NKR_38_opdat_Rehabilitering af patienter med proststakræft: Superviseret træning- metaanalyse. København: Sundhedsstyrelsen, 2021.

Review information

Authors

Sundhedsstyrelsen[1]

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Characteristics of studies

Characteristics of included studies

Bjerre 2019

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 67.8 (6.2) ● *Time since diagnosis in years, mean (SD)*: 3.0 (2.7) ● *Number of participants on ADT (%)*: 46 (42), separate data for the ADT population. ● *Time on ADT in days, median (IQR):* 512.5 days (208-881) Control ● *Age in years, mean (SD)*: 69.0 (6.2) ● *Time since diagnosis in years, mean (SD)*: 3.8 (3.9) ● *Number of participants on ADT (%)*: 41 (39), separate data for the ADT population. ● *Time on ADT in days, median (IQR):* 580 days (235-1089) Overall ● *Age in years, mean (SD)*: 68.4 (6.2) ● *Time since diagnosis in years, mean (SD)*: 3.4 (3.4) ● *Number of participants on ADT (%)*: 87 (41) ● *Time on ADT in days, median (IQR):* 520 days (213-982) **Included criteria:** Patients diagnosed with prostate cancer; Age:≥18 years; Able to read and complete questionnaires in Danish; Signed informed consent.

	Excluded criteria: < 6 weeks prostatectomy; Football training not allowed by primary physician; Hip or spine bone mineral density <−2.5 T-score.
Interventions	**Intervention Characteristics** Intervention ● *Description*: Participants allocated to the intervention group will be offered one hour of recreational football twice weekly. The football training sessions consist of a 20-min warm-up based on the FIFA11+ concept, though modified to suit older players. Next, participants will spend 20 min practising dribbling, passing and shooting. The training sessions will then end with 20 min of 5−7-a-side football. Two coaches recruited from the local football club will be in charge of all training sessions. The coaches are expected to have experience as either a player or coach but no other formal qualifications are required. The coaches will be required to have passed a first-aid course and to complete a 10-h course involving lectures on PCa treatment, patient experiences of PCa and a manual describing the content of the training, including the FIFA 11+ concept intended to prevent injuries. Participants will be told to avoid hard tackles and other actions that carry a risk of injury. In the event of injuries participants will remain in their allocated group and will be encouraged to participate in football practice again after recovery. Adherence to the intervention will be recorded by the coaches. Participants allocated to football training will be able to track their individual adherence and compare it to an average adherence rate of participants in the football group. ● *Dose*: 60 mins, twice weekly ● *Duration*: 6 months ● *Time on ADT in days, median (IQR):* 512.5 (208-881) Control ● *Description*: Participants allocated to the control group will receive a phone-based counselling session (5−15 min) as part of the information on group allocation, as well as information via email on the current physical activity guidelines. ● *Dose*: Not applicable ● *Duration*: 6 months ● *Time on ADT in days, mean (SD)*: median (IQR) 580 (235-1089)
Outcomes	*Generel livskvalitet (quality of life), SF 36, mental component, mean change (95% CI)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: SF 36, mental component ● **Range**: 0-100 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Change from baseline *Generel livskvalitet (quality of life), SF 36, physical component, mean change (95% CI)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: SF 36, physical component ● **Range**: 0-100 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Change from baseline

Diagnosespecifik livskvalitet (disease specific quality of life), Functional Assessment of Cancer Therapy Prostate (Fact P), mean change (95% CI)
- **Outcome type**: Continuous Outcome
- **Reporting**: Partially reported
- **Scale**: Functional Assessment of Cancer Therapy Prostate
- **Range**: 0-156
- **Unit of measure**: Points
- **Direction**: Higher is better
- **Data value**: Change from baseline

Fysisk funktion (physical function)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Muskelstyrke (muscle strength)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Vo2 max (Vo2 peak)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Depression (depression)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Hjertekarsygdom (cardiovascular diseases)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med frakturer
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, Frakturer ja/nej
- **Unit of measure**: Antal personer der får fraktur
- **Direction**: Lower is better
- **Data value**: Endpoint

Træningsrelaterede skader (Exercise related injuries) antal skader i alt
- **Outcome type**:
- **Reporting**: Fully reported
- **Scale**: Antal træningsrelaterede skader i alt

	● **Unit of measure**: Antal personer med ● **Direction**: Lower is better ● **Data value**: Endpoint *Frafald (dropouts) antal personer* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, Frafald ja/nej ● **Unit of measure**: Antal personer der falder fra ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** The FCPC Trial is supported by TrygFonden and research grants from the Danish Cancer Society. The Musculoskeletal Statistics Unit at the Parker Institute (RC) is supported by grants from the Oak Foundation. Julie Midtgaard is supported by the University Hospitals'Centre for Health Research **Country:** Denmark **Authors name:** Eik Bjerre **Institution:** University Hospitals Centre for Health Research (UCSF), Rigshospitalet, University of Copenhagen, Copenhagen, Denmark **Email:** eb@ucsf.dk **Address:** University Hospitals Centre for Health Research (UCSF), Rigshospitalet, University of Copenhagen, Copenhagen, Denmark
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Patients were randomly allocated to either a football group (FG) or a usual care group (UG) according to a computer-generated list of random numbers after all baseline assessments were completed."
Allocation concealment (selection bias)	Low risk	Quote: "A statistician not otherwise involved in the trial generated separate lists with a 1:1 ratio and varying block sizes (n = 4–8) stratified for each center and treatment category (receiving ADT or not) using SAS. The allocation was concealed from trial personnel as the statistician received a password-protected email from the trial man- agement system (EasyTrial ®) with an upload function for the allocation sequence. After participants were enrolled by trial personnel at each hospital, the trial manager telephoned participants who had provided written informed consent and undergone all baseline measurements."
Blinding of participants and personnel (performance bias)	High risk	Quote: "Randomization was done using the web-based trial management system, and the participants were told which group they were allocated to. Given the nature of the intervention, neither participants nor coaches were blinded."
Blinding of outcome assessment (detection bias)	High risk	Quote: "Blinding was implemented for objective outcomes, so personnel performing the dual-energy X-ray absorptiometry (DXA) assessments had no information on the group allocation." Judgement Comment: High risk for subjective outcomes (quality of life) Low risk for objective putcomes (Muscle strength, physical function, fractures) Critical outcome is based on self-assessment.

Incomplete outcome data (attrition bias)	Low risk	Quote: "The main analyses of the primary, secondary, and safety outcomes were performed according to the intention-to- treat (ITT) principle." Judgement Comment: Low and balances number of dropouts in the groups and reasons stated.
Selective reporting (reporting bias)	Low risk	Quote: "No changes were made during the conduct of the trial in relation to the original protocol [18] or trial registration." Judgement Comment: Protocol available, all outcomes of interest stated in the protocol are reported.
Other bias	Low risk	The study appears to be free of other sources of bias The study appears to be free of other sources of bias. All authors have completed the Unified Compet- ing Interest form (available on request from the corresponding author) and received no support from any organization for the submitted work. Eik Dybboe Bjerre, Klaus Brasso, Anders Bojer Jørgensen, Thomas Hindborg Petersen, Alexandra Röthlin Eriksen, Anders Tolver, Jes- per Frank Christensen, Mads Hvid Poulsen, Søren Sørensen Madsen, Peter Busch Østergren, Michael Borre, Christoffer Johansen, Mikael Rørth, and Julie Midtgaard have had no financial relationships with any organizations that might have an interest in the submitted work in the previous 3 years. Peter Krustrup has received funding for other re- search activities from the DBU, Union of European Football Associa- tions (UEFA) and FIFA in the previous 3 years. No other relationships or activities could have influenced the submitted work.

Bourke 2014

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Træning ● *Age - Mean(sd)*: 71(6) ● *Height - cm*: 173.1(6.8) ● *Weight - kg*: 87.8(14.0) ● *BMI - kg/m2*: 29.3(4.4) ● *Number of participants on ADT (%): 50 (100)* ● *Time on ADT in months, mean (SD):33 (33)* Kontrol (vanlig beh) ● *Age - Mean(sd)*: 71(8) ● *Height - cm*: 173.3(7.1) ● *Weight - kg*: 84.6(13.5) ● *BMI - kg/m2*: 28.1(4.1) ● *Number of participants on ADT (%): 50 (100)* ● *Time on ADT in months, mean (SD): 30 (30)* **Included criteria:** Eligible men were sedentary (ie, exercising < 90 min per week at a moderate intensity) and receiving continuous ADT for a minimum of 6 months prior to recruitment, with planned long-term retention on ADT. **Excluded criteria:** Men with unstable angina, uncontrolled hypertension, recent myocardial infarction, pacemakers, and painful or unstable bony metastases were excluded.

Interventions	**Intervention Characteristics** Træning ● *Description*: The intervention was a combined tapered exercise and dietary advice intervention delivered with integrated behaviour change support. Men attended a dedicated rehabilitation suite to undertake aerobic and resistance exercise, in groups up to five, supervised by an exercise physiologist. The aerobic exercise prescription was 30 min at an intensity of 55–85% of age predicted maximum heart rate or 11–13 on the Borg Rating of Perceived Exertion scale [1],using stationary cycles, rowing ergometers, and treadmills. Between two and four sets and 8–12 repetitions (reps) of resistance exercises (cable machines or free weights) targeting large skeletal muscle groups (quadriceps, deltoids, pectorals, latissimus dorsi, hamstrings) beginning at an intensity of 60% of one rep max with progression through increasing sets and reps before weight was increased. During the supervised sessions, emphasis was placed on providing instruction on the correct performance of exercises, effective technique through instruction and demonstration, and individual capability, with guidance on exercise intensity monitoring by using heart rate and perceived exertion. This was undertaken twice a week from weeks 1–6, and once per week from weeks 7–12. During the first 6 wk, men were also asked to undertake at least one self directed independent exercise session (eg, brisk walking, cycling, and gym exercise) for at least 30 min using the skills taught in the supervised sessions such as intensity monitoring using the Borg scale and correct technique during resistance exercise. This requirement was increased to twice per week during weeks 7–12. Goals for these sessions were set with participants and included review and feedback at each following session. During sessions the facilitator aimed to address any concerns the individual had about exercise, highlighting what the benefits might be and providing encouragement and verbal reinforcement for effort. Adherence to supervised exercise sessions was assessed by attendance records, heart rate, and Borg ratings. Independent exercise adherence was assessed via patient log books, which were also used in sessions to reflect achievement of exercise goals and monitor activity [2]. To help improve adherence, a behavioural component included exploring with patients barriers to exercise and strategies tohelp them incorporate regular physical activity in their daily lives, discussion around what social support structures were available to them and how to use them, and which types of physical activity they preferred to engage in.In addition to exercise training, participants were encouraged to improve their diet over the course of the intervention. All men were provided with a nutrition advice pack advocating reduction of saturated fats and refined carbohydrates, increasing dietary fibre and fruit and vegetable intake, and moderating the use of alcohol. Small-group healthy eating seminars, lasting approximately 15–20 min, were carried out every 2 wk throughout the 12-wk intervention, facilitated by the study researcher. Participants were helped to think of areas of their diet they would like to improve and were encouraged to set weekly goals towards achieving these targets. Men shared experiences of trying to change dietary habits and highlighted areas of success and issues they were finding hard to address. These experiences were then explored within the group. The group facilitator ensured that the advice pack was referred to appropriately to assist problem solving. The sessions were concluded with a verbal re negotiation of dietary goals based on the session feedback if it was appropriate. No restriction was placed on dietary habits for any trial participant. ● *Intensity*: ● *weekly traning sessions*: This was undertaken twice a week from weeks 1–6, and once per week from weeks 7–12 Kontrol (vanlig behandling) ● *Description*: Men randomised to usual care were followed up in the urology clinic and seen by an oncology nurse specialist and urologist.The treating physicians were informed that the man was participating in a lifestyle intervention study and further information would be available on application ● *Intensity*: No restrictions were placed on exercise/dietary behaviours over the period ofthe study ● *weekly traning sessions*: Not applicable

Outcomes	*Livskvalitet, diagnose specifik* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: FACT-P ● **Range**: 0-156 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Endpoint ● **Notes**: outcome data hentet fra aflæsning på fig. 3 N hentet fra Fig1 flowchart. SD er "normal sd" for FACT-P (ikke hentet fra artikel) Fysisk funktion ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Hjerte-kar sygdom* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Depression* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Diabetes* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Muskelstyrke* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Iltoptagelse (Vo2)* Aerobic exercise tolerance ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Aerobic exercise tolerance ● **Unit of measure**: Seconds ● **Direction**: Higher is better ● **Data value**: Endpoint *Fraktur* ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint

	Bivirkninger, træningsrelaterede ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Number of participants with skeletal related adverse events. ● **Direction**: Lower is better ● **Data value**: Endpoint Frafald, alle årsager ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** None reported **Country:** UK **Setting:** Outpatient urology clinics in UK **Comments:** Trial registration: ISRCTN88605738. **Authors name:** Liam Bourke **Institution:** Department of Primary Care and Public Health, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, UK **Email:** d.j.rosario@sheffield.ac.uk **Address:** Academic Urology Unit, K Floor, Department of Oncology, Royal HallamshireHospital, Glossop Road, University of Sheffield, Sheffield S10 2JF, UK
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Randomisation was undertaken (1:1) by a senior academic independent of the study, at the patient level using nQuery statistical software".
Allocation concealment (selection bias)	Low risk	Quote: "Randomisation was undertaken (1:1) by a senior academic independent of the study, at the patient level using nQuery statistical software".
Blinding of participants and personnel (performance bias)	High risk	No information of blinding of participants and health care professionals. Blinding not feasible.
Blinding of outcome assessment (detection bias)	High risk	Quote: "Functional outcomes were assessed by a trained technician blinded to group allocation". High risk for self-reported outcomes (quality of life)
Incomplete outcome data (attrition bias)	Low risk	Equal drop out in the two groups, reasons stated.

Selective reporting (reporting bias)	High risk	Refernece to a protocol, Muscle strength stated as secondary outcoem in the protocol but not reported
Other bias	Low risk	The study appears to be free of other sources of bias

Cormie 2015

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Træning ● *Age in years - Mean(sd)*: 69.9 (5.5) ● Time since diagnosis, months, mean (SD): 16.6 (27.0) ● *BMI - kg/m2*: 29.3 (4.5) ● *Number of participants on ADT (%): 32 (100)* ● *Time on ADT in days, mean (SD): 6.2 (1.16)* Kontrol (vanlig behehandling) ● *Age - Mean(sd)*: 67.1 (7.5) ● Time since diagnosis, months, mean (SD): 10.4 (14.4) ● *BMI - kg/m2*: 29.6 (2.6) ● *Number of participants on ADT (%): 31 (100)* ● *Time on ADT in days, mean (SD): 5.6 (2.0)* **Included criteria:** One hundred and twenty-six men aged 46–80 years scheduled to commence ADT for the treatment of prostate cancer were referred by oncologists and urologists in Perth, Western Australia from June 2011 through to October 2012, and screened for participation in the study (Fig. 1). Participants were not involved with any other clinical trial or exercise trial. Participants had a histological diagnosis of prostate cancer, were beginning treatment with leuprorelin acetate depot (Lucrin®), were anticipated to remain on ADT for at least the next 3 months and obtained written medical clearance from their physician (GP). **Excluded criteria:** Patients were excluded if they had previously received ADT, had established bone metastatic disease, were unable to walk 400 m unassisted or had musculoskeletal, cardiovascular and/or neurological disorders that could inhibit them from exercising (as determined by the patient's physician).
Interventions	**Intervention Characteristics** Træning ● *Description*: The exercise intervention involved twice weekly exercise sessions for 3 months in one of six exercise clinics across Perth and regional Western Australia (Bunbury). Sessions were conducted in small groups of 8–10 participants supervised by accredited exercise physiologists. The sessions were ≈60 min in duration and involved moderate–high intensity aerobic and resistance exercises, as well as standard warm-up and cool-down periods. The aerobic exercise component included 20–30 min of cardiovascular exercise using various modes, e.g. walking or jogging on a treadmill, cycling or rowing on a stationary ergometer or exercising on a cross trainer machine. Target intensity was set at approximately 70–85% of estimated maximum heart rate. The resistance exercise component involved eight exercises that targeted the major upper and lower body muscle groups (leg press, leg extension, leg curl, calf raise, chest press, latissimus dorsi pulldown, biceps curl and triceps extension). Intensity was manipulated from 6–12 repetition

	maximum (RM; i.e. the maximal weight that can be lifted 6–12 times, which is equivalent to ≈60–85% of one repetition maximum [1RM]) using 1–4 sets per exercise. To ensure the progressive nature of the programme, participants were encouraged to work past the specific RM prescribed and the resistance was increased by a 5–10% increment for the next set/training session if the participant exceeded the target RM. Prescription of both aerobic and resistance exercise components was progressive and modified according to individual response. Session rating of perceived exertion (RPE) was recorded immediately after the completion of each exercise session to monitor the perceived intensity of the exercise [28]. Participants were encouraged to supplement the supervised exercise sessions with home-based aerobic exercise with the aim of accumulating a total of at least 150 min of moderate intensity aerobic exercise each week. The exercise intervention was designed in accordance with international guidelines [29]. Kontrol (vanlig behehandling) ● *Description*: Participants randomised to the usual-care group received no intervention but were offered the exercise programme after the completion of the intervention period. All participants maintained standard medical care for the treatment of prostate cancer and were instructed to maintain their customary activity and dietary patterns throughout the intervention period.
Outcomes	*Livskvalitet, Helbredsrelateret* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: SF-36, Physical health composite and mental health composite ● **Range**: 0-100 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Endpoint Fysisk funktion ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Repeated chair raise, 5 repetitions ● **Unit of measure**: Seconds ● **Direction**: Lower is better ● **Data value**: Endpoint Muskelstyrke ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Leg press, 1 RM ● **Unit of measure**: Kg ● **Direction**: Higher is better ● **Data value**: Endpoint *Iltoptagelse (Vo2)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: *Vo2 max* ● **Unit of measure**: ml/Kg/min

	● **Direction**: Higher is better ● **Data value**: Endpoint *Hjerte-kar sygdom* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Depression* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Brief symptom inventory BSI-18 ● Range 0-24 ● **Unit of measure**: Points ● **Direction**: Lower is better ● **Data value**: Endpoint *Diabetes* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Fraktur* ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint Bivirkninger, træningsrelaterede ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint Frafald, alle årsager ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** The study was funded by Abbvie Pty Ltd. **Country:** Australia **Setting:** Patients diagnosed with prostate cancer were referred by oncologists and urologists in Perth, Western Australia.

