

Supplementary Material S3. Detailed search strategies for online databases

- Search strategy of Pubmed
 - (“Aging”[TW] OR “Sarcopenias”[TW] OR “Atrophies, Muscular”[TW] OR “Atrophy, Muscular”[TW] OR “Muscular Atrophies”[TW] OR “Atrophy, Muscle”[TW] OR “Atrophies, Muscle”[TW] OR “Muscle Atrophies”[TW] OR “Muscle Atrophy”[TW] OR “Frailties”[TW] OR “Frailness”[TW] OR “Frailty Syndrome”[TW] OR “Debility”[TW] OR “Debilities”[TW] OR “Decreased muscle mass”[TW] OR “Muscle loss”[TW]) OR (“Sarcopenia”[Mesh] OR “Muscular atrophy”[Mesh] OR “frailty”[Mesh])) AND (“Telemedicine”[Mesh] OR “Telemedicine”[Mesh]) OR (“Telehealth”[TW] OR “Mobile Health”[TW] OR “Telehealth”[TW] OR “eHealth”[TW] OR “mHealth”[TW] OR “e-health”[TW] OR “ehealth”[TW] OR “telehealth”[TW] OR “tele-health”[TW] OR “Untact healthcare”[TW] OR “Remote medical care”[TW] OR “Remote healthcare”[TW] OR “Telemedicine”[TW] OR “tele medicine”[TW])) AND (“Physical Functional Performance”[Mesh]) OR (“Functional Performance, Physical”[TW] OR “Functional Performances, Physical”[TW] OR “Performance, Physical Functional”[TW] OR “Performances, Physical Functional”[TW] OR “Physical Functional Performances”[TW] OR “Functional Performance”[TW] OR “Functional Performances”[TW] OR “Performance, Functional”[TW] OR “Performances, Functional”[TW] OR “Physical Performance”[TW] OR “Performance, Physical”[TW] OR “Performances, Physical”[TW] OR “Physical Performances”[TW]) OR (“Quality of Life”[Mesh]) OR (“Life Quality”[TW] OR “Health-Related Quality Of Life ”[TW] OR “Health Related Quality Of Life ”[TW] OR “HRQOL ”[TW]) OR (“ADL”[TW] OR Activities, Daily Living “[TW] OR “Activity, Daily Living “[TW] OR “Daily Living Activities “[TW] OR “Daily Living Activity “[TW] OR “Living Activities, Daily “[TW] OR “Living Activity, Daily “[TW]) OR (“Activities of Daily Living”[Mesh]))
- Search strategy of Embase
 - (‘sarcopenia’/exp OR ‘sarcopenia’ OR ‘muscle atrophy’/exp OR ‘degeneration, muscle’ OR ‘muscle atrophial’ OR ‘muscle atrophy’ OR ‘muscle degeneration’ OR ‘muscle fiber atrophy’ OR ‘muscle fiber degeneration’ OR ‘muscle recession’ OR ‘muscle wasting’ OR ‘muscular atrophy’ OR ‘muscular degeneration’ OR ‘myoatrophy’ OR ‘myodegeneration’ OR ‘myofibrillar degeneration’ OR ‘myophagism’ OR ‘atrophy, muscle’ OR ‘frailty’/exp OR ‘frailty’ OR ‘aging’/exp OR ‘age induced changes’ OR ‘ageing’ OR ‘aging’ OR ‘aging biology’ OR ‘aging process’ OR ‘aging rate’) AND (‘web-based intervention’/exp OR ‘internet-based intervention’ OR ‘internet-intervention’ OR ‘online-based intervention’ OR ‘online-intervention’ OR ‘web intervention’ OR ‘web-based intervention’ OR ‘telehealth’/exp OR ‘e-health’ OR ‘ehealth’ OR ‘tele-health’ OR ‘telehealth’ OR ‘telemedicine’/exp OR ‘tele medicine’ OR ‘telemedicine’) AND (‘physical activity’/exp OR ‘activity, physical’ OR ‘physical activity’ OR ‘physical performance’/exp OR ‘ability, physical’ OR ‘assessment, physical performance’ OR ‘evaluation, physical performance’ OR ‘performance, physical’ OR ‘physical functional performance’ OR ‘physical performance’ OR ‘physical performance assessment’ OR ‘physical performance evaluation’ OR ‘physical performancy’ OR ‘quality of life’/exp OR ‘hrql’ OR ‘health related quality of life’ OR ‘life quality’ OR ‘quality of life’ OR ‘activity of daily living assessment’/exp OR ‘activity of daily living assessment’ OR ‘daily life activity assessment’)
- Search strategy of Cochrane Library
 - #1 MeSH descriptor: [Sarcopenia] explode all trees
 - #2 sarcopenia
 - #3 MeSH descriptor: [Frailty] explode all trees
 - #4 frailty
 - #5 MeSH descriptor: [Muscular Atrophy] explode all trees
 - #6 muscular atrophy
 - #7 MeSH descriptor: [Muscle Weakness] 3 tree(s) exploded
 - #8 muscle weakness
 - #9 MeSH descriptor: [Aged] explode all trees
 - #10 aging

