*”  |
| S32  | TI “clinical trials” OR AB “clinical trials”  |
| S31  | TI “case stud\*” OR AB “case stud\*”  |
| S30  | S26 AND S29  |
| S29  | S27 OR S28  |
| S28  | DE HEALTH PROMOTION  |
| S27  | TI (promot\* or uptak\* or encourag\* or increas\* or start\* or adher\* or sustain\* or maintain\*) OR AB (promot\* or uptak\* or encourag\* or increas\* or start\* or adher\* or sustain\* or maintain\*)  |
| S26  | S22 AND S25  |
| S25  | S23 OR S24  |
| S24  | TI surgery OR AB surgery OR TX prehabilitation  |
| S23  | TI (general surgery or perioperative period or perioperative care or preoperative period or preoperative care or postoperative period or postoperative care) OR AB (general surgery or perioperative period or perioperative care or preoperative period or preoperative care or postoperative period or postoperative care)  |
| S22  | S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21  |
| S21  | TI “keep\* fit” OR AB “keep\* fit”  |
| S20  | DE AEROBIC EXERCISES  |
| S19  | DE DANCE  |
| S18  | SU (exercis\* or run\* or walk\* or swim\* or danc\* or pilates or yoga or sports or fitness or cardiorespiratory fitness)  |
| S17  | TI (exercis\* N5 (fit\* or train\* or activ\* or endur\*)) OR AB (exercis\* N5 (fit\* or train\* or activ\* or endur\*))  |
| S16  | TI (physical N5 (fit\* or train\* or activ\* or endur\*)) OR AB (physical N5 (fit\* or train\* or activ\* or endur\*))  |
| S15  | TI (led walk\* or health walk\*) OR AB (led walk\* or health walk\*)  |
| S14  | TI ((moderate or vigorous\*) N0 activ\*)) OR AB ((moderate or vigorous\*) N0 activ\*))  |
| S13  | TI “cardiorespiratory fitness” OR AB “cardiorespiratory fitness”  |
| S12  | TI “motor activity” OR AB “motor activity”  |
| S11  | DE RECREATION  |
| S10  | DE PHYSICAL FITNESS CENTERS  |
| S9  | DE YOGA  |
| S8  | DE SPORTS  |
| S7  | TI “physical education and training” OR AB “physical education and training”  |
| S6  | TI (fitness class\* or fitness regime\* or fitness program\* or fitness strateg\*) OR AB (fitness class\* or fitness regime\* or fitness program\* or fitness strateg\*)  |
| S5  | DE SWIMMING  |
| S4  | DE PHYSICAL FITNESS  |
| S3  | DE WALKING  |
| S2  | DE RUNNING  |
| S1  | DE EXERCISE  |

**PsycInfo search strategy**

|  |  |
| --- | --- |
| 1 | exp EXERCISE/ |
| 2 | RUNNING/ |
| 3 | WALKING/ |
| 4 | PHYSICAL FITNESS/ |
| 5 | SWIMMING/ |
| 6 | (fitness ADJ (class\* OR regime\* OR program\* OR strateg\*)).ti,ab |
| 7 | "PHYSICAL EDUCATION AND TRAINING"/ |
| 8 | exp SPORTS/ |
| 9 | YOGA/ |
| 10 | FITNESS CENTERS/ |
| 11 | RECREATION/ |
| 12 | MOTOR ACTIVITY/ |
| 13 | CARDIORESPIRATORY FITNESS/ |
| 14 | ((moderate OR vigorous\*) ADJ activ\*).ti,ab |
| 15 | (led walk\* OR health walk\*).ti,ab |
| 16 | (physical ADJ5 (fit\* OR train\* OR activ\* OR endur\*)).ti,ab |
| 17 | (exercis\* ADJ5 (fit\* OR train\* OR activ\* OR endur\*)).ti,ab |
| 18 | (exercis\* OR run\* OR walk\* OR swim\* OR danc\* OR pilates OR yoga OR sports OR fitness\* OR cardiorespiratory fitness).ti,ab,me |
| 19 | DANCING/ |
| 20 | AEROBIC EXERCISE/ |
| 21 | (keep\* fit).ti,ab |
| 22 | GENERAL SURGERY/ OR PERIOPERATIVE PERIOD/ OR PERIOPERATIVE CARE/ OR PREOPERATIVE PERIOD/ OR PREOPERATIVE CARE/ OR POSTOPERATIVE PERIOD/ OR POSTOPERATIVE CARE/ |
| 23 | (surgery).ti,ab OR (prehabilitation).me |
| 24 | (promot\* OR uptak\* OR encourag\* OR increas\* OR start\* OR adher\* OR sustain\* OR maintain\*).ti,ab |
| 25 | exp "HEALTH PROMOTION"/ |
| 26 | (case stud\*).ti,ab,me |
| 27 | "CLINICAL TRIALS"/ |
| 28 | (cohort stud\*).ti,ab,me |
| 29 | (longitudinal stud\*).ti,ab,me |
| 30 | RANDOMIZED CONTROLLED TRIALS/ |
| 31 | (randomis\* controlled trials OR randomiz\* controlled trials OR random\*).ti,ab |
| 32 | ("interrupted time series").ti,ab |
| 33 | "controlled before-after" OR "control\* before and after" OR ((control\* ADJ before) AND (control ADJ5 after)).ti,ab |
| 34 | (intervention? OR effect? OR impact? OR controlled OR control group?).ti,ab |
| 35 | (pretest AND (post test OR posttest)).ti,ab |
| 36 | (pre-test AND (post test OR posttest)).ti,ab |
| 37 | (quasi experiment\* OR quasiexperiment\* OR pseudo experiment\* OR pseudoexperiment\* OR evaluat\* OR time series OR time point? OR repeated measure\*).ti,ab |
| 38 | (1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21) |
| 39 | (22 OR 23) |
| 40 | (38 AND 39) |
| 41 | (24 OR 25) |
| 42 | (40 AND 41) |
| 43 | (26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37) |
| 44 | (42 AND 43) |
| 45 | ANIMALS/ NOT (HUMANS/ AND ANIMALS/) |
| 46 | 44 NOT 45 |