	Comments: ACTRN12610000691044; https://www.anzctr.org.au/ Trial/Registration/TrialReview.aspx?id=335822. **Authors name:** Prue Cormie **Institution:** Edith Cowan University Health and Wellness Institute, Edith Cowan University
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Adequately performed sequence. Quote: "participants were randomised in an allocation ratio of 1:1 using a random assignment computer program"
Allocation concealment (selection bias)	Low risk	Quote: "The project coordinator and exercise physiologists involved in assigning participants to groups were 'blinded' to the allocation sequence"
Blinding of participants and personnel (performance bias)	High risk	Not possible to blind
Blinding of outcome assessment (detection bias)	High risk	insufficient reported. High risk for self-reprted outcomes (Quality of life)
Incomplete outcome data (attrition bias)	Low risk	Intervention: 1/32, control: 7/31. ITT analyses
Selective reporting (reporting bias)	Low risk	None detected
Other bias	Low risk	No other sources of bias

Dawson 2018

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 68.6 (8.4) ● *BMI, Kg/m2, mean (SD)*: 28.5 (4.7) ● *Time since diagnosis in years, mean (SD)*: 4.7 (5.1) ● *Number of participants on ADT (%)*: 16 (100) ● *Time on ADT in months, mean (SD)*: 14.6 (15.4) Control ● *Age in years, mean (SD)*: 66.3 (9.0) ● *BMI, Kg/m2, mean (SD)*: 26.1 (4.0) ● *Time since diagnosis in years, mean (SD)*: 4.7 (4.9) ● *Number of participants on ADT (%)*: 19 (100)

	● *Time on ADT in months, mean (SD)*: 12.7 (11.6) **Included criteria:** Current treatment with gonadotrophin-releasing hormone (GnRH) agonist/antagonist with or without anti-androgen for at least 12 weeks, or prior treatment of GnRH agonist/antagonist with serum testosterone concentration < 50 ng·dl− 1 at baseline and for the study duration. For patients not currently receiving ADT, an additional screening of testosterone < 50 ng·dl− 1 was performed **Excluded criteria:** Chemotherapy or radiation within 4 weeks of enrollment; Major surgery within 6 months; Coronary or vascular event in the last year; Current participation in a structured exercise program.
Interventions	**Intervention Characteristics** Intervention ● *Description*: TRAIN (TRAIN+TRAINPRO = EXE group): TRAINPRO and TRAIN groups performed resistance training 3 days per week for 12 weeks with an accredited exercise trainer at the USC Clinical Exercise Research Center. The resistance training program met the American Cancer Society's (ACS) guidelines for strength training and the Compendium of PhysicalActivity's classification for vigorous intensity. Each session was ~ 50 min in duration and began with a 5 min dynamic warmup of body weight exercises that targeted the muscle groups used in the resistance training routine (Table 1). The weekly training volume was divided such that each muscle group was trained twice per week, with lower body and trunk trained on the first day, lower and upper extremities on the second day, and upper body and trunk on the third day. The training routine included 7 machine-based exercises (leg press, leg curl, leg extension, chest press, shoulder press, seated row, lat pulldown) and 3 trunk exercises (plank, hip bridge, dead bug). Because metastatic patients were included, alternative exercises were offered to patients with pre-existing pain due to affected skeletal sites (Table 1). This modular approach has been utilized in previous investigations conducted in patients with bone metastatic disease. Every session concluded with 5 min of static stretching, where hip flexors/extensors were stretched on lower body and total body days, and shoulder flexors/extensors were stretched on upper body and total body days.The resistance exercise load was systematically progressed using a periodization model as previously described, with 3 sets of each exercise performed and rest periods held constant at 1 min between sets. The periodization model consisted of a 4-week muscular endurance mesocycle and an 8-week hypertrophy mesocycle, where load and repetitions were varied over the course of the intervention. Because brief periods of overreaching were expected due to each load increase, repetitions were tapered by 2 in the second week of each microcycle to maximize adaptations without overtraining. The progression cycle was as follows: Weeks 1–2:60% 1RM, 15 repetitions; Weeks 3–4: 65–67%, 15–12 repetitions; Weeks 5–6: 70% 1RM, 12–10 repetitions; Weeks 7–8:75% 1RM, 10–8 repetitions; Weeks 9–10: 80% 1RM, 10–8 repetitions; Weeks 11–12: 83% 1RM, 8 repetitions. Participants were trained to fatigue with each set, where verbal encourage-ment and light spotting for completion of all repetitions were provided when necessary. In addition to the described training, the TRAINPRO were given 50 g·day− 1 of whey protein isolate (EnergyFirst®, Manhattan Beach, CA) for 12 weeks. The 50 g daily supplement was divided into two 25 g doses, with each 25 g dose containing 112.5 kcal, 25 g protein (2 g leucine), 0 g fat, and 3.75 g carbohydrate. For TRAINPRO participants,one dose was given immediately after the exercise session to optimize post-exercise anabolic stimuli.Participants completed a protein diary, which was collected on a weekly basis. ● *Dose*: 50 min, 3 days per week ● *Duration*: 12 weeks ● *Time on ADT in months, mean (SD)*: EXE: 14.6 (8.4) Control ● *Description*: STRECTH (STRECTH + PRO = NoEXE group): PRO and STRETCH groups performed a home-based flexibility program 3 times per week for 12 weeks, then were offered the exercise program at the end of the study. Each home-based stretching session lasted 5 min and matched the stretches performed by TRAIN and TRAINPRO groups. PRO and STRETCH groups were given a stretching band, a booklet detailing the exercises, and were asked to complete weekly records of flexibility compliance and other exercises performed outside the study with a monetary compensation provided at midpoint and post-intervention. In addition to the home program, the PRO were given 50 g·day− 1 of whey protein isolate (EnergyFirst®, Manhattan Beach, CA) for 12 weeks. The 50 g daily supplement was divided into two 25 g doses, with each 25 g

	dose containing 112.5 kcal, 25 g protein (2 g leucine), 0 g fat, and 3.75 g carbohydrate. Participants completed a protein diary, which was collected on a weekly basis. ● *Dose*: See above ● *Duration*: 12 weeks ● *Time on ADT in months, mean (SD)*: NoEXE: 12.7 (11.6)
Outcomes	*Diagnosespecifik livskvalitet (desease specific quality of life), Functional Assessment of Cancer Therapy General (Fact G), mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Functional Assessment of Cancer Therapy General ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Diagnosespecifik livskvalitet (desease specific quality of life), Functional Assessment of Cancer Therapy Prostate (Fact P), mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Functional Assessment of Cancer Therapy Prostate ● **Range**: 0-156 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Fysisk funktion (physical function) 400 meter gangtest, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 400 meter gangtest ● **Unit of measure**: Seconds ● **Direction**: Higher is better ● **Data value**: Endpoint *Fysisk funktion (physical function), timed up and go, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Timed up and go ● **Unit of measure**: Seconds ● **Direction**: Lower is better ● **Data value**: Endpoint *Muskelstyrke (muscle strength) Leg press, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Leg press

- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Endpoint

Muskelstyrke (muscle strength), Leg extension, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: Leg extension
- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Endpoint

Vo2 max (Vo2 peak)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Depression (depression) Epidemiologic Studies depression Scale (CES-D), mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: Epidemiologic Studies depression Scale (CES-D)
- **Range**: 0-60
- **Unit of measure**: Points
- **Direction**: Lower is better
- **Data value**: Endpoint

Hjertekarsygdom (cardiovascular diseases)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, Frakturer ja/nej
- **Unit of measure**: Antal personer der får fraktur
- **Direction**: Lower is better
- **Data value**: Endpoint

Træningsrelaterede skader (Exercise related injuries) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, Træningsrelaterede skader ja/nej

	● **Unit of measure**: Antal personer med træningsrelaterede skader ● **Direction**: Lower is better ● **Data value**: Endpoint *Frafald (dropouts) antal personer* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Frafald ● **Unit of measure**: Antal personer der falder fra ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** JKD received financial support from the National Strength and Conditioning Association and the California State University, which was used to support the exercise intervention, data collection and analysis. CJL is funded by SC CTSI UL1TR001855, which supported her role in data interpretation and manuscript review. CMD is funded by NIH/NCI K07CA160718, which supported her role in study management, analysis, and manuscript review. **Country:** USA **Authors name:** Jacqueline K. Dawson **Institution:** Divison of Biokinesiology and Physical Therapy, Ostrow School of Dentistry, University of Southern California **Email:** kiwata@alumni.usc.edu **Address:** Divison of Biokinesiology and Physical Therapy, Ostrow School of Dentistry, University of Southern California, 1540 Alcazar Street, CHP-155, Los Angeles, CA 90033, USA
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Participants were randomized 1:1 to one of four study groups:" Quote: "The randomization list was prepared in advance by a bio-statistician, and allocation was conducted by the Clinical Investigation Support Office at the University of Southern California (USC) Norris Comprehensive Cancer Center." Judgement Comment: No specific information on how the allocation sequence was generated, but presume that the sequence generation was random. Assuming the ransomisation was done in a computer program as it was done by a biostatistician.
Allocation concealment (selection bias)	Low risk	Quote: "The randomization list was prepared in advance by a bio- statistician, and allocation was conducted by the Clinical Investigation Support Office at the University of Southern California (USC) Norris Comprehensive Cancer Center." Judgement Comment: Central allocation.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Trial participants and investigators were not blinded to group allocation." Judgement Comment: No blinding.

Blinding of outcome assessment (detection bias)	High risk	Quote: "Trial participants and investigators were not blinded to group allocation." Judgement Comment: No blinding.
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: Per protocol analyses, balanced numbers of dropouts between groups 3/16 (exercise) vs 2/19 (control), reasons stated.
Selective reporting (reporting bias)	Low risk	Judgement Comment: Protocol available both at clinical trials NCT01909440and as a published protocol, outcome data were reported for all outcomes of interests specified in the published protocol. In register, and the protocol it is stated that ITT would be performed. This is not done, but it is only a pilot study.
Other bias	Low risk	Quote: "The authors declare that they have no competing interests." Judgement Comment: The study is at pilot study with 37 participants randomised. At clinical trials the actual enrolement is 43 participants.

Focht 2018

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 69.4 (9.0) ● *BMI, Kg/m2, mean (SD)*: 28.5 (9.05) ● *Number of participants on ADT (%)*: 16 (100) ● *Time on ADT in months, mean (SD)*: 32.18 (27.28) Control ● *Age in years, mean (SD)*: 64.5 (8.6) ● *BMI, Kg/m2, mean (SD)*: 31.5 (6.23) ● *Number of participants on ADT (%)*: 16 (100) ● *Time on ADT in months, mean (SD)*: 15.31 (19.39) **Included criteria:** (a) histologically defined diagnosis of prostate cancer based on pathology reports and staging studies; (b) currently undergoing androgen-deprivation therapy with a planned course of at least 3 months of continuous therapy; (c) sedentary activity pattern with less than 60 min of structured exercise participation per week during the past 6 months, consistent with recent lifestyle intervention trial's classification of inactivity; (d) free of poorly controlled medical conditions that precluded safe participation in an exercise program, such as uncontrolled coronary artery disease, hypertension, peripheral vascular disease, cerebral ischemia, congestive heart failure, chronic obstructive pulmonary disease, insulin-dependent diabetes, psychiatric disease, renal failure, liver failure, other active cancers, or anemia; (e) consent to participate from the treating oncologist and primary care physician;(f) willingness to accept randomization and undergo the testing and intervention procedures. **Excluded criteria:** Not applicable.
Interventions	**Intervention Characteristics** Intervention ● *Description*: The EX+D intervention involved a 12-week, multicomponent approach designed to facilitate exercise and dietary behavior change and promote adherence, independent of study staff, to these changes in lifestyle behavior. The exercise component of the EX+D intervention integrated a combination of supervised resistance and aerobic exercise performed twice per week. All supervised exercise sessions lasted 1 hr in duration. The exercise prescription was tailored to each individual's baseline functional abilities and exercise tolerance/capacity. Consequently,

	resistance exercise load, volume, and volume-load and aerobic exercise duration and intensity were guided by each participant's exercise tolerance and gradually increased across the intervention to progress toward optimal, targeted prescription ranges. Additionally, given that a primary goal of the intervention was to offset androgen deprivation-induced declines in muscle mass and strength, resistance exercise was the focal aspect of center-based training sessions. The progressive resistance exercise stimulus involved performing three sets at each individual's 8–12 repetition maximum (8RM–12RM) and a rating of perceived exertion (1–10) ranging from 3 (Moderately Hard) to 6 (Hard) for nine different exercises (leg extension, leg curl, chest press, lattimus dorsi pull-down, overhead press, triceps extension, bicep curl,calf raises, and abdominal crunch). To implement the resistance training principles of progression and overload, when participants were able to successfully complete two additional repetitions on two consecutive sets of an exercise, the resistance was increased by 5% for upper body exercises and 10% for lower body exercises. A 1–2 min rest interval was maintained between each set, and all sets were performed in a symptom-limited manner. The aerobic exercise stimulus consists of 10–20 min of exercise performed at a rating of perceived exertion (1–10) ranging from 3 (fairly light) to 4 (moderately hard) on the participant's choice of a treadmill, stationary cycle, or elliptical trainer. Participants were also encouraged to gradually increase independent, home-based exercise participation and purposeful activity and decrease sedentary time to progress toward accruing a volume of physical activity consistent with national guidelines for health (i.e., 150 min of physical activity per week and 10,000 steps per day). ● *Dose*: 60 min , twice weekly. ● *Duration*: 12 weeks ● *Time on ADT in months, mean (SD)*: 32.18 (27.28) Control ● *Description*: Men randomized to the SC control arm received usual prostate cancer treatment and standard disease management education, as well as additional educational literature describing the American Institute of CancerResearch dietary and physical activity guidelines and education ● *Dose*: Not applicable ● *Duration*: 12 weeks ● *Time on ADT in months, mean (SD)*: 15.31 (19.39)
Outcomes	Livskvalitete (quality of life) ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Fysisk funktion (physical function), 400 meter gangtest, mean change (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 400 meter gangtest ● **Unit of measure**: Seconds ● **Direction**: Higher is better ● **Data value**: Change from baseline *Muskelstyrke (muscle strength), Leg extension, mean change (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Leg extension ● **Unit of measure**: Kg ● **Direction**: Higher is better ● **Data value**: change from baseline

	Vo2 max (Vo2 peak) ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported Depression (depression) ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Hjertekarsygdom (cardiovascular diseases)* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported Diabetes (diabetes) ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Frakturer (fractures) antal personer med* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, Frakturer ja/nej ● **Unit of measure**: Antal personer der får fraktur ● **Direction**: Lower is better ● **Data value**: Endpoint *Træningsrelaterede skader (Exercise related injuries) antal personer med* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, træningsrelaterede skader ja/nej ● **Unit of measure**: Antal personer med ● **Direction**: Lower is better ● **Data value**: Endpoint *Frafald (dropouts) antal personer* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer der falder fra ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** This study is supported by National Cancer Institute (R03 CA16296901). **Country:** USA **Authors name:** Brian C. Focht **Institution:** Department of Human Sciences, Exercise and Behavioral Medicine Laboratory, Kinesiology, The Ohio State University

	Email: focht.10@osu.edu **Address:** Department of Human Sciences, Exercise and Behavioral Medicine Laboratory, Kinesiology, The Ohio State University, 305 Annie and John Glenn Ave, Columbus, OH 43210, USA
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Eligible participants were randomly assigned with equal probability to each of the two treatment arms using a 1:1 ratio following the completion of the baseline screening visit. The computer-generated randomization allocation sequence was sequentially numbered and sealed in opaque envelopes."
Allocation concealment (selection bias)	Low risk	Quote: "The computer-generated randomization allocation sequence was sequentially numbered and sealed in opaque envelopes. The randomization allocation sequence was also concealed from study staff responsible for conducting the baseline assessments."
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information on blinding of personnel and participants, blinding not feasible.
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Assessments of all study outcomes were obtained at baseline, 2-month, and 3-month follow-up visits by trained study personnel who were blinded to participants' treatment assignment." Judgement Comment: Low risk for objective outcomes, no subjective outcomes of interest were reported.
Incomplete outcome data (attrition bias)	Low risk	Quote: "ANCOVA analyses were conducted using the intent-to-treat principle to account for missing data with the last observation carried forward (LOCF) approach, used to impute change across time to be zero." Judgement Comment: 11/16 in the usual care group dropped out vs 2/16 in the exercise group. Reasons for dropout stated. Intention to treat analyses performed with last observation carried forward for missing data.
Selective reporting (reporting bias)	High risk	Judgement Comment: Many outcomes in trial registry is not reported in study, but may be reported in other publications. Protocol available at cliniclatrials.gov. (NCT02050906) Change in global and disease-specific QOL assessed using the Satisfaction with Life Scale, the Short Form (SF)-36, and the Functional Assessment of Cancer Treatment-Prostate (FACT-P) were stated in the protocol, buit not reported in the publication.
Other bias	Low risk	The study appears to be free of other sources of bias.