- #11 {OR #1-#10}
- #12 MeSH descriptor: [Telemedicine] explode all trees
- #13 telemedicine
- #14 MeSH descriptor: [Telerehabilitation] explode all trees
- #15 telerehabilitation
- #16 MeSH descriptor: [Telecommunications] explode all trees
- #17 telecommunication
- #18 Communication Aids for Disabled
- #19 MeSH descriptor: [Communication Aids for Disabled] explode all trees
- #20 MeSH descriptor: [Internet-Based Intervention] explode all trees
- #21 Internet-Based Intervention
- #22 MeSH descriptor: [Remote Consultation] explode all trees
- #23 remote consultation
- #24 remote rehabilitation
- #25 (remote near/5 rehabilitation):ti,ab,kw OR (remote near/5 consultation):ti,ab,kw OR (tele near/5 rehabilitation):ti,ab,kw OR (tele near/5 consultation):ti,ab,kw OR (tele near/5 intervention):ti,ab,kw
- #26 (remote near/5 intervention):ti,ab,kw OR (internet near/5 rehabilitation):ti,ab,kw OR (internet near/5 consultation):ti,ab,kw OR (internet near/5 intervention):ti,ab,kw
- #27 {OR #12-#26}
- #28 MeSH descriptor: [Physical Functional Performance] explode all trees
- #29 Physical Functional Performance
- #30 MeSH descriptor: [Quality of Life] explode all trees
- #31 Quality of Life
- #32 MeSH descriptor: [Activities of Daily Living] explode all trees
- #33 Activities of Daily Living
- #34 MeSH descriptor: [Physical Endurance] explode all trees
- #35 Physical Endurance
- #36 {OR #28-#35}
- #37 #11 AND #27 AND #36

- Search strategy of CINHAL

“(Sarcopenia OR Muscular atrophy OR Frailty OR Muscle weakness OR Sarcopenia OR Muscular atrophy OR Frailty OR Muscle weakness OR “Atrophies, Muscular” OR “Atrophy, Muscular” OR “Muscular Atrophies” OR “Atrophy, Muscle” OR “Atrophies, Muscle” OR “Muscle Atrophies” OR “Muscle Atrophy” OR “fragilities” OR “frankness” OR “Frailty Syndrome” OR “Debility” OR “diabilities”) AND (Telemedicine OR telerehabilitation OR telecommunication OR internet-based intervention OR remote consultation OR Telemedicine OR telerehabilitation OR telecommunication OR internet-based intervention OR remote consultation OR “Telemedicine” OR “Telehealth” OR “Mobile Health” OR “Telehealth” OR “eHealth” OR “mHealth” OR “Telehealth” OR “e-health” OR “tele-health” OR “Telemedicine” OR “tele medicine” OR “web portals” OR “web portal” OR “web portal” OR “e-consult” OR econsult* OR telemed* OR “ehealth” OR “e-health” OR “mhealth” OR “m-health” OR “mobile health” OR “telehealth” OR “tele-health” OR “tele health” OR “electronic communication” OR “remote consultation” OR “remote health care” OR “remote healthcare” OR “remote care” OR “remote monitoring” OR “teleconsultation” OR teleconsult* OR mobile* OR “webbase” OR “web-based” OR “Electronic Mail” OR “Electronic Mail” OR “email” OR email* OR “Mobile Application” OR “mobile apps” OR “mobile app” OR webapp* OR “SMS” OR “Cell Phones” OR “Smartphone” OR “Text Messaging” OR “Mobile Phone” OR “Cell Phone” OR “Smartphones” OR iphon* OR “text messag” OR “texting” OR “mobile” OR “cellular phone” OR “cellular phones” OR “smart phone” OR “telemedicine” OR “tele-care” OR “telecare”