Galvao 2010

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Træning ● *Age in years - Mean (sd)*: 69,5 (7,3) ● *Height - cm*: 171,1 (6,1) ● *Weight - kg*: 80,7 (10,3)

	● *BMI - kg/m2*: 27,4 (3,2) ● *Number of participants on ADT (%): 29 (100)* ● *Time on ADT in months, mean (SD): 18.2 (38.5)* Kontrol (vanlig behehandling) ● *Age in years - Mean(sd)*: 70,1 (7,3) ● *Height - cm*: 172,0 (7,7) ● *Weight - kg*: 83,2 (14,4) ● *BMI - kg/m2*: 28,0 (3,8) ● *Number of participants on ADT (%): 28 (100)* ● *Time on ADT in months, mean (SD): 10.1 (26.8)* **Included criteria:** Inclusion criteria included histologically documented prostate cancer, mini-mum prior exposure to AST longer than 2 months, without PSA evidence ofdisease activity, and anticipated to remain hypogonadal for the subsequent 6 months. **Excluded criteria:** Exclusion criteria included bone metastatic disease, musculoskeletal,cardiovascular, or neurological disorders that could inhibit them from exercising, inability to walk 400 meters or undertake upper and lower limb exercise, and resistance training in the previous 3 months. **Pretreatment:** There were no significant differences between groups at baseline.
Interventions	**Intervention Characteristics** Træning ● *Description*: Participants undertook combined progressive resistance and aerobic training twice a week for 12 weeks. The resistance exercises included the chest press, seated row, shoulder press, triceps extension, leg press, leg extension and leg curl, with abdominal crunches also performed. Sessions commenced and concluded with general flexibility exercises ● *Intensity*: The resistance exercise program was designed to progress from 12- to 6 repetition maximum (RM) for two to four sets per exercise.The aerobic component of the training program included 15 to 20 minutes of cardio vascular exercises (cycling and walking/jogging) at 65% to 80% maximum heart rate and perceived exertion at 11 to 13(6 to 20 point, Borg scale ● *weekly traning sessions*: 2 Kontrol (vanlig behehandling) ● *Description*: Usual care. Control participants could undergo the training after the assessment period had been completed. ● *Intensity*: Not applicable ● *weekly traning sessions*: Not applicable
Outcomes	*Livskvalitet, Helbredsrelateret* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: SF-36, Physical health composite and mental health composite ● **Range**: 0-100 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Endpoint Fysisk funktion ● **Outcome type**: Continuous Outcome

- **Reporting**: Fully reported
- **Scale**: Repeated chair raise, 5 repetitions
- **Unit of measure**: Seconds
- **Direction**: Lower is better
- **Data value**: Endpoint

Hjerte-kar sygdom
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Depression
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Diabetes
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Iltoptagelse (Vo2)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Muskelstyrke
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: Leg press 1RM
- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Endpoint

Fraktur
- **Outcome type**: Dictomuous Outcome
- **Reporting**: Fully reported
- **Unit of measure**: Numbers
- **Direction**: Lower is better
- **Data value**: Endpoint

Bivirkninger, træningsrelaterede
- **Outcome type**: Dictomuous Outcome
- **Reporting**: Fully reported
- **Unit of measure**: Numbers
- **Direction**: Lower is better
- **Data value**: Endpoint

Frafald, alle årsager

	● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Supported by the Cancer Council of Western Australia **Country:** Australia **Setting:** Sir Charles Gairdner Hospital (Perth, Western Australia) **Authors name:** Daniel A. Galvão **Institution:** School of Exercise, Biomedicaland Health Sciences, Edith CowanUniversit **Email:** d.galvao@ecu.edu.au **Address:** 100 Joondalup Dr, Joonda-lup, Western Australia 6027, Australia;
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "participants were randomly assigned to the two arms: exercise (EX) or usual care controls (CO) in a ratio of 1:1 using a computer random assignment program"
Allocation concealment (selection bias)	Low risk	Quote: "The allocation sequence was concealedfrom the project coordinator and exercise physiologist involved in assigning participants to groups"
Blinding of participants and personnel (performance bias)	High risk	No information of blinding of participants and health care professionals. Blinding not feasible.
Blinding of outcome assessment (detection bias)	High risk	No information of blinding of outcome assessors. High risk for self reported outcomes (subjective outcomes).
Incomplete outcome data (attrition bias)	Low risk	Intention to treat analyses
Selective reporting (reporting bias)	Low risk	Protocol availablre ACTRN 126070000263493. Reports on al the ooutcomes stated in the protocol
Other bias	Low risk	The study appears to be free of other sources of bias

Galvao 2018

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 69.7 (7.6) ● *BMI, Kg/m2, mean (SD)*: 28.9 (4.1) ● *Time since diagnosis in months, median (IQR):* 20.5 (4.3-57.8) ● *Number of participants on ADT (%)*: 27 (96.4) ● *Time on ADT in months, median (IQR):* 2.0 (1.0-6.3) Control ● *Age in years, mean (SD)*: 70.4 (9.3) ● *BMI, Kg/m2, mean (SD)*: 28.5 (4.0) ● *Time since diagnosis in months, median (IQR):* 39.0 (8.0-77.0) ● *Number of participants on ADT (%)*: 27 (93.1) ● *Time on ADT in months, median (IQR):* 4.0 (1.0-9.0) **Included criteria:** Inclusion criteria included established bone metastases according to their most recent bone scan, and this included at any time point of their bone metastatic disease (e.g., at onset of bone metastatic diagnosis or at any time point thereafter), no acute illness, and no significant bone pain as assessed by their clinician. **Excluded criteria:** Exclusion criteria included the presence of any musculoskeletal, cardiovascular, or neurological disorders that could inhibit patients from exercising, and if patients had undertaken structured and supervised aerobic and/or resistance training two or more times per week within the past 3 months.
Interventions	**Intervention Characteristics** Intervention ● *Description*: The M3EP comprised resistance, aerobic, and flexibility exercises undertaken three times per week in a university exercise clinic supervised by an exercise physiologist. In brief, the exercise prescription was based on location/extent of bone metastases to avoid specific loading of the sites (Table 1), with exercise sessions lasting 60 min. The resistance exercise component targeted the major trunk and upper and lower body muscle groups, which we have used in previous studies, at a moderate intensity ranging from 10- to 12-repetition maximum (RM;e.g., maximal weight that can be lifted 10–12 times) for three sets per exercise. Exercises were performed at a set cadence of 2 s for both eccentric and concentric phases, minimizing peak forces transmitted to the skeleton. To ensure progression, resistance was increased by 5%–10% for the next set/training session when the RM values were exceeded during a set. The aerobic exercise component included 20–30 min of cardiovascular exercise using various modes such as walking on a treadmill, cycling, or rowing on a stationary ergometer on the basis of disease extent with a target intensity of 60%–85% estimated maximal heart rate. The flexibility component involved static stretching, 2–4 repetitions for 30–60 s per stretch for all major joints considered important for maintaining function. Each session commenced with a 10-min warm-up comprising low-level aerobic activities such as treadmill walking and stationary cycling as determined by bone metastases site, as well as stretching, and concluded with a 5-min cool-down period of stretching activities. All participants will be asked to maintain customary physical activity and diretary patterns over the intervention period (apart from the programmed exercise). ● *Dose*: 60 mins 3 times per week ● *Duration*: 3 months ● *Time on ADT in months, median (IQR):* 2.0 (1.0-6.3)

	Control 1 ● *Description*: Usual care. All participants will be asked to maintain customary physical activity and diretary patterns over the intervention period ● *Dose*: Not applicable ● *Duration*: 3 months ● *Time on ADT in months, median (IQR):* 4.0 (1.0-9.0)
Outcomes	*Generel livskvalitet (quality of life), SF 36, physical component, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: SF 36, physical component ● **Range**: 0-100 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Fysisk funktion (physical function), 400 meter gangtest, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 400 meter gangtest ● **Unit of measure**: Seconds ● **Direction**: Higher is better ● **Data value**: Endpoint *Fysisk funktion (physical function), timed up and go, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Timed up and go ● **Unit of measure**: Seconds ● **Direction**: Lower is better ● **Data value**: Endpoint *Fysisk funktion (physical function), 6 meters gangtest, fast, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 6 meters gangtest, fast ● **Unit of measure**: Seconds ● **Direction**: Lower is better ● **Data value**: Endpoint *Fysisk funktion (physical function), 6 meters gangtest, usual, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 6 meters gangtest, usual

- **Unit of measure**: Seconds
- **Direction**: Lower is better
- **Data value**: Endpoint

Muskelstyrke (muscle strength), Leg extension, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: Leg extension
- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Endpoint

Vo2 max (Vo2 peak)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Depression (depression)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Hjertekarsygdom (cardiovascular diseases)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, frakturer ja/nej
- **Unit of measure**: Antal personer der får fraktur
- **Direction**: Lower is better
- **Data value**: Endpoint

Træningsrelaterede skader (Exercise related injuries) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, træningsrelaterede skader ja/nej
- **Unit of measure**: Antal personer med
- **Direction**: Lower is better
- **Data value**: Endpoint

Frafald (dropouts) antal personer

	● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer der falder fra ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Movember New Directions Development Award obtained through Prostate Cancer Foundation of Australia's Research Program **Country:** Australia **Authors name:** Daniel A. Galvao **Institution:** Exercise Medicine Research Institute, Edith Cowan University **Email:** d.galvao@ecu.edu.au. **Address:** Exercise Medicine Research Institute, Edith Cowan University, 270 Joondalup Drive, Joondalup, WA 6027, Australia
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "After the baseline assessment, patients were randomly assigned to exercise (EX) or usual care controls (CON) in a ratio of 1/1 using a computer random assignment program subject to maintaining approximate bal- ance regarding stratification for current chemotherapy."
Allocation concealment (selection bias)	Low risk	Quote: "The allocation sequence was concealed from the project coordi- nator and exercise physiologist involved in assigning patients to groups."
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information on blinding of personnel and participants, blinding not feasible.
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: Quote from Galvao 2011 (protocol): "The exercise physiologists and other recearches conductiing the study measures will be blinded to at given participant's group allocation". Primary outcome is based on self-assessment and blinding not feasible.
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: 5/28 dropped out in the exercise group vs 3/29 in the usual care group. reason stated. Low attritin rates in both groups and not related to intervention (interventon = 5/28, control 3/29).
Selective reporting (reporting bias)	Low risk	Judgement Comment: Protocol available at https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?ACTRN=12611001158954 anda published protocol is also available. Outcome data were reported for all outcomes of interests specified in the protocols.
Other bias	Low risk	The study appears to be free of other sources of bias

Harrison 2018

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 65.66 (8.11) Control ● *Age in years, mean (SD)*: 64.37 (8.31) **Included criteria:** a) Male age ≥ 18 years; b) Histologically-confirmed adenocarcinoma of the prostate; c) Completion of appropriate prior treatment with local therapy (i.e., prostatectomy, radiation therapy or equivalent), per NCCN Guidelines; d) Detectable PSA, defined as PSA ≥0.01 ng/ml; e) Appropriate for treatment with ADT in the opinion of the treating physician.; f) Serum total testosterone ≥150 ng/dL (5.2 nmol/L); g) ECOG performance status of ≤ 1 (Appendix A) h) Planned treatment with castration therapy (GnRH agonist/antagonist) for ≥8 months. i) Must not have any of the following absolute contraindications to cardiopulmonary exercise testing and/or aerobic training as determined by the attending oncologist: (Absolute Contraindications, Acute myocardial Infarction (within 3-5 days of any planned study procedures), Unstable angina, Uncontrolled arrhythmia causing symptoms or hemodynamic compromise, Recurrent syncope, Active endocarditis, Acute myocarditis or pericarditis, Symptomatic severe aortic stenosis, Uncontrolled heart failure, Acute (within 3 months) pulmonary embolus or pulmonary infarction, Thrombosis of lower extremities, Suspected dissecting aneurysm, Uncontrolled asthma, Pulmonary edema, Room air desaturation at rest <85%, Respiratory failure Acute non-cardiopulmonary disorders that may affect exercise performance or be aggravated by exercise (i.e. infection, renal failure, thyrotoxicosis), Mental impairment leading to inability to cooperate.) j) Able to swallow enzalutamide and comply with study requirements; k) Must be able to complete an acceptable cardiopulmonary exercise test (CPET) at baseline (see Section 9), defined as at least one of the following: (Achieving a plateau in oxygen consumption concurrent with an increase in power output; Respiratory exchange ratio ≥ 1.1 (RER); Volitional exhaustion with a rating of perceived exertion ≥ 17 (RPE))l) Must be able to complete an acceptable muscular strength test (assessed using calculated one-repetition maximum (1-RM)) at baseline (see Section 9), in the opinion of the fitness specialist, exercise physiologist, or trained designee administering the test.m) Life expectancy of ≥ 12 months.n) Must use a condom if having sex with a pregnant woman. o) Male subject and his female partner who is of childbearing potential must use 2 acceptable methods of birth control (one of which must include a condom as a barrier method of contraception) starting at screening and continuing throughout the study period and for 3 months after final study drug administration. Two acceptable methods of birth control thus include the following: Condom (barrier method of contraception); AND One of the following is required:Established use of oral, or injected or implanted hormonal method of contraception by the female partner; Placement of an intrauterine device (IUD) or intrauterine system (IUS) by the female partner; Additional barrier method: Occlusive cap (diaphragm or cervical/vault caps) with spermicidal foam/gel/film/cream/suppository by the female partner; Tubal ligation in the female partner; Vasectomy or other procedure resulting in infertility (e.g., bilateral orchiectomy), for more than 6 monthsp) Subjects must have normal organ and marrow function as defined below:absolute neutrophil count >1,500/µL,platelets >100,000/µL,total bilirubin <2.5 X institutional upper limit of normal,AST(SGOT)/ALT(SGPT) <2.5 X institutional upper limit of normal,Creatinine ≤ 2.0 OR creatinine clearance >30 mL/min/1.73 m2 for subjects with creatinine levels above institutional normal. **Excluded criteria:** a) Definite evidence of metastatic prostate cancer, in the opinion of the treating physician. Pelvic and retroperitoneal lymph nodes < 2.0 cm in short axis are allowed. b) Subjects who have had treatments with GnRH agonists/antagonists and/or anti-androgens within 1 year of randomization. c) Use of herbal products that may have hormonal anti-prostate cancer activity and/or are known to decrease PSA values (e.g., saw palmetto) or systemic corticosteroids for prostate cancer within 4 weeks of day 29 visit (start of Enzalutamide and ADT). d) Subjects who have had radiotherapy within 12 weeks prior to entering the study or those who have not recovered from adverse events due to agents or therapies administered for treatment of prostate cancer more than 4 weeks earlier (except urinary, rectal, and sexual side effects related to prostatectomy or radiotherapy are

	permitted) e) Subjects who have had any surgical procedure (i.e. TURP, etc.) within 4 weeks prior to entering the study. f) Subjects who are receiving any other investigational agents. g) Significant cardiovascular disease, including:Symptomatic left ventricular dysfunction or known baseline left ventricular ejection fraction (LVEF) by multigated acquisition scan (MUGA) or echocardiogram (ECHO) of < lower limit of institutional normal (LLN). "Symptomatic" is defined as New York Heart Association (NYHA) Class II or greater. Note: MUGA and ECHCO do NOT need to be measured to establish eligibility for this study. Uncontrolled hypertension (in the opinion of the treating provider). Myocardial infarction, severe angina, or unstable angina within 6 months prior to administration of first dose of study drug.History of serious ventricular arrhythmia (i.e., ventricular tachycardia or ventricular fibrillation) within 12 months of first dose of study drug. Uncontrolled cardiac arrhythmias.Coronary or peripheral artery bypass graft within 6 months of first dose of study drug.History of CVA, TIA, or rest claudication within 6 months of first dose of study drug.h) Uncontrolled intercurrent illness including, but not limited to, ongoing or active infection, symptomatic congestive heart failure, unstable angina pectoris, cardiac arrhythmia, or psychiatric illness/social situations that would limit compliance with study requirements (in the opinion of the treating provider).i) Subjects with any condition (e.g., gastrointestinal tract disease resulting in an inability to take oral medication or a requirement for IV alimentation, prior surgical procedures affecting absorption, or active peptic ulcer disease) that impairs the ability to swallow and retain enzalutamide are excluded.j) History of another invasive cancer within 5 years of randomization with the exceptions of (a) non-melanoma skin cancers and (b) American Joint Committee on Cancer (AJCC) Stage 0 or 1 cancers that have a remote probability of recurrence, in the opinion of the treating physician, in consultation with the principal investigator.k) Known or suspected brain metastasis or leptomeningeal disease.l) History of seizure or any condition that may predispose to seizure (e.g., prior cortical stroke, significant brain trauma) at any time in the past. Also, history of loss of consciousness or transient ischemic attack within 12 months of the Day 1 visit.
Interventions	**Intervention Characteristics** Intervention ● *Description*: The ENZ+ADT+Exercise arm will receive treatment with enzalutamide plus androgen deprivation therapy along with supervised exercise training. Exercise began 4 weeks prior to starting ADT þ ENZ and consisted of 48 supervised exercise sessions delivered 3x/week between 55-80% of exercise capacity (VO2peak) for aerobic training and 60-85% of one repetition maximum (1-RM) for resistance training ● *Dose*: 3 times/week ● *Duration*: 16 weeks Control ● *Description*: The usual care arm will receive treatment with enzalutamide with androgen deprivation therapy, with no supervised exercise training. ● *Dose*: ● *Duration*: 16 weeks
Outcomes	*Diagnosespecifik livskvalitet (desease specific quality of life), Functional Assessment of Cancer Therapy Prostate (Fact P), mean change (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Partially reported ● **Scale**: Functional Assessment of Cancer Therapy Prostate ● **Range**: 0-156 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Change from baseline *Fysisk funktion (physical function), rejse/sætte sig test, antal sekunder på 5 gentagelser mean change (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported

- **Scale**: rejse/sætte sig test
- **Unit of measure**: seconds
- **Direction**: Lower is better
- **Data value**: Change from baseline

Fysisk funktion (physical function), 6 minutters gangtest, mean change (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: 6 minutters gangtest
- **Unit of measure**: Meters
- **Direction**: Higher is better
- **Data value**: Change from baseline

Muskelstyrke, leg press, mean change (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: leg press
- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Change from baseline

Vo2 max (Vo2 peak) mean change (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: VO2 max
- **Unit of measure**: ml/Kg/min
- **Direction**: Higher is better
- **Data value**: Change from baseline

Depression (depression)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Hjertekarsygdom (cardiovascular diseases)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, frakturer ja/nej

	● **Unit of measure**: Antal personer der får fraktur ● **Direction**: Lower is better ● **Data value**: Endpoint *Træningsrelaterede skader (Exercise related injuries) antal personer med* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, træningsrelaterede skader ja/nej ● **Unit of measure**: Antal personer med ● **Direction**: Lower is better ● **Data value**: Endpoint *Frafald (dropouts) antal personer* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer der falder fra ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Pheizer (Medivation), Astellas **Authors name:** Michael Harrison **Institution:** Duke University **Email:** michael.harrison@duke.edu
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Judgement Comment: Once the subject has been registered, completed screening, and found to eligible post-baseline testing, the study coordinator at Duke will request the subject's random assignment to one of the two treatment arms from the Medidata RAVE database.
Allocation concealment (selection bias)	Low risk	Judgement Comment: The site will then be notified by the RAVE database to which arm the subject has been assigned.
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: Information from clinical neithersubjects nor study personnel will be blinded to treatment assignment. trials.gov: Masking: open label
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: Information from clinicaltrials.gov: Masking: open label. Critical outcome is self-reported
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: No dropouts. Outcome data are missing for few participants for some outcomes. No attrition in either groups

Selective reporting (reporting bias)	Low risk	Judgement Comment: Protocol and results avalible at clinicaltrials.gov. Outcome data were reported for all outcomes specifiedat clinical trials.gov.
Other bias	Unclear risk	Only an abstract is available. The study was originally designed to recruit 56 subjects but was halted eraly due to funding issues.

Hojan 2017

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 65.7 (6.2) ● *BMI, Kg/m2, mean (SD)*: 26.42 (2.8) ● *Number of participants on ADT (%)*: 36 (100) Control ● *Age in years, mean (SD)*: 67.9 (4.9) ● *BMI, Kg/m2, mean (SD)*: 29.25 (3.7) ● *Number of participants on ADT (%)*: 36 (100) Overall ● *Age in years, mean (SD)*: 66.23 (4.94) ● *BMI, Kg/m2, mean (SD)*: 28.69 (3.4) ● *Number of participants on ADT (%)*: 36 (100) **Included criteria:** 1. Aged between 18 and 75 years; 2. Scheduled ADT (LH-analogue 10.8 mg every 3 months) planned to continue for a total period of 36 months (3 to 5 months prior to RT, during and after completion); 3. RT received a total dose of 76 Gy in 38 fractions (in the first phase of therapy, the pelvic lymph nodes along with the prostate gland and seminal vesicles were subjected to a dose of 46 Gy at 2 Gy fractions and in the second phase of therapy the irradiated volume was limited to prostate gland plus seminal vesicles to a total dose of 76 Gy); 4. Good general condition (Eastern Cooperative Oncology Group - ECOG- performance status 0-1). **Excluded criteria:** 1. Distant metastases and/or disease progression resulting in RT or the introduction of chemotherapy; 2. Insufficiently controlled arterial hypertension or cardiac diseases resulting in circulation failure (above Stage II Heart Failure according to the New York Heart Association); 3. Insufficiently controlled metabolic diseases, endocrinological, rheumatic, and absorption disorders; 4. Other tumours;5. Preexisting bone metastases at high risk for fracture; or with a psychiatric illness or dementia or organic brain disease.
Interventions	**Intervention Characteristics** Intervention ● *Description*: All exercise training sessions in the exercise group consisted of 5 exercise sessions/wk for 8 weeks (during RT—between assessments I and II), and 3 d/wk for the next 10 months. The physical activities were performed either individually (strength training performed with the assistance of a physiotherapist) or in groups (exercises on treadmills or cycle ergometers, supervised by a therapist) and took place at a rehabilitation department. During RT, optional progressive exercise training included brisk walking, running indoors or on a treadmill, various cycling activities (30 min), and 25-minute resistance exercises (2 sets of 8 repetitions of 5 different exercises: bicep curl, triceps extension, leg extension, leg curl, and abdominal crunch) at 70% to 75% of their estimated one-repetition maximum. All activities lasted approximately 65 to 70

	minutes. The workout consisted of a 5-minute warm-up and 55 minutesof physical activity, followed by a 5-minute relaxation period. The physical activity was moderate, with a maximal heart rate of 65% to 70% (220-age). After RT, the exercise group performed a very similar exercise program 3 times/wk (ie, 1 day of exercise and 1 day of rest), but 1.5 h/d in our department. Exercise sessions consisted of 5 minutes of light warm-up and stretching, 40 minutes of middle-impact aerobics, 35 minutes of resistance training, and a 10-minute cool-down including relaxation. The prescribed aerobic intensity was 70% to 80% of heart rate reserve. ● *Dose*: 5 exercise sessions/wk for 8 weeks (during RT—between assessments I and II), and 3 d/wk for the next 10 months. 65-75 min per session ● *Duration*: 12 months ● *Time on ADT in months, mean (SD)*: Control ● *Description*: Patients randomized to the control group received usual care and physical activity according to recommendations. Clinicians provided medical clearance prior to the patients' involvement in the study. Patients in this group were given standard physical activity recommendations and were instructed via printed materials to perform 30 minutes of moderate physical activity 5 d/wk (150 min/wk). Patients randomized to this group were instructed not to begin any formal physical activities and perform usual daily activity at home ● *Dose*: ● *Duration*: 12 months
Outcomes	*Diagnosespecifik livskvalitet (desease specific quality of life), Functional Assessment of Cancer Therapy General (Fact G), mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Functional Assessment of Cancer Therapy General ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Diagnosespecifik livskvalitet (desease specific quality of life), EORTC QLQ-C30,subscale global health status, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: EORTC QLQ-C30,subscale global health status ● **Range**: 0-100 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Diagnosespecifik livskvalitet (desease specific quality of life), EORTC QLQ-C30,subscale, physical function, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: EORTC QLQ-C30,subscale, physical function ● **Range**: 0-100 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint

Fysisk funktion, 6 minutters gangtest, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: 6 minutters gangtest
- **Unit of measure**: meters
- **Direction**: Higher is better
- **Data value**: Endpoint

Muskelstyrke (Muscle strength)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Vo2 max (Vo2 peak)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Depression (depression)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Hjertekarsygdom (cardiovascular diseases)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, frakturer ja/nej
- **Unit of measure**: Antal personer der får fraktur
- **Direction**: Lower is better
- **Data value**: Endpoint

Træningsrelaterede skader (Exercise related injuries) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, træningsrelaterede skader ja/nej
- **Unit of measure**: Antal personer med
- **Direction**: Lower is better
- **Data value**: Endpoint

Frafald (dropouts) antal personer

	● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer der falder fra ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Greater Poland Cancer Centre (Poland) **Country:** Poland **Authors name:** Katarzyna Hojan **Institution:** Department of Rehabilitation, Greater Poland Cancer Centre **Email:** khojan@op.p **Address:** Oddział Rehabilitacji, Wielkopolskie Centrum Onkologii, ul. Garbary 15, 61-866 Poznań, Poland,
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "For allocating the participants, a computer -generated list of random numbers was used. Patients were randomly assigned to one of the study groups (exercise group vs usual-care [control] group) following simple randomization procedures."
Allocation concealment (selection bias)	Low risk	Quote: "Concealed randomization was conducted using sequentially numbered opaque envelopes containing group assignments provided to participants following the baseline assessment."
Blinding of participants and personnel (performance bias)	High risk	Quote: "This study was not fully blinded; however, group allocation was concealed from the patients and the physiatrist until after the completion of the baseline assessments. A clinical research coordinator obtained patient consent, collected all the self -reported assessments, and explained the exercise program to participants. Laboratory assistants, study statistician, and data managers remained blinded at all times." Judgement Comment: Blinding of personnel and participants not feasible do to the natur of the interventions
Blinding of outcome assessment (detection bias)	High risk	Quote: "This study was not fully blinded; however, group allocation was concealed from the patients and the physiatrist until after the completion of the baseline assessments. A clinical research coordinator obtained patient consent, collected all the self -reported assessments, and explained the exercise program to participants. Laboratory assistants, study statistician, and data managers remained blinded at all times. recurrence. 10,11 It has been" Judgement Comment: High risk for self-reported outcomes (quality of life, critical outcome)Low risk for objective outcomes (walking test, fractures)
Incomplete outcome data (attrition bias)	Unclear risk	Judgement Comment: No real intention to treat analysis, excludes particiants with cancer progression during the period of radiation therapy. 5/36 dropped out in the usual care group, 1/36 in the exercise group. Low attrition in both groups (Intervention 1/36, control 3/36). ITT analyses were performed for missing data but not drop-outs

Selective reporting (reporting bias)	Low risk	Judgement Comment: Protocol available at http://www.isrctn.com/ISRCTN80765858.Retrospectively registered. Outcomewere not specefied in details in the protocol.Primary outcome measure1. Efficacy of physical exercises (data from questionnaires)2. Blood inflammation markers3. Assessment of functional capacity, fatigue and QoL during PCa treatment.Outcome data were reported for all outcomes specified in the methods section (Hojan 2016)
Other bias	Low risk	The study appears to be free of other sources of bias.

Ndjavera 2020

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 71.4 (5.4) ● *BMI, Kg/m2, mean (SD)*: 28.4 (3.1) ● *Number of participants on ADT (%)*: 24 (100) Control ● *Age in years, mean (SD)*: 72.5 (4.2) ● *BMI, Kg/m2, mean (SD)*: 27.7 (3.4) ● *Number of participants on ADT (%)*: 26 (100) Overall ● *Age in years, mean (SD)*: 72.0 (4.8) ● *BMI, Kg/m2, mean (SD)*: 28.0 (3.3) ● *Number of participants on ADT (%)*: 50 (100) **Included criteria:** Histologically confirmed prostate cancer, aged 50–80 years, beginning LHRH agonist treatment with or without radiotherapy, anticipated to remain on ADT for ≥6 months, be classified as 0 or 1 according to the WHO performance status, and not achieving 150 min/week of moderate intensity physical activity during the last 6 months **Excluded criteria:** Metastatic bone disease, previously treated with ADT, involvement in any other clinical trial, prior CV event or heart failure, chronic obstructive pulmonary disease, and an absolute contraindication to exercise testing or training.
Interventions	**Intervention Characteristics** Intervention ● *Description*: Patients competed two supervised exercise sessions per week for 12 weeks upon initiating ADT. Each session lasted 60 min and included aerobic interval exercise on a cycleergometer (Monark 824E; Varberg, Sweden) followed by resistance training. The aerobic exercise component involved a 5 min warm-up at light resistance (50 W) followed by 6 x 5 min bouts at an intensity of 11–15 on the 6–20 Borg Rating of Perceived Exertion (RPE) Scale, corresponding to 55–85% of the age-predicted maximum heart rate (220 – age). Patients maintained a cadence of 50 rev/min and each 5 min bout was separated by 2.5 min of active recovery at light resistance (50 W). As patients became accustomed to the exercise, they were encouraged to progress towards the upper threshold of intensity by adding further load to the cycle ergometer flywheel. The resistance training component included six exercises that targeted themajor muscle groups (dumbbell squat, modified press-up, dumbbell bent-over row, dumbbell bicep curl, short arc quad, wall squat). Patients performed 2–4 sets of 10 repetitions at 11–15 RPE, which is a valid

	method of monitoring resistance training intensity in this population. Each exercise was separated by 30 s of passive rest. Resistance training stimuli were progressed weekly byincreasing the external load and/or increasing the number of sets. In addition to the supervised exercise sessions, patients were advised to increase their habitual physical activity levels and were encouraged to engage in 30 min of self directed structured exercise or physical activity on 3 days each week (e.g., brisk walking, cycling, home-based resistance training). After the withdrawal of supervision (i.e., after the 3-month supervised intervention had finished), patients were instructed to continue exercising and to maintain self-directed levels of physical activity. ● *Dose*: 60 min, twice weekly ● *Duration*: 12 weeks Control ● *Description*: Standard care ● *Dose*: Not applicable ● *Duration*: 12 weeks
Outcomes	*Diagnosespecifik livskvalitet (desease specific quality of life), Functional Assessment of Cancer Therapy Prostate (Fact P), mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Functional Assessment of Cancer Therapy Prostate ● **Range**: 0-156 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Fysisk funktion (physical function)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Muskelstyrke, håndgrebsstyrke, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Håndgrebsstyrke ● **Unit of measure**: Kg ● **Direction**: Higher is better ● **Data value**: Endpoint *Vo2 max (Vo2 peak) mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Vo2 max ● **Unit of measure**: ml/Kg/min ● **Direction**: Higher is better ● **Data value**: Endpoint *Depression (depression)*

	● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Hjertekarsygdom (cardiovascular disease)* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Diabetes (diabetes)* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Frakturer (fractures) antal personer med* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frakturer ja/nej ● **Unit of measure**: Antal personer der får fraktur ● **Direction**: Lower is better ● **Data value**: Endpoint *Træningsrelaterede skader (Exercise related injuries) antal personer med* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, træningsrelaterede skader ja/nej ● **Unit of measure**: Antal personer med ● **Direction**: Lower is better ● **Data value**: Endpoint *Frafald (dropouts) antal personer* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer der falder fraa ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** No information **Country:** UK **Setting:** Urology multi-discipllinary team at the Norfolk and Norwich University Hospitals NHS Foundtion Trust, UK **Authors name:** Wilphard Ndjavera **Institution:** Department of Urology, Norfolk and Norwich University Hospital, Norwich, UK
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "standard care plus exercise group using a randomisation sequence created by an independent researcher (nQuery, Statistical Solutions Ltd, Boston, MA, USA)." Quote: "prospective, randomised controlled trial (RCT). After baseline testing, patients were randomly allocated 1:1 to a standard care control group or a standard".
Allocation concealment (selection bias)	Low risk	Quote: "Treatment allocation was concealed from the research team until after baseline measurements were collected. Outcome assessors and data analysts".
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information on blinding of personnel and participants, blinding not feasible.
Blinding of outcome assessment (detection bias)	High risk	Quote: "Outcome assessors and data analysts were blind to treatment allocation. Outcomes were assessed at baseline," Judgement Comment: Low risk for objective outcomes (muscle strength and V02 peak) High risk for subjective putcomes (quality of life) Critical outcome.
Incomplete outcome data (attrition bias)	Low risk	Quote: "To comply with intention-to-treat and increase precision of the estimates, missing data at 3-months (n = 8) and 6-months (n = 13) were multiply imputed using predictive mean matching with 20 iterations." Judgement Comment: 2/24 dropped out in the exercise group vs 6/26 in the control group. reasons stated. Reasons not presumed to be related to the outcome.
Selective reporting (reporting bias)	Low risk	Judgement Comment: Outcomes reported matches those in protocolNCT03776045
Other bias	Low risk	The study appears to be free of other sources of bias