OR “tele-monitoring” OR “telemonitoring” OR “website” OR “websites” OR “personal digital assistant” OR “computer-assisted instruction” OR “ipad” OR ipad* OR “telenursing” OR telenurs* OR “virtual community” OR “webpage” OR “webpages” OR “web application” OR “web applications” OR “short message service” OR “Internet” OR “internet” OR “online” OR “digital” OR digital* OR “Reminder System” OR “Reminder Systems” OR “Reminder System” OR “Reminder Device” OR “Reminder Devices” OR “reminder messages” OR “reminder message” OR “web” OR “Virtual Reality” OR “Virtual Reality” OR “smart technology” OR “smart technol” OR “wearable technology” OR “wearable technologies” OR “telerehabilitation” OR “computer-assisted therapy” OR “computer-assisted therapy” OR “computer assisted therapy” OR “online therapy” OR “Computer Mediated Communication” OR “Computer Mediated Communications” OR “remote” OR “on-line” OR “on line” OR “wearable devices” OR “wearable device” OR “healthsense” OR “healthsensors” OR “health sensor” OR “health sensors” OR “Robotics” OR “robotics” OR robot* OR “exergame” OR “exergames” OR exergam* OR “Video Game” OR “app-based” OR “wearable app” OR “wearable apps” OR “wearables” OR “Nintendo” OR “Wii” OR “gaming console” OR “gaming consoles” OR internet OR “world wide web” OR telenursing OR tele-nursing OR “health informatics” OR “information technology” OR “mobile phone” OR “electronic health records” OR “personal digital assistant” OR Telemedicine OR Tele-medicine OR “Cellular Phones” OR “remote consultation” OR “electronic health records” OR “personal digital assistant” OR “public health informatics” OR “remote monitoring” OR “remote monitor” OR “web based” OR web-based OR online OR on-line OR smartphone OR “cell phones” OR “information technology personnel” OR “occupational health services”) AND (“Physical Functional Performance” OR “Functional Performance, Physical” OR “Functional Performances, Physical” OR “Performance, Physical Functional” OR “Performances, Physical Functional” OR “Physical Functional Performances” OR “Functional Performance” OR “Functional Performances” OR “Performance, Functional” OR “Performances, Functional” OR “Physical Performance” OR “Quality of Life” OR “Life Quality” OR “Health-Related Quality Of Life” OR “Health Related Quality Of Life” OR “HRQOL” OR “Activities of Daily Living” OR “ADL” OR “Activities, Daily Living” OR “Activity, Daily Living” OR “Daily Living Activities” OR “Daily Living Activity” OR “Living Activities, Daily” OR “Living Activity, Daily”)

• Search strategy of PEDro

- tele* frailty “physical function*”
- tele* frailty “physical performance”
- tele* frailty “Quality of life”
- tele* frailty “Activities of Daily Living”
- tele* frailty “Physical Endurance”
- tele* aging “physical function*”
- tele* aging “physical performance”
- tele* aging “Quality of life”
- tele* aging “Activities of Daily Living”
- tele* aging “Physical Endurance”
- tele* sarcopenia “physical function*”
- tele* sarcopenia “physical performance”
- tele* sarcopenia “Quality of life”
- tele* sarcopenia “Activities of Daily Living”
- tele* sarcopenia “Physical Endurance”
- tele* “muscle atrophy” “physical function*”
- tele* “muscle atrophy” “physical performance”
- tele* “muscle atrophy” “Quality of life”
- tele* “muscle atrophy” “Activities of Daily Living”
- tele* “muscle atrophy” “Physical Endurance”
- internet frailty “physical function*”