Newton 2020/Taaffe 2019

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 69.0 (6.3) ● *BMI, Kg/m2, mean (SD)*: 27.5 (4.4) ● *Number of participants on ADT (%)*: 54 (100) ● *Days since first ADT injection, mean (SD)*: 6.4 (2.1) Control ● *Age in years, mean (SD)*: 67.5 (7.7) ● *BMI, Kg/m2, mean (SD)*: 28.3 (3.9) ● *Number of participants on ADT (%)*: 50 (100) ● *Days since first ADT injection, mean (SD)*: 5.7 (1.9)

	Included criteria: Commencing ADT and intending to remain on it for at least the next 6 months; No structured aerobic or resistance exercise in the past 3 months; Able to walk 400 m. **Excluded criteria:** Prior ADT; Established metastatic disease; Established osteoporosis; Medications known to affect bone metabolism; Acute illness or any musculoskeletal, cardiovascular or neurological disorder that could inhibit or put them at risk from exercising as determined by their physician.
Interventions	**Intervention Characteristics** Intervention ● *Description*: Sessions were conducted in small groups of 6–10 participants supervised by accredited exercise physiologists. The sessions were 60 min in duration and consisted of a combination of impact loading, aerobic and resistance exercise. The frequency of aerobic and resistance exercise was alternated weekly such that two aerobic/impact loading and one resistance/impact loading session were performed in 1 week and two resistance/impact loading and one aerobic/impact loading session were performed in the subsequent week. Briefly, the impact-loading component consisted of a series of bounding (over soft hurdles), hopping, skipping, leaping, anddrop jumping activities that resulted in peak ground reaction forces of 3.4–5.2 times body weight, with the volume andintensity progressive in nature. For the first 8 weeks, two rotations were performed of skipping (30 s), bounding (15 cm hurdles), and jumping (10 times), with jumping replaced in weeks 5–8 by drop jumping (15 cm, 10 times). For the second 8 weeks, three rotations were performed of bounding (15–30 cm hurdles), drop jumping (15–20 cm, 10 times), and skipping (30 s), with skipping replaced in weeks 13–16 by hopping/leaping (10 times). There after, four rotations of hopping/leaping (10 times), bounding (30 cm hurdles), and drop jumping (20 cm, 10 times) were performed. Resistance training consisted of upper and lower body exercises for the main muscle groups and included the leg press, leg extension, leg curl, chest press, seated row, lat pulldown, and biceps curl. Intensity was set at 6–12 repetition maximum (RM; the maximal weight lifted 6–12 times) using 2–4 sets/exercise. The aerobic-based component consisted of various modes and included walking/jogging on a treadmill and cycling or rowing on a stationary ergometer at an intensity of 60–85% estimated maximum heart rate for 25–40 min, with heart rate monitored using heart rate watches (Polar Electra Oy, Finland). All sessions commenced with a warm-up comprising low-level aerobic activities and concluded with a cool down of stretching activities. In addition to clinic-based exercise, the men were encouraged to undertake twice weekly home-based training consisting of aerobic activities such as walking or cycling and a modified version of the impact-loading programme consisting of hopping, leaping, and drop jumping. ● *Dose*: 60 min, three times per week ● *Duration*: 6 months + 6 months. We use data for the end of the first 6 months of supervised exercise. ● *Days since first ADT injection, mean (SD)*: 6.4 (2.1) Control ● *Description*: Delayed exercise. Usual care for the first 6 months followed by 6 montsh of supervised exercise (same program as the intervention group, but first after 6 months). ● *Dose*: Not applicable (for the 6 months of usual care. ● *Duration*: 6 months of usual care followed by 6 months supervised exercise. We use data for the end of the 6 months of usual care. ● *Days since first ADT injection, mean (SD)*: 5.7 (1.9)
Outcomes	*Livskvalitet (quality of life)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Fysisk funktion (physical function), rejse/sætte sig test, antal sekunder på 5 gentagelser, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: *rejse/sætte sig test*

- **Unit of measure**: Seconds
- **Direction**: Lower is better
- **Data value**: Endpoint

Fysisk funktion, 400 meter gangtest, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: 400 meter gangtest
- **Unit of measure**: Seconds
- **Direction**: Higher is better
- **Data value**: Endpoint

Fysisk funktion, 6 meters gangtest, fast, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: 6 meters gangtest, fast
- **Unit of measure**: Seconds
- **Direction**: Lower is better
- **Data value**: Endpoint

Fysisk funktion, 6 meters gangtest, usual, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: 6 meters gangtest, usual
- **Unit of measure**: Seconds
- **Direction**: Lower is better
- **Data value**: Endpoint

Muskelstyrke, Benpres, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: Benpres
- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Endpoint

Vo2 max (Vo2 peak)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Depression (depression)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Hjertekar sygdom (cardiovascular disease)

	● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Diabetes (diabetes)* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Frakturer (fractures) antal personer med* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frakturer ja/nej ● **Unit of measure**: Antal personer der får fraktur ● **Direction**: Lower is better ● **Data value**: Endpoint *Træningsrelaterede skader (Exercise related injuries) antal personer med* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, træningsrelaterede skader ja/nej ● **Unit of measure**: Antal personer med ● **Direction**: Lower is better ● **Data value**: Endpoint *Frafald (dropouts) antal personer* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer der falder fraa ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** This study was funded by Cancer Australia,Prostate Cancer Foundation of Australia and Beyond Blue (NHMRC#1029901). DAG is funded by a Cancer Council Western AustraliaResearch Fellowship. SKC is supported by an Australian ResearchCouncil Professorial Future Fellowship **Country:** Australia **Authors name:** Robert U. Newton
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Following familiarisation and baseline assessments, 104 men were randomly assigned using a computer random assignment program to either immediate exercise (IMEX) or delayed exercise (DEL), and stratified according to age (≤70 and >70 years) and smoking status (yes/no)."
Allocation concealment (selection bias)	Low risk	Quote: "This was a single-blinded randomised controlled trial (RCT; investigators and testing personnel blinded to group allocation)" Judgement Comment: Investigators were blinded for group allacation.
Blinding of participants and personnel (performance bias)	High risk	Quote: "This was a single-blinded randomised controlled trial (RCT; investigators and testing personnel blinded to group allocation)" Judgement Comment: No blinding of personel and participants Not possible to blind particpants or personnel.
Blinding of outcome assessment (detection bias)	Low risk	Quote: "´investigators and testing personnel blinded to group allocation)" Judgement Comment: Low risk for objective outcomes, no subjective outcomes.
Incomplete outcome data (attrition bias)	Low risk	Quote: "Intention-to-treat was used for analyses of primary and secondary endpoints using maximum-likelihood imputation of missing values (expectation maximisation). Freidman's ANOVA with Bonferroni-adjusted Wilcoxon" Judgement Comment: 6/54 dropped out in the exercise gropu vs 13/50 in the delayed training group (control group). Reasons stated. Intention to treat analyses were performed.
Selective reporting (reporting bias)	High risk	Judgement Comment: Our critical outcomes quality of life were included as an outcome in registry but not reoprted in study, but might be included in other studies. https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=347946Quote: Quality of Life: quality of life will be assessed using the SF-36, EORTC QLQ-C30, EORTC QLQ-PR25 and EPIC-26 questionnaires.
Other bias	Low risk	The study appears to be free of other sources of bias.

Nilsen 2015

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Træning ● *Age - Mean(sd)*: 66 (6.6) ● *Number of participants on ADT (%): 28 (100)* ● *Time on ADT in months, mean (SD): 9.0 (1.6)* Kontrol (vanlig behandling) ● *Age - Mean(sd)*: 66 (5) ● *Number of participants on ADT (%): 30 (100)* ● *Time on ADT in months, mean (SD): 9.0 (1.8)* **Included criteria:** Prostate cancer patients with an intermediate- or high risk profile, which was determined based on serum levels of prostate specific antigen and the histology and extent of the primary tumour. All patients had been referred to high-dose radiotherapy, which strated 2-6 months after the initation of neo-adjuvant ADT, followed by adjuvant ADT, which was continued for 9-36 months.

	Other criteria were: age ≤75 years, ability tounderstand Norwegian, residence less than 1 hour by car from the training facility. **Excluded criteria:** Regular strength training (≥1 session per week), use of osteoporosis medication, and/or medicial conditions that could complicate participation.
Interventions	**Intervention Characteristics** Træning ● *Description*: The patients performed three sessions pre week for 16 weeks. Each session included nine exercises (smith machine half squat, leg press, smith machine standing calf raises, knee flexion, knee extention, chest press, seated row, seated shoulder press and biceps curl) ● *Intensity*: After two weeks of familiarisation, including low resistance corresponding to 40-50% of 1RM in two sets of 10 repitiotions, the training programme followed a daily undulating periodisation model, with a linear progression model, with a linear progression in training volume through the intervention period: 1-3 sets of 10RM on mondays, and 2-3 sets of 6RM on fridays. A submaximal session was carreid out on wednesdays with 10 reps with 80-90% of 10RM in 2-3 sets. ● *weekly traning sessions*: 3 Kontrol (vanlig behandling) ● *Description*: Usual care for 16 weeks. ● *Intensity*: Not applicable ● *weekly traning sessions*: Not applicable
Outcomes	*Livskvalitet, Helbredsrelateret* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: EORTC QLQ-C30 Global Health Status and quality of life subscsale ● **Range**: 0-100 ● **Unit of measure**: points ● **Direction**: Lower is better ● **Data value**: Endpoint Fysisk funktion ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Repeated chair raise ● **Unit of measure**: Repetitions in 30 seconds ● **Direction**: Higner is better ● **Data value**: Endpoint *Hjerte-kar sygdom* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Depression* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported

	Diabetes ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Iltoptagelse (Vo2)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported Muskelstyrke ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Leg press 1RM ● **Unit of measure**: Kg ● **Direction**: Higher is better ● **Data value**: Endpoint *Fraktur* ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint Bivirkninger, træningsrelaterede ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint Frafald, alle årsager ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Supported by the Norwegian Foundation of Health and rehabilitation and the Norwegian Cancer Society. Co-funded by the regional Health Authority in Southern Norway. Additional funding by Eckbo's legacy, The Rdium Hospital's legacy and Trivselsanlegget's legacy. **Country:** norway **Setting:** Two units at the Oslo University Hospital in Norway. **Authors name:** Nilsen
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The allocation sequence was computer generatedgenerated.
Allocation concealment (selection bias)	Unclear risk	No information of allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	No information of blinding of participants and health care professionals. Blinding not feasible.
Blinding of outcome assessment (detection bias)	High risk	No information of blinding of outcome assessors. High risk for self-reprted outcomes (Qality of life).
Incomplete outcome data (attrition bias)	Low risk	Low number of dropouts, reasons stated.
Selective reporting (reporting bias)	Low risk	Trial registration: Clinicaltrials.gov identifier: NCT00658229. The study reports on all the outcomes of interests that were stated in the methods section.
Other bias	Low risk	The study appears to be free of other sources of bias

Segal 2003

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Træning ● *Age in years - Mean(sd)*: 68.2 (7.9) ● *Højde - cm*: Not reported ● *Vægt - kg*: 88.0 (12.6) ● *BMI - kg/m2*: 29.0 (3.5) ● *Time since diagnosis in months, mean (SD): 32.2 (36.7)* ● *Number of participants on ADT (%): 82 (100)* ● *Time on ADT in months, mean (SD): 12.3 (18.7)* Kontrol (vanlig behandling) ● *Age in years - Mean(sd)*: 67.7 (7.5) ● *Højde - cm*: Not reported ● *Vægt - kg*: 86.7 (13.0) ● *BMI - kg/m2*: 28.5 (3.7) ● *Time since diagnosis in months, mean (SD): 25.1 (42.5)* ● *Number of participants on ADT (%): 73 (100)* ● *Time on ADT in months, mean (SD): 13.2 (21.9)*

	Included criteria: They were eligible if they had histologically documented prostate cancer, were scheduled to receive androgen deprivation therapy for at least 3 months after recruitment, and if the treating oncologist provided consent. It was not necessary for patients to be newly diagnosed with prostate cancer. **Excluded criteria:** Men were excluded if they had severe cardiac disease (New York Heart Association class III or greater), uncontrolled hypertension (blood pressure 160/95 mmHg), uncontrolled pain, unstable bone lesions, or residence more than 1 hour from the study center. **Pretreatment:** The groups were balanced in terms of age, body weight, body mass index, time from diagnosis, time receiving hormone therapy, cancer stage grouping, treatment intent, prior physical activity level, and experience with resistance exercise
Interventions	**Intervention Characteristics** Træning ● *Description*: Resistance exercise consisted of a 12-week program of nine strength-training exercises carried out under supervision , at 60% to 70% of one-repetition maximum (1-RM; the maximum amount of weight that can be lifted once), estimated from the standard loadtest. Patients were free to complete their program at any time during the fitness centers' hours of operation. No attempt was made to place patients in groups to exercise,although in some cases more than one participant in the intervention groupinadvertently showed up to exercise at the same time of day ● *Intensity*: Two sets of eight to 12 repetitions of the following nine exercises wereperformed: leg extension, calf raises, leg curl, chest press, latissimus pulldown, overhead press, triceps extension, biceps curls, and modifiedcurl-ups. Sixty percent of the participant's 1-RM was used as the starting resistance. Patients were instructed to increase the resistance by 5 lb when they were able to complete more than 12 repetitions. ● *weekly traning sessions*: three times per week Kontrol (vanlig behandling) ● *Description*: Men in the control group were offered the identical exercise advice and guidance; however, it was not provided until after the 12-week waiting period. ● *Intensity*: Not applicable ● *weekly traning sessions*: Not applicable
Outcomes	*Livskvalitet, diagnose specifik* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: FACT-P ● **Range**: 0-156 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Change from baseline Fysisk funktion ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Hjerte-kar sygdom* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Depression* ● **Outcome type**: Continuous Outcome

	● **Reporting**: Not reported *Diabetes* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Iltoptagelse (Vo2)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported Muskelstyrke ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Leg press repetition maximum ● **Unit of measure**: Number of repetitions ● **Direction**: Higher is better ● **Data value**: Endpoint *Fraktur* ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Not reported Bivirkninger, træningsrelaterede ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Not reported Frafald, alle årsager ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Supported by the National Cancer Institute of Canada (NCIC) with fundsfrom the Canadian Cancer Society (CCS; grant in aid of research no.009458). R.D.R. is supported by a New Investigator Award from the Heartand Stroke Foundation of Canada. K.S.C. is supported by an InvestigatorAward from the Canadian Institutes of Health Research and a ResearchTeam Grant from the NCIC with funds from the CCS and the CCS/NCICSociobehavioral Cancer Research Network. **Country:** Canada **Setting:** The trial was coordinated at the Ottawa Regional Cancer Centre (Ottawa, Ontario, Canada). The other participating center was the Cross Cancer Institute in Edmonton (Alberta, Canada). **Comments:** Not reported **Authors name:** Roanne J. Segal **Institution:** Department of Medical Oncology, Ottawa Regional Cancer Centre-General Site, **Email:** email: Roanne.Segal@orcc.on.ca.

	Address: 503 Smyth Rd, Ottawa, Ontario KIH 1C4, Canada
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Using a table of random numbers"
Allocation concealment (selection bias)	Unclear risk	No information of allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	No information of blinding of participants and health care professionals. Blinding not feasible.
Blinding of outcome assessment (detection bias)	High risk	No information of blinding of outcome assessors. Outcome measures were self-reported and blinding not feasible.
Incomplete outcome data (attrition bias)	Unclear risk	8 drop outs in the intervention group, 12 in the control group, no reasons stated
Selective reporting (reporting bias)	Low risk	No protocol available. Study reports on outcomes mentioned in article.
Other bias	Low risk	The study appears to be free of other sources of bias

Segal 2009a

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention 1 ● *Age in years, mean (SD)*: 66.4 (7.6) ● *BMI, Kg/m2, mean (SD)*: 28.1 (3.5) ● *Number of participants on ADT (%)*: 23 (57.5) Intervention 2 ● *Age in years, mean (SD)*: 66.2 (6.8) ● *BMI, Kg/m2, mean (SD)*: 28.9 (3.4) ● *Number of participants on ADT (%)*: 25 (62.5) Control ● *Age in years, mean (SD)*: 65.3 (7.6) ● *BMI, Kg/m2, mean (SD)*: 29.0 (4.2) ● *Number of participants on ADT (%)*: 26 (63.4) Overall ● *Age in years, mean (SD)*: 66.3 (7.0) ● *BMI, Kg/m2, mean (SD)*: 28.6 (12.2) ● *Time since diagnosis in months, mean (SD)*:

	● *Number of participants on ADT (%)*: 74 (61.2) **Included criteria:** Men were eligible to participate if they had histologically documented PCa, were scheduled to receive radiotherapy with or without ADT, and if the treating oncologist approved. **Excluded criteria:** Men were excluded if they had severe cardiac disease (New York Heart Association functional class III or IV), uncontrolled hypertension, pain, psychiatric illness, or lived more than 1 hour away.
Interventions	**Intervention Characteristics** Intervention 1 ● *Description*: Resistance training participants exercised three times per week performing two sets of eight to12 repetitions of 10 different exercises (leg extension, leg curl, seated chest fly, latissimus pulldown, overhead press, triceps extension, biceps curls, calf raises, low back extension, and modified curl-ups) at 60% to 70% of their estimated one-repetition maximum(1 RM).Resistance was increased by 5 lb when participants completed more than 12 repetitions. ● *Dose*: 3 times per week. Exercise duration began at 15 minutes and increased by 5 minutes every 3 weeks until it reached 45 minutes. Exercise intensity was standardized using heart rate monitors. ● *Duration*: 24 weeks Intervention 2 ● *Description*: Aerobic training participants exercised three times perweek on a cycle ergometer, treadmill, or elliptical trainer beginning at 50% to60% of their predetermined peak oxygen consumption (VO2peak) for weeks 1 to 4 and progressing to 70% to 75% for weeks 5 to 24. ● *Dose*: 3 times per week. Exercise duration began at 15 minutes and increased by 5 minutes every 3 weeks until it reached 45 minutes. Exercise intensity was standardized using heart rate monitors. ● *Duration*: 24 weeks Control ● *Description*: Usual care. Usual care participants were asked not to initiate exercise and were offered a program, post intervention assessments. ● *Dose*: Not applicable ● *Duration*: 24 weeks
Outcomes	*Diagnosespecifik livskvalitet, (Disease specific quality of life), Functional Assessment of Cancer Therapy Prostate (Fact P) mean final, SD* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Functional Assessment of Cancer Therapy Prostate ● **Range**: 0-156 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Diagnosespecifik livskvalitet, (diagnose specific quality of life), Functional Assessment of Cancer Therapy General (Fact G) mean final, SD* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: Functional Assessment of Cancer Therapy General ● **Unit of measure**: Points ● **Direction**: Higher is better

- **Data value**: Endpoint

Fysisk funktion (physical function)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Muskelstyrke (muscle strength) Benpres, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: benpres
- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Endpoint

Vo2 max (Vo2 peak) mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: Vo2 max
- **Unit of measure**: ml/Kg/min
- **Direction**: Higher is better
- **Data value**: Endpoint

Depression (depression)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Hjertekarsygdom (cardiovascular disease)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, frakturer ja/nej
- **Unit of measure**: Antal personer med fraktur
- **Direction**: Lower is better
- **Data value**: Endpoint

Træningsrelaterede skader (exercise related injuries) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported

	● **Scale**: Dichotomous, træningsrelaterede skader ja/nej ● **Unit of measure**: antal personer ● **Direction**: Lower is better ● **Data value**: Endpoint *Frafald (dropouts) antal personer* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Fully reported ● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Supported by Grant No. 013232 from the Canadian Prostate Cancer Research Fund **Country:** Canada **Authors name:** Roanne J. Segal **Institution:** University of Ottawa **Email:** rsegal@ottawahospital.on.ca **Address:** University of Ottawa, 501 Smyth Rd, Ottawa, Ontario, Canada K1H 8L6
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Central random assignment was used, with allocation concealment before assignment." Quote: "participants underwent random assignment). Participants were stratified by intended duration of ADT (16 weeks/ none v ADT 16 weeks) and randomly assigned to one of three groups: resistance training, aerobic training, or usual care using computer-generated numbers.Central random assignment was used," Judgement Comment: Presume the method was sufficient.
Allocation concealment (selection bias)	Low risk	Quote: "Central random assignment was used, with allocation concealment before assignment. To ensure blinding of the research coordinator, an exercise specialist handled the random assignments."
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information. Not possible to blind participants or personnel.
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: No information. High risk of bias for subjective outcomes (quality of life), since blinding of participants were not feasible.
Incomplete outcome data (attrition bias)	Unclear risk	Judgement Comment: 7/40 in the resistence exercise group dropped out, 3/40 in the aerobic exercise group and 1 in the usual care group. Reasons for dropouts were not stated. Intention to treat analyses were performed.

Selective reporting (reporting bias)	Low risk	Judgement Comment: No reference to a protocol, reports on all the outcomes stated in the methods section. One of our critical outcome of interest were not included in the trial (function).
Other bias	Low risk	The study appears to be free of other sources of bias

Segal 2009b

Methods	See Segal 2009a
Participants	
Interventions	
Outcomes	
Identification	
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Central random assignment was used, with allocation concealment before assignment." Quote: "participants underwent random assignment). Participants were stratified by intended duration of ADT (16 weeks/ none v ADT 16 weeks) and randomly assigned to one of three groups: resistance training, aerobic training, or usual care using computer-generated numbers.Central random assignment was used," Judgement Comment: Presume the method was sufficient.
Allocation concealment (selection bias)	Low risk	Quote: "Central random assignment was used, with allocation concealment before assignment. To ensure blinding of the research coordinator, an exercise specialist handled the random assignments."
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information. Not possible to blind participants or personnel.
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: No information. High risk of bias for subjective outcomes (quality of life), since blinding of participants were not feasible.
Incomplete outcome data (attrition bias)	Unclear risk	Judgement Comment: 7/40 in the resistence exercise group dropped out, 3/40 in the aerobic exercise group and 1 in the usual care group. Reasons for dropouts were not stated. Intention to treat analyses were performed.
Selective reporting (reporting bias)	Low risk	Judgement Comment: No reference to a protocol, reports on all the outcomes stated in the methods section. One of our critical outcome of interest were not included in the trial (function).
Other bias	Low risk	The study appears to be free of other sources of bias

Taaffe2017/Newton 2019/Wall2017a

Methods	See Taaffe2017/Newton2019/Wall2017b
Participants	
Interventions	
Outcomes	
Identification	
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "participants were stratified according to time on ADT (< 6 mo or ≥ 6 mo) and randomly allocated to: impact loading + resistance training (ILRT), aerobic + resistance training (ART), or to usual care/delayed exercise (DEL) by computer random assignment."
Allocation concealment (selection bias)	Low risk	Judgement Comment: Wall, 2017: The allocation sequence was concealed from the project coordinator and exercise physiologist involved in assigning participants to groups
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information on blinding of personnel and participants, blinding not feasible. Open (masking not used) https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=83774.
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: From trial register: Open (masking not used) https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=83774
Incomplete outcome data (attrition bias)	Low risk	Quote: "Intention to treat was utilised for all analyses using maximum likelihood imputation of missing values (expectation maximisation)." Judgement Comment: 15/58 dropped out in the resistance/impact gruop, 7/54 in the resistanve/cardiovascular group and 15/51 in the usual care group (delayed exercise). Reasons stated. Intention to treat analyses.
Selective reporting (reporting bias)	High risk	Judgement Comment: Protocol available at https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=83774&showOriginal=true&isReview=true. Retrospectively registred Our critical outcome quality of life were included in the protocol, but not reported in the publications. Since the trial were conducted between 2009 and 2012 we presume that the authors have had sufficient time to publish all results. from the protocol: Secondary outcome: Questionnaire (EORTC QLQ-C30), European Organization for Research and Treatment of Cancer ? Prostate Specific Module (EORTC QLQ-PR25), Medical Outcomes Study Short-Form 36 (SF-36), and The Brief Symptom Inventory-18 (BSI-18).
Other bias	Low risk	The study appears to be free of other sources of bias

Taaffe 2017/Newton 2019/Wall2017b

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention 1 ● *Age in years, mean (SD)*: 68.9 (9.1) ● *BMI, Kg/m2, mean (SD)*: 28.1 (3.5) ● *Number of participants on ADT (%)*: 57 (100) ● *Time on ADT in months, mean (SD)*: 4.2 (4.5) Intervention 2 ● *Age in years, mean (SD)*: 69.0 (9.3) ● *BMI, Kg/m2, mean (SD)*: 28.0 (3.7) ● *Number of participants on ADT (%)*: 54 (100) ● *Time on ADT in months, mean (SD)*: 5.3 (7.6) Control 1 ● *Age in years, mean (SD)*: 68.4 (9.1) ● *BMI, Kg/m2, mean (SD)*: 30.3 (4.8) ● *Number of participants on ADT (%)*: 48 (100) ● *Time on ADT in months, mean (SD)*: 3.7 (3.7) **Included criteria:** Histologically documented PCa; Minimum exposure to ADT of 2 months; Without prostate-specific antigen (PSA) evidence of disease activity; Anticipated to receive ADT for the subsequent 12 months. **Excluded criteria:** Bone metastatic disease; Musculoskeletal, cardiovascular, or neurological conditions that could inhibit them from exercising, inability to walk 400 m or undertake exercise; Structured resistance and aerobic training in the previous 3 months.
Interventions	**Intervention Characteristics** Intervention 1 ● *Description*: Impact loading + resistance training (ILRT): ILRT was undertaken twice weekly in University-affiliated exercise clinics for 12 mo. Sessions were supervised with up to 10 participants. The impact-loading component consisted of a series of bounding, skipping, drop jumping, hopping, and leaping activities that produced ground reaction forces of 3.4–5.2 times body weight, and was progressive in nature. Resistance training consisted of six principal exercises that targeted the major upper and lower body muscle groups: chest press, seated row, shoulder press, leg press, leg extension, and leg curl, with supplementary exercises. Patients performed two to four sets of each exercise at an intensity of 6–12 RM (maximal weight that can be lifted 6–12 times). In addition, the ILRT group undertook home training twice weekly that consisted of two to four rotations of skipping/hopping/leaping/drop jumping ● *Dose*: Twice weekly ● *Duration*: 12 months ● *Time on ADT in months, mean (SD)*: 4.2 (4.5) Intervention 2 ● *Description*: Aerobic + resistance training (ART): ART underwent supervised exercise in the clinic twice weekly for the initial 6 mo. The

	aerobic-based component consisted of 20–30 min of exercise at 60–75% of estimated maximal heart rate using various modes which included walking/jogging and cycling or rowing on stationary ergometers. Resistance exercise during the initial 6 mo was the same as that undertaken in the ILRT regimen. In addition, participants were encouraged to undertake home-based aerobic activity such as walking or cycling with the goal to accumulate 150 min/wk of aerobic activity. For the 2nd 6 mo, patients were provided with a home-based maintenance program similar to our previous report ● *Dose*: Twice weekly ● *Duration*: 12 months ● *Time on ADT in months, mean (SD)*: 5.3 (7.6) Control 1 ● *Description*: Usual care/delayed exercise (DEL): DEL were provided with a printed booklet with information about exercise for the initial 6 mo (endpoint of interest for our comparison), followed by 6 mo of twice weekly supervised exercise on a cycle ergometer at an intensity of 70% maximal heart rate and flexibility exercises in the clinic ● *Dose*: ● *Duration*: 6 months (for our comparison of interest) + 6 months ● *Time on ADT in months, mean (SD)*: 3.7 (3.7)
Outcomes	*Livskvalitet (quality of life)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Fysisk funktion, 400 meter gangtest, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 400 meter gangtest ● **Unit of measure**: Seconds ● **Direction**: Higher is better ● **Data value**: Endpoint *Muskelstyrke (muscle strength),* Leg press, *mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Leg press ● **Unit of measure**: Kg ● **Direction**: Higher is better ● **Data value**: Endpoint *Muskelstyrke (muscle strength),Leg extension, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Leg extension ● **Unit of measure**: Kg ● **Direction**: Higher is better

- **Data value**: Endpoint

Vo2 max (Vo2 peak)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Depression (depression)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Hjertekarsygdom (cardiovascular disease)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, frakturer ja/nej
- **Unit of measure**: Antal personer der får fraktur
- **Direction**: Lower is better
- **Data value**: Endpoint

Træningsrelaterede skader (Exercise related injuries) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, træningsrelaterede skader ja/nej
- **Unit of measure**: Antal personer med
- **Direction**: Lower is better
- **Data value**: Endpoint

Frafald (dropouts) antal personer
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, frafald ja/nej
- **Unit of measure**: Antal personer der falder fra
- **Direction**: Lower is better
- **Data value**: Endpoint

Identification	**Sponsorship source:** National Health and Medical Research Council 534409, Prostate Cancer Foundation of Australia, Cancer Council of Western Australia, and Cancer Council of Queensland **Country:** Australia **Authors name:** Dennis R. Taaffe **Institution:** Exercise Medicine Research Institute, School of Medical and Health Sciences, Edith Cowan University, **Email:** d.taaffe@ecu.edu.au **Address:** Exercise Medicine Research Institute, School of Medical and Health Sciences, Edith Cowan University, 270 Joondalup Drive, Joondalup, WA 6027, Australia
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "participants were stratified according to time on ADT (< 6 mo or ≥ 6 mo) and randomly allocated to: impact loading + resistance training (ILRT), aerobic + resistance training (ART), or to usual care/delayed exercise (DEL) by computer random assignment."
Allocation concealment (selection bias)	Low risk	Judgement Comment: Wall, 2017: The allocation sequence was concealed from the project coordinator and exercise physiologist involved in assigning participants to groups
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information on blinding of personnel and participants, blinding not feasible. Open (masking not used) https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=83774.
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: From trial register: Open (masking not used) https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=83774
Incomplete outcome data (attrition bias)	Low risk	Quote: "Intention to treat was utilised for all analyses using maximum likelihood imputation of missing values (expectation maximisation)." Judgement Comment: 15/58 dropped out in the resistance/impact gruop, 7/54 in the resistanve/cardiovascular group and 15/51 in the usual care group (delayed exercise). Reasons stated. Intention to treat analyses.
Selective reporting (reporting bias)	High risk	Judgement Comment: Protocol available at https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=83774&showOriginal=true&isReview=true. Retrospectively registred Our critical outcome quality of life were included in the protocol, but not reported in the publications. Since the trial were conducted between 2009 and 2012 we presume that the authors have had sufficient time to publish all results. from the protocol: Secondary outcome: Questionnaire (EORTC QLQ-C30), European Organization for Research and Treatment of Cancer ? Prostate Specific Module (EORTC QLQ-PR25), Medical Outcomes Study Short-Form 36 (SF-36), and The Brief Symptom Inventory-18 (BSI-18).
Other bias	Low risk	The study appears to be free of other sources of bias

Uth 2014

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Træning ● *Age in years- Mean (sd)*: 67.1(7.1) ● *Højde - cm*: 177.0(5.7) ● *Vægt - kg*: 83.4 (11.6) ● *BMI - kg/m2*: 26.6 (3.2) ● Time since diagnosis in days, median (IQR): 453 (374-2077) ● *Number of participants on ADT (%): 29 (100)* ● Time on ADT in days, median (IQR):376 (285-833) Kontrol (vanlig behandling) ● *Age in years - Mean(sd)*: 66.5 (4.9) ● *Højde - cm*: 180.8 (5.4) ● *Vægt - kg*: 89.0 (11.9) ● *BMI - kg/m2*: 27.6 (2.8) ● Time since diagnosis in days, median (IQR): 671 (383-1359) ● *Number of participants on ADT (%): 28 (100)* ● Time on ADT in days, median (IQR): 560 (283-1049) **Included criteria:** Patients presenting at Copenhagen Prostate Cancer Center, Copenhagen University Hospital, Rigshospitalet, or the Department of Urology, Frederiksberg Hospital, Denmark aged < 76 years managed with ADT, i.e., LHRHa, or surgical castration, forat least 6 months were eligible. **Excluded criteria:** Main criteria for exclusion were cardiovascular disorders, osteoporosis, and activity limiting pain from bone metastases. **Pretreatment:** The groups were well balanced following randomization,although participants in CON were taller than participantsin FG (P = 0.01). stor forskel i muskel studrke og funktionelle test. Kontrolgruppen har højeste målinger.OBS: ADT time (days) 376 (285–833) 560 (283–1049) OBS: PSA level at diagnosis 18 (10–39) 28 (15–43)
Interventions	**Intervention Characteristics** Træning ● *Description*: Participants in the FG performed football. During the first 4 weeks,the football training consisted of two weekly sessions, which started with 15 min of warm-up exercises (running, dribbling, passing, shooting, balance, and muscle strength exercises) followed by 2×15 min of 5–7 a-side small-sided games. In weeks5–8, the duration of each session increased to 3×15-min games after the warm-up, and in weeks 9–12, there were three weekly training sessions of the same duration. ● *Intensity*: Not reported ● *weekly traning sessions*: 12 weeks, 2-3 times weekly Kontrol (vanlig behehandling) ● *Description*: Participants in CON were encouraged to maintain their baseline physical activity level and were offered 12 weeks football training after the assessment period had been completed. ● *Intensity*: Not applicable

	● *weekly traning sessions*: Not applicable
Outcomes	*Livskvalitet* ● **Outcome type**: Continuous Outcome ● **Reporting**:Not reported Fysisk funktion ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Repeated chair raise ● **Unit of measure**: Repetitions in 30 seconds ● **Direction**: Higner is better ● **Data value**: Endpoint *Hjerte-kar sygdom* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Depression* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported *Diabetes* ● **Outcome type**: Dichotomous Outcome ● **Reporting**: Not reported *Iltoptagelse (Vo2)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Not reported ● **Scale**: Vo2 max ● **Unit of measure**: ml/Kg/min ● **Direction**: Higher is better ● **Data value**: Endpoint Muskelstyrke ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: Knee extensor 1RM ● **Unit of measure**: Kg ● **Direction**: Higher is better ● **Data value**: Endpoint *Fraktur* ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported

	● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint Bivirkninger, træningsrelaterede ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint Frafald, alle årsager ● **Outcome type**: Dictomuous Outcome ● **Reporting**: Fully reported ● **Unit of measure**: Numbers ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** The study was supported by grants from TheCenter for Integrated Rehabilitation of Cancer patients (CIRE), acenter established and supported by The Danish Cancer Society and The Novo Nordisk Foundation. The project was also supported by TrygFonden, Preben & Anna Simonsen Fonden and The Beckett Foundation. **Country:** Denmark **Setting:** The University Hospitals Centre for Health Research (UCSF), **Comments:** NCT01711892 **Authors name:** Jacob Uth **Institution:** The University Hospitals Centre for Health Research (UCSF), Copenhagen University Hospital Rigshospitalet **Email:** ju@ucsf.dk **Address:** Blegdamsvej 9, 2100 Copenhagen, Denmark
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	No information of how the allocation sequence was generated.
Allocation concealment (selection bias)	Unclear risk	No information of allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	No information of blinding of participants and health care professionals. Blinding not feasible.