- internet frailty “physical performance”
- internet frailty “Quality of life”
- internet frailty “Activities of Daily Living”
- internet frailty “Physical Endurance”
- internet aging “physical function*”
- internet aging “physical performance”
- internet aging “Quality of life”
- internet aging “Activities of Daily Living”
- internet aging “Physical Endurance”
- internet sarcopenia “physical function*”
- internet sarcopenia “physical performance”
- internet sarcopenia “Quality of life”
- internet sarcopenia “Activities of Daily Living”
- internet sarcopenia “Physical Endurance”
- internet “muscle atrophy” “physical function*”
- internet “muscle atrophy” “physical performance”
- internet “muscle atrophy” “Quality of life”
- internet “muscle atrophy” “Activities of Daily Living”
- internet “muscle atrophy” “Physical Endurance”
- remote frailty “physical function*”
- remote frailty “physical performance”
- remote frailty “Quality of life”
- remote frailty “Activities of Daily Living”
- remote frailty “Physical Endurance”
- remote aging “physical function*”
- remote aging “physical performance”
- remote aging “Quality of life”
- remote aging “Activities of Daily Living”
- remote aging “Physical Endurance”
- remote sarcopenia “physical function*”
- remote sarcopenia “physical performance”
- remote sarcopenia “Quality of life”
- remote sarcopenia “Activities of Daily Living”
- remote sarcopenia “Physical Endurance”
- remote “muscle atrophy” “physical function*”
- remote “muscle atrophy” “physical performance”
- remote “muscle atrophy” “Quality of life”
- remote “muscle atrophy” “Activities of Daily Living”
- remote “muscle atrophy” “Physical Endurance”
- web frailty “physical function*”
- web frailty “physical performance”
- web frailty “Quality of life”
- web frailty “Activities of Daily Living”
- web frailty “Physical Endurance”
- web aging “physical function*”

- web aging “physical performance”
 - web aging “Quality of life”
 - web aging “Activities of Daily Living”
 - web aging “Physical Endurance”
 - web sarcopenia “physical function*”
 - web sarcopenia “physical performance”
 - web sarcopenia “Quality of life”
 - web sarcopenia “Activities of Daily Living”
 - web sarcopenia “Physical Endurance”
 - web “muscle atrophy” “physical function*”
 - web “muscle atrophy” “physical performance”
 - web “muscle atrophy” “Quality of life”
 - web “muscle atrophy” “Activities of Daily Living”
 - web “muscle atrophy” “Physical Endurance”
 - tele* “muscular atrophy” “physical function*”
 - tele* “muscular atrophy” “physical performance”
 - tele* “muscular atrophy” “Quality of life”
 - tele* “muscular atrophy” “Activities of Daily Living”
 - tele* “muscular atrophy” “Physical Endurance”
 - internet “muscular atrophy” “physical function*”
 - internet “muscular atrophy” “physical performance”
 - internet “muscular atrophy” “Quality of life”
 - internet “muscular atrophy” “Activities of Daily Living”
 - internet “muscular atrophy” “Physical Endurance”
 - remote “muscular atrophy” “physical function*”
 - remote “muscular atrophy” “physical performance”
 - remote “muscular atrophy” “Quality of life”
 - remote “muscular atrophy” “Activities of Daily Living”
 - remote “muscular atrophy” “Physical Endurance”
 - web “muscular atrophy” “physical function*”
 - web “muscular atrophy” “physical performance”
 - web “muscular atrophy” “Quality of life”
 - web “muscular atrophy” “Activities of Daily Living”
 - web “muscular atrophy” “Physical Endurance”
- Search strategy of Web of Science
 (ALL=(Sarcopenia OR Muscular atrophy OR Frailty OR Muscle weakness OR aged) OR TS=(Sarcopenia OR Muscular atrophy OR Frailty OR Muscle weakness OR aged OR “sarcopenia” OR “Muscular atrophy” OR “Frailty” OR “sarcopenia” OR “Atrophies, Muscular” OR “Atrophy, Muscular” OR “Muscular Atrophies” OR “Atrophy, Muscle” OR “Atrophies, Muscle” OR “Muscle Atrophies” OR “Muscle Atrophy” OR “fragilities” OR “frankness” OR “Frailty Syndrome” OR “Debility” OR “diabilities”)) AND (ALL=(Telemedicine OR telerehabilitation OR telecommunication OR internet-based intervention OR remote consultation) OR TS=(Telemedicine OR telerehabilitation OR telecommunication OR internet-based intervention OR remote consultation OR “Telemedicine” OR “Telehealth” OR “Mobile Health” OR “Telehealth” OR “eHealth” OR “mHealth” OR “Telehealth” OR “e-health” OR “tele-health” OR “Telemedicine” OR “tele medicine” OR “web portals” OR “web portal” OR “web portal” OR “e-consult” OR econsult* OR telemed* OR “ehealth” OR “e-health” OR “mhealth” OR “m-health” OR