Blinding of outcome assessment (detection bias)	Unclear risk	No information of blinding of outcome assessors.
Incomplete outcome data (attrition bias)	Low risk	Low number of dropouts reasons stated
Selective reporting (reporting bias)	High risk	Protocol available at clinicaltrials.gov. Outcomes of interests stated in the protocol, but not reported (quality of life and HADS). Results from these outcomes are not found in other publications from the same trial. Uth 2016a, Uth 2016b
Other bias	Low risk	The study appears to be free of other sources of bias

Winters Stone 2015

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group
Participants	**Baseline Characteristics** Intervention ● *Age in years, mean (SD)*: 69.9 (9.3) ● *BMI, Kg/m2, mean (SD)*: 28.4 (4.1) ● *Time since diagnosis in months, mean (SD)*: 79.2 (58.9) ● *Number of participants on ADT (%)*: 29 (100 %) ● *Time on ADT in months, mean (SD)*: 39.0 (36.1) Control ● *Age in years, mean (SD)*: 70.5 (7.8) ● *BMI, Kg/m2, mean (SD)*: 29.6 (4.8) ● *Time since diagnosis in months, mean (SD)*: 75.6 (56.0) ● *Number of participants on ADT (%)*: 22 (100%) ● *Time on ADT in months, mean (SD)*: 28.5 (29.2) **Included criteria:** Participants with a confirmed diagnosis of prostate cancer, currently receiving ADT but no other cancer treatment, clear of bone metastases in the hip or spine, with bone mineral density T score ≥ −2.5, with no antiresorptive medications, with no participation in resistance and/or impact training ≥ 2 times per week and ≥ 30 minutes per session, and with physician clearance to exercise. **Excluded criteria:** Not Applicable.
Interventions	**Intervention Characteristics** Intervention ● *Description*: Participants in both groups were prescribed an exercise program of 2 supervised classes and 1 home-based session per week for 12 months. The POWIR program was based on our prior interventions in people without cancer and was aimed to increase musculoskeletal health and function in older adults through resistance plus impact training. Free weights were used to apply resistance and included dumbbells, barbells, and weighted vests (loaded as percentage bodyweight). Resistance exercises were all multijoint and emphasized movements common to activities of daily living, including wall-sits, squats, bent-knee dead lifts, multi directional lunges, 1-arm row, chest press, lateral raise, and push-ups. Impact exercise, consisting of 50 two-footed jumps, was included to mechanically load the skeleton for bone outcomes.Forhome exercise, resistance bands replaced free weights and body weight replaced weighted vests for upper-body exercises and lower-body exercises, respectively.

	● *Dose*: 2 supervised classes and 1 home-based session per week ● *Duration*: 12 months ● *Time on ADT in months, mean (SD)*: 39.0 (36.1) Control ● *Description*: Participants in both groups were prescribed an exercise program of 2 supervised classes and 1 home-based session per week for 12 months. Participants in the control group performed a series of seated or lying whole-body stretching and relaxation exercises aimed to minimize weight-bearing forces and muscle activation. For home exercise, control participants followed a written guideline of stretches and relaxation used in class. A gentle exercise placebo group was used as a control rather than a usual care group to equalize attention, maximize retention, and minimize contamination. ● *Dose*: 2 supervised classes and 1 home-based session per week ● *Duration*: 12 months ● *Time on ADT in months, mean (SD)*: 28.5 (29.2)
Outcomes	*Diagnosespecifik livskvalitet (desease specific quality of life), EORTC QLQ-C30,subscale, physical function, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: EORTC QLQ-C30,subscale, physical function ● **Range**: 0-100 ● **Unit of measure**: Points ● **Direction**: Higher is better ● **Data value**: Endpoint *Fysisk funktion (physical function), rejse/sætte sig test, antal sekunder på 5 gentagelser, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: seconds ● **Direction**: Lower is better ● **Data value**: Endpoint *Fysisk funktion (physical function), 4 meters gangtest, fast, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 4 meters gangtest, fast ● **Unit of measure**: Seconds ● **Direction**: Lower is better ● **Data value**: Endpoint *Fysisk funktion (physical function), 4 meters gangtest, usual, mean final (SD)* ● **Outcome type**: Continuous Outcome ● **Reporting**: Fully reported ● **Scale**: 4 meters gangtest, usual ● **Unit of measure**: seconds ● **Direction**: Lower is better

- **Data value**: Endpoint

Muskelstyrke (muscle strength), Leg press, mean final (SD)
- **Outcome type**: Continuous Outcome
- **Reporting**: Fully reported
- **Scale**: Leg press
- **Unit of measure**: Kg
- **Direction**: Higher is better
- **Data value**: Endpoint

Vo2 max (Vo2 peak)
- **Outcome type**: Continuous Outcome
- **Reporting**: Not reported

Depression (depression)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Hjertekarsygdom (cardiovascular disease)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Diabetes (diabetes)
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Not reported

Frakturer (fractures) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, frakturer ja/nej
- **Unit of measure**: Antal personer der får fraktur
- **Direction**: Lower is better
- **Data value**: Endpoint

Træningsrelaterede skader (Exercise related injuries) antal personer med
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported
- **Scale**: Dichotomous, træningsrelaterede skader ja/nej
- **Unit of measure**: Antal personer med
- **Direction**: Lower is better
- **Data value**: Endpoint

Frafald (dropouts) antal personer
- **Outcome type**: Dichotomous Outcome
- **Reporting**: Fully reported

	● **Scale**: Dichotomous, frafald ja/nej ● **Unit of measure**: Antal personer der falder fra ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Supported by the Livestrong Foundation (formerly Lance Armstrong Foundation); and TheraBand, Inc, for providing elastic exercise bands for study participants. **Country:** USA **Authors name:** Kerri M. Winters-Stone **Institution:** Knight Cancer Institute, Oregon Health & Science University **Email:** wintersk@ohsu.edu **Address:** Oregon Health & Science University, 3455 SW US Veteran's Hospital Rd, Mailcode: SN-ORD, Portland, OR 97239
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Randomization was stratified by length of ADT use (>1 or ≤1y) and current aerobic activity (≥90 min/wk vs <90min/wk) and occurred after baseline testing." Judgement Comment: Assuming from the description it is done by computer
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information on how the allocation sequence was concealed
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: Trial described as single blinded, testers were blinded, no information on blinding of personnel and participants, blinding not feasible.
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Tests were administered by trained technicians blinded to group assignment." Judgement Comment: Low risk of bias for objective outcomes (muscle strength, walking test, fractures) High risk for subjective outcomes (quality of life)
Incomplete outcome data (attrition bias)	Low risk	Quote: "The intention-to-treat (ITT) analysis was performed using a linear mixed effects modeling approach implemented in the lme package for the R statistical computing environment." Judgement Comment: 3/29 dropped out in the exercise group vs 5/22 in the control group, reasons stated. Intention to treat analyses were performed.
Selective reporting (reporting bias)	High risk	Quote: "Self-reported physical function was measured using 3 separate instruments, each with different attributes. For comparison with commonly used questionnaires, we measured physical function with the Medical Outcomes Study 36-Item Short-Form Health Survey physical function subscale, a generic measure for use in general population surveys, and the physical function subscale of the European Organization for Research and Treatment of CancerQuality of Life Questionnaire (version 3), a cancer-specific measure." Judgement Comment: SF 36 were stated in the methods secion but not reported in the publication
Other bias	Low risk	The study appears to be free of other sources of bias.

Footnotes

Characteristics of excluded studies

Aggarwal 2015

Reason for exclusion	Wrong intervention

Alibhai 2015

Reason for exclusion	A protocol

Alibhai 2018

Reason for exclusion	Only an abstract

Alibhai 2018a

Reason for exclusion	A protocol

Alibhai 2019

Reason for exclusion	Wrong comparator

Armes 2016

Reason for exclusion	Wrong intervention

Baguley 2017

Reason for exclusion	a protocol

Bjorke 2020

Reason for exclusion	Wrong study design

Bourke 2018

Reason for exclusion	Wrong patient population

Brady 2019

Reason for exclusion	An abstract, wrong population and wrong outcomes

Buffart 2015

Reason for exclusion	Wrong patient population

Cole 2017

Reason for exclusion	Only an abstract

Cole 2017a

Reason for exclusion	Only an abstract

Cormie 2013

Reason for exclusion	Preliminary publication of a study. Primary publication already included Cormie 2015

Craike 2016

Reason for exclusion	Wrong patient population

Craike 2018

Reason for exclusion	Wrong patient population

Cunningham 2020

Reason for exclusion	Wrong patient population

Dieperink 2013

Reason for exclusion	Wrong intervention

Dieperink 2017

Reason for exclusion	Wrong intervention

Dorff 2017

Reason for exclusion	Only an abstract

Doyle 2019

Reason for exclusion	Wrong intervention

Dunne 2019

Reason for exclusion	Wrong intervention

Dunne 2019a

Reason for exclusion	Wrong intervention

Edmunds 2020

Reason for exclusion	Wrong patient population

Eriksen 2017

Reason for exclusion	Wrong patient population

Fairman 2019

Reason for exclusion	Wrong comparator

Focht 2019

Reason for exclusion	Wrong outcomes

Frawley 2020

Reason for exclusion	Wrong study design

Freedland 2019

Reason for exclusion	Wrong intervention

Galvao 2014

Reason for exclusion	Wrong patient population

Galvao 2016

Reason for exclusion	Only an abstract

Galvao 2017

Reason for exclusion	Wrong study design

Galvao 2017a

Reason for exclusion	Only an abstract

Galvao 2018a

Reason for exclusion	Wrong patient population

Gaskin 2016

Reason for exclusion	Wrong patient population

Gaskin 2017

Reason for exclusion	Wrong patient population

Gilbert 2016

Reason for exclusion	Wrong outcomes

Gray 2019

Reason for exclusion	Wrong patient population

Hart 2017

Reason for exclusion	a protocol

Hebert 2012

Reason for exclusion	Wrong patient population

Hojan 2015

Reason for exclusion	Only an abstract

Hvid 2016

Reason for exclusion	Wrong patient population

Jones 2014

Reason for exclusion	Wrong patient population

Kenfield 2018

Reason for exclusion	Only an abstract

Kim 2018

Reason for exclusion	Wrong intervention

Kiwata 2017

Reason for exclusion	Only an abstract

Lam 2017

Reason for exclusion	Wrong intervention

Lam 2019

Reason for exclusion	Wrong intervention

Livingston 2015

Reason for exclusion	Wrong patient population

Lyons 2016

Reason for exclusion	Wrong intervention

Mareschal 2015

Reason for exclusion	Wrong study design

Martin 2015

Reason for exclusion	Wrong patient population

Martin 2016

Reason for exclusion	Wrong patient population

McGowan 2013

Reason for exclusion	Wrong intervention

Monga 2007

Reason for exclusion	Wrong patient population

Mustian 2015

Reason for exclusion	Wrong intervention

Newton 2009

Reason for exclusion	A protocol

Newton 2012

Reason for exclusion	a protocol

Newton 2013

Reason for exclusion	An abstract, full text already included Cormie 2015

Newton 2017

Reason for exclusion	An abstract, full text already included, Taaffe 2017

Newton 2018

Reason for exclusion	a protocol

Newton 2019

Reason for exclusion	a protocol

Nilsen 2016

Reason for exclusion	Wrong outcomes

Nilsen 2016a

Reason for exclusion	Wrong outcomes

Nilsen 2018

Reason for exclusion	Wrong patient population

Norris 2015

Reason for exclusion	Wrong comparator

ONeill 2015

Reason for exclusion	Wrong intervention

Oneill 2019

Reason for exclusion	Wrong intervention

Owen 2017

Reason for exclusion	a protocol

Papadopoulos 2020

Reason for exclusion	Wrong comparator

Park 2012

Reason for exclusion	Wrong patient population

Park 2018

Reason for exclusion	Wrong intervention

Pernar 2017

Reason for exclusion	Wrong intervention

Saad 2016

Reason for exclusion	a protocol

Sajid 2016

Reason for exclusion	Wrong intervention

Schega 2015

Reason for exclusion	Wrong study design

Sheill 2017

Reason for exclusion	a protocol

Sheill 2019

Reason for exclusion	Only an abstract

Singh 2017

Reason for exclusion	Only an abstract

Taaffe 2018

Reason for exclusion	Wrong patient population

Teleni 2015

Reason for exclusion	Wrong study design

Uth 2016

Reason for exclusion	Wrong outcomes

Uth 2016a

Reason for exclusion	Wrong outcomes

Uth 2018

Reason for exclusion	Wrong outcomes

Villumsen 2019

Reason for exclusion	Wrong intervention

Westley 2019

Reason for exclusion	Wrong intervention

Wilson 2017

Reason for exclusion	Only an abstract

Windsor 2004

Reason for exclusion	Wrong patient population

Winters Stone 2015a

Reason for exclusion	Wrong outcomes

Winters Stone 2016

Reason for exclusion	Wrong intervention

Zopf 2015

Reason for exclusion	Wrong patient population

Footnotes

Characteristics of studies awaiting classification

Footnotes

Characteristics of ongoing studies

Footnotes

References to studies

Included studies

Bjerre 2019

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Data and analyses

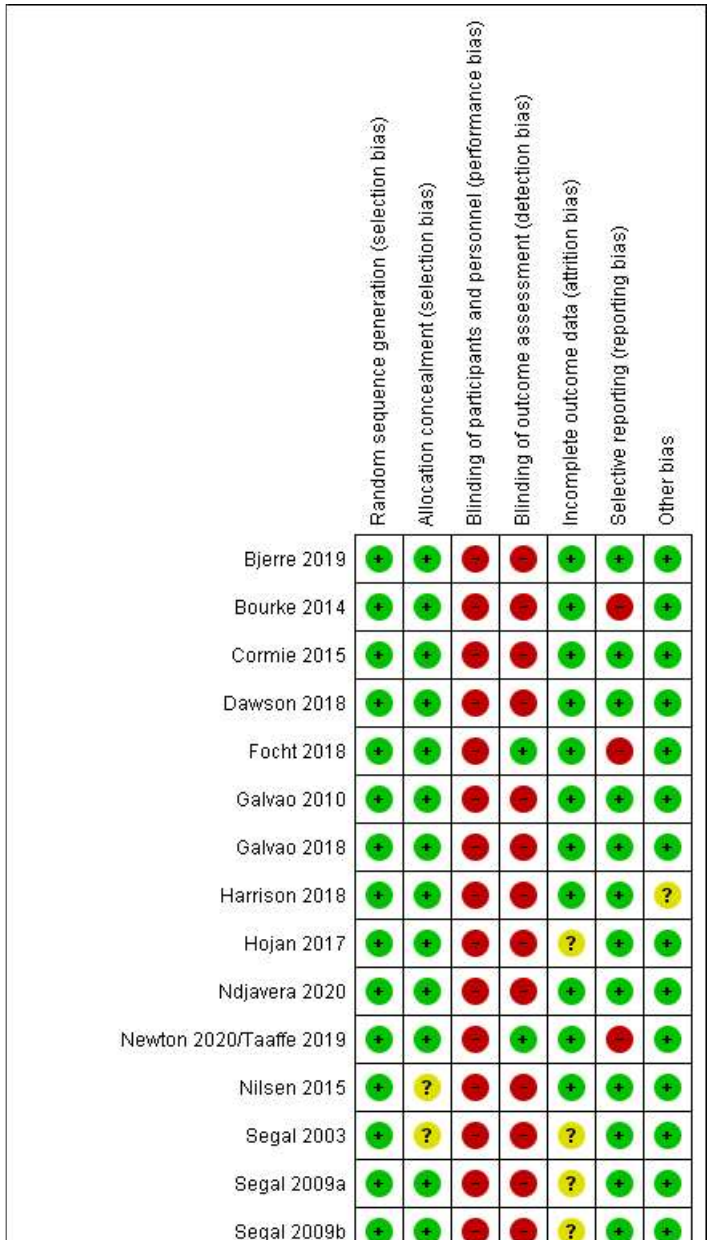
1 Superviseret træning vs vanlig aktivitet

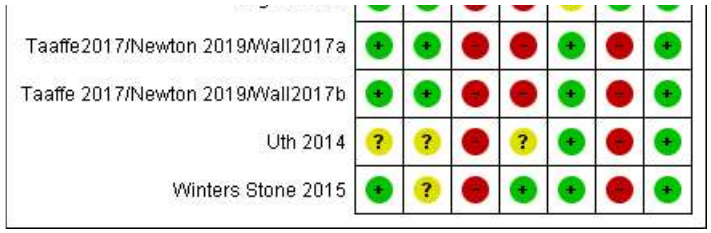
Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Livskvalitet (quality of life) Diagnosespecifik livskvalitet	12	767	Std. Mean Difference (IV, Random, 95% CI)	0.45 [0.30, 0.59]
1.1.1 Measured with FACT-P	8	543	Std. Mean Difference (IV, Random, 95% CI)	0.40 [0.21, 0.59]
1.1.2 EORTC-QLQ-C30	4	224	Std. Mean Difference (IV, Random, 95% CI)	0.54 [0.27, 0.81]
1.2 Livskvalitet (quality of life),generel livskvalitet, SF-36 totalscore	3	198	Mean Difference (IV, Random, 95% CI)	-1.60 [-3.94, 0.75]
1.3 Livskvalitet (quality of life),generel livskvalitet, SF-36, phycical component	4	246	Mean Difference (IV, Random, 95% CI)	-1.34 [-4.67, 1.99]
1.4 Livskvalitet (quality of life), generel livskvalitet, SF-36 mental component	3	198	Mean Difference (IV, Random, 95% CI)	-3.30 [-5.74, -0.87]

1.5 Fysisk funktion (physical function) gangtest	11	612	Std. Mean Difference (IV, Random, 95% CI)	-0.45 [-0.64, -0.25]
1.6 Fysisk funktion (physical function) rejse/sætte sig test	7	404	Std. Mean Difference (IV, Random, 95% CI)	-0.33 [-0.57, -0.08]
1.7 Muskelstyrke (Strenght)	16	968	Std. Mean Difference (IV, Random, 95% CI)	0.46 [0.26, 0.65]
1.8 Vo2 max (Vo2 peak)	7	406	Mean Difference (IV, Random, 95% CI)	1.76 [0.82, 2.69]
1.9 Depressions symptomer (depressive symptoms)	2	89	Std. Mean Difference (IV, Random, 95% CI)	-0.34 [-0.76, 0.08]
1.10 Frakturer (fractures) Risk diff. antal personer med	18	1071	Risk Difference (IV, Random, 95% CI)	0.00 [-0.01, 0.02]
1.10.1 Football traaining	2	136	Risk Difference (IV, Random, 95% CI)	0.02 [-0.05, 0.09]
1.10.2 Aerobic and/or resistance training	16	935	Risk Difference (IV, Random, 95% CI)	0.00 [-0.02, 0.02]
1.11 Frakturer (fractures) Risk ratio, antal personer med	18	1071	Risk Ratio (IV, Random, 95% CI)	1.86 [0.25, 13.99]
1.11.1 Aerobic and/or resistance training	16	935	Risk Ratio (IV, Random, 95% CI)	Not estimable
1.11.2 Football training	2	136	Risk Ratio (IV, Random, 95% CI)	1.86 [0.25, 13.99]
1.12 Træningsrelaterede skader (Exercise related injuries) risk. diff, antal personer med	16	880	Risk Difference (IV, Random, 95% CI)	0.01 [-0.01, 0.03]
1.13 Træningsrelaterede skader (Exercise related injuries) risk ratio, antal personer med	16	880	Risk Ratio (IV, Random, 95% CI)	6.18 [1.41, 27.14]
1.14 Frafald (dropouts) risk ratio, antal personer	19	1417	Risk Ratio (IV, Random, 95% CI)	0.74 [0.55, 1.00]
1.14.1 Exercise start after 2 months	15	1174	Risk Ratio (IV, Random, 95% CI)	0.85 [0.62, 1.15]
1.14.2 Start of exercise with-in one monht	4	243	Risk Ratio (IV, Random, 95% CI)	0.36 [0.18, 0.73]
1.15 Frafald (dropouts) risk diff, antal personer. Analysen bruges til tjek af udregning af absolutte tal i MAGIC	19	1417	Risk Difference (IV, Random, 95% CI)	-0.03 [-0.07, 0.01]

Figures

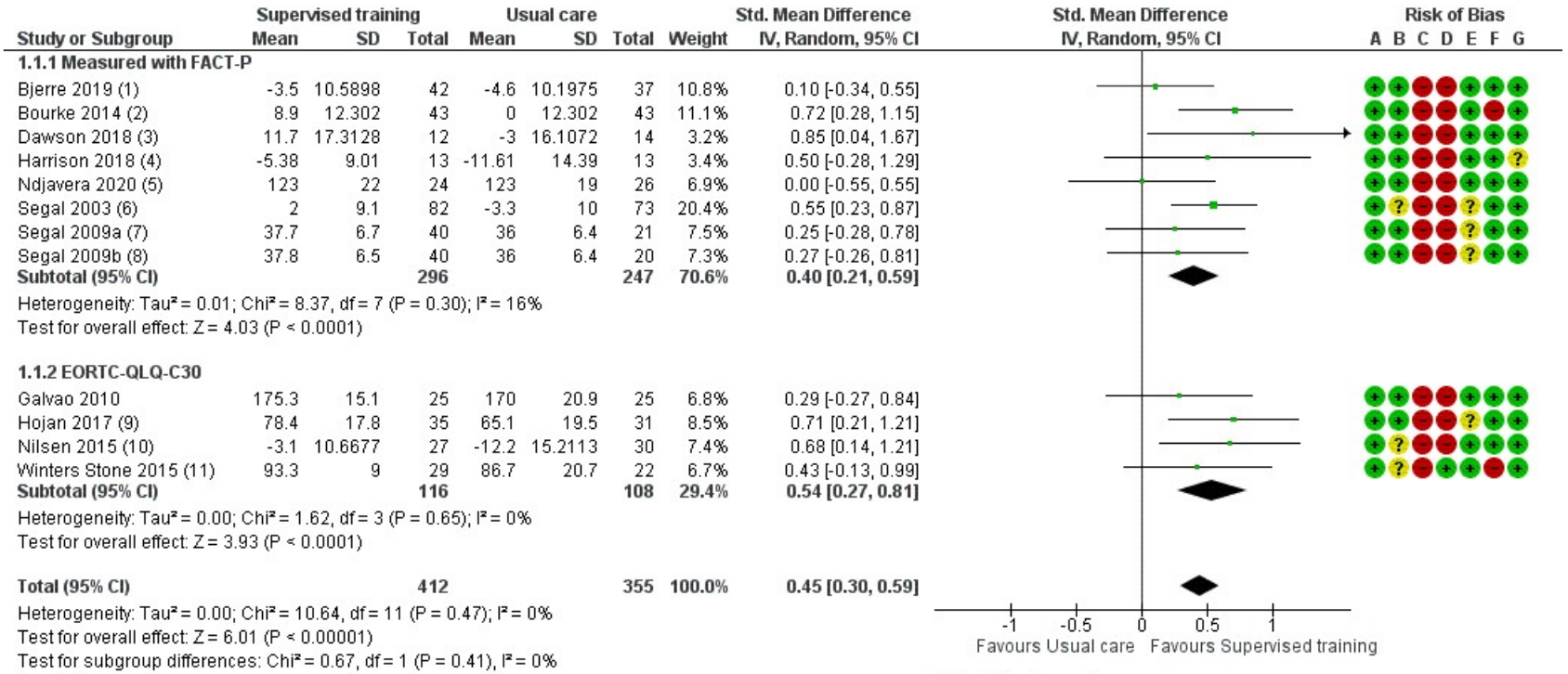
Figure 1


Random sequence generation (selection bias)
Allocation concealment (selection bias)
Blinding of participants and personnel (performance bias)
Blinding of outcome assessment (detection bias)
Incomplete outcome data (attrition bias)
Selective reporting (reporting bias)
Other bias
Bjerre 2019
Bourke 2014
Cormie 2015
Dawson 2018
Focht 2018
Galvao 2010
Galvao 2018
Harrison 2018
Hojan 2017
Ndjavera 2020
Newton 2020/Taaffe 2019
Nilsen 2015
Segal 2003
Segal 2009a
Segal 2009b



Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

Figure 2 (Analysis 1.1)



Footnotes

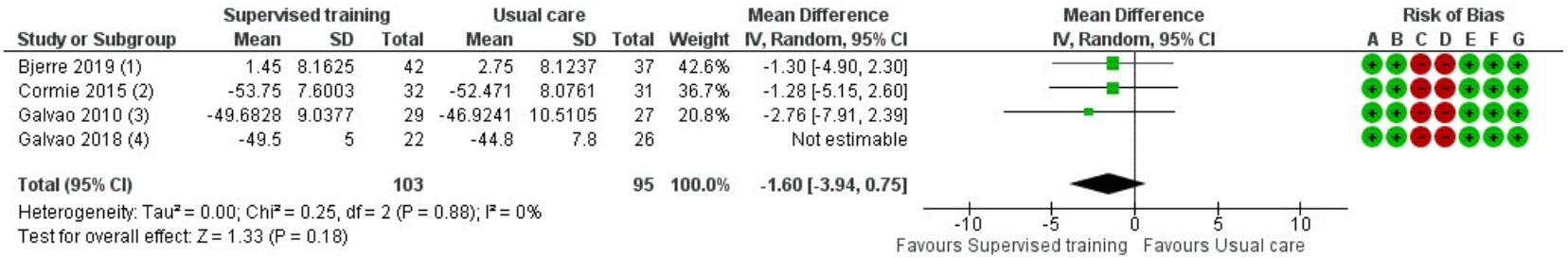
(1) Intervention: football (group), control: usual care (advice on physical activity according to guidelines), medain...
(2) Intervention: Aerobic and resistance exercise in groups + dietary advice and behavioral change support,...
(3) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT:...
(4) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT...
(5) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care,...
(6) Intervention: Resistance exercise, individual training, control: usual care, mean months on ADT: 12...
(7) Intervention: Resistance exercise, no information on group or individual training, control: usual care, no...
(8) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no...
(9) Intervention: Aerobic (in groups) or strength training (individual), control: usual care including standard...
(10) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on...
(11) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean...

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.1 Livskvalitet (quality of life) Diagnosespecifik livskvalitet.

Figure 3 (Analysis 1.2)



Footnotes

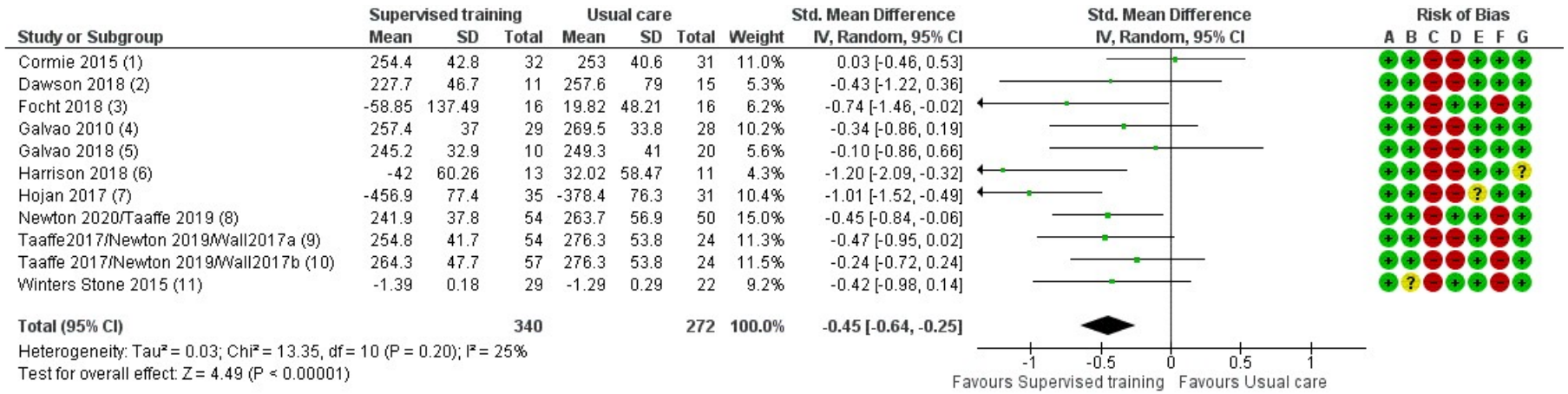
(1) Intervention: footbal (group), control: usual care (advice on physical activity according to guidelines),...
(2) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in...
(3) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18...
(4) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.2 Livskvalitet (quality of life),generel livskvalitet, SF-36 totalscore.

Figure 4 (Analysis 1.5)



Footnotes

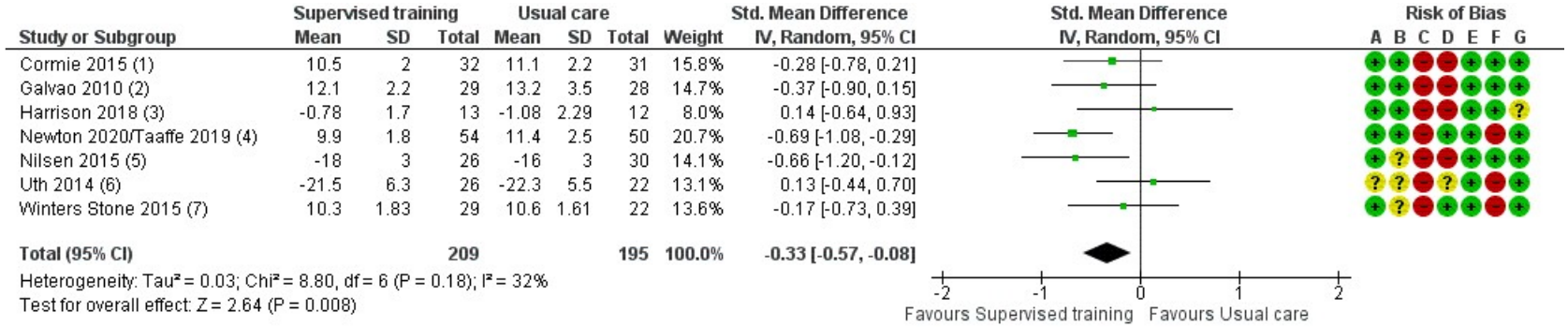
(1) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(2) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT: 15...
(3) Intervention: resistance and aerobic exercise in groups, control: usual care including advice on physical activity according to...
(4) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18 (intervention) and 10...
(5) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT: 2...
(6) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT began 4...
(7) Intervention: Aerobic (in groups) or strength training (individual), control: usual care including standard physical activity...
(8) Intervention: impact loading, aerobic and resistance exercise in groups, Control: usual care (delayed exercise), mean days...
(9) Intervention: Restistance + aerobic training training in groups, control: usual care (delayed exercise), mean months on ADT:...
(10) Intervention: Impact loading + resistance training training in groups, control: usual care (delayed exercise), mean months...
(11) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean months on ADT:...

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.5 Fysisk funktion (physical function) gangtest.

Figure 5 (Analysis 1.6)



Footnotes

(1) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(2) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18...
(3) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care,...
(4) Intervention: impact loading, aerobic and resistance exercise in groups, Control: usual care (delayed...
(5) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on...
(6) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control),...
(7) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean...

Risk of bias legend