“mobile health” OR “telehealth” OR “tele-health” OR “tele health” OR “electronic communication” OR “remote consultation” OR “remote health care” OR “remote healthcare” OR “remote care” OR “remote monitoring” OR “teleconsultation” OR teleconsult* OR mobile* OR “webbase” OR “web-based” OR “Electronic Mail” OR “Electronic Mail” OR “email” OR email* OR “Mobile Application” OR “mobile apps” OR “mobile app” OR webapp* OR “SMS” OR “Cell Phones” OR “Smartphone” OR “Text Messaging” OR “Mobile Phone” OR “Cell Phone” OR “Smartphones” OR iphon* OR “text messag” OR “texting” OR “mobile” OR “cellular phone” OR “cellular phones” OR “smart phone” OR “telemedicine” OR “tele-care” OR “telecare” OR “tele-monitoring” OR “telemonitoring” OR “website” OR “websites” OR “personal digital assistant” OR “computer-assisted instruction” OR “ipad” OR ipad* OR “telenursing” OR telenurs* OR “virtual community” OR “webpage” OR “webpages” OR “web application” OR “web applications” OR “short message service” OR “Internet” OR “internet” OR “online” OR “digital” OR digital* OR “Reminder System” OR “Reminder Systems” OR “Reminder System” OR “Reminder Device” OR “Reminder Devices” OR “reminder messages” OR “reminder message” OR “web” OR “Virtual Reality” OR “Virtual Reality” OR “smart technology” OR “smart technol” OR “wearable technology” OR “wearable technologies” OR “telerehabilitation” OR “computer-assisted therapy” OR “computer-assisted therapy” OR “computer assisted therapy” OR “online therapy” OR “Computer Mediated Communication” OR “Computer Mediated Communications” OR “remote” OR “on-line” OR “on line” OR “wearable devices” OR “wearable device” OR “healthsense” OR “healthsensors” OR “health sensor” OR “health sensors” OR “Robotics” OR “robotics” OR robot* OR “exergame” OR “exergames” OR exergam* OR “Video Game” OR “app-based” OR “wearable app” OR “wearable apps” OR “wearables” OR “Nintendo” OR “Wii” OR “gaming console” OR “gaming consoles” OR internet OR “world wide web” OR telenursing OR tele-nursing OR “health informatics” OR “information technology” OR “mobile phone” OR “electronic health records” OR “personal digital assistant” OR Telemedicine OR Tele-medicine OR “Cellular Phones” OR “remote consultation” OR “electronic health records” OR “personal digital assistant” OR “public health informatics” OR “remote monitoring” OR “remote monitor” OR “web based” OR web-based OR online OR on-line OR smartphone OR “cell phones” OR “information technology personnel” OR “occupational health services”) AND (ALL=(“Physical Functional Performance” OR “Functional Performance, Physical” OR “Functional Performances, Physical” OR “Performance, Physical Functional” OR “Performances, Physical Functional” OR “Physical Functional Performances” OR “Functional Performance” OR “Functional Performances” OR “Performance, Functional” OR “Performances, Functional” OR “Physical Performance” OR “Quality of Life” OR “Life Quality” OR “Health-Related Quality Of Life” OR “Health Related Quality Of Life” OR “HRQOL” OR “Activities of Daily Living” OR “ADL” OR “Activities, Daily Living” OR “Activity, Daily Living” OR “Daily Living Activities” OR “Daily Living Activity” OR “Living Activities, Daily” OR “Living Activity, Daily”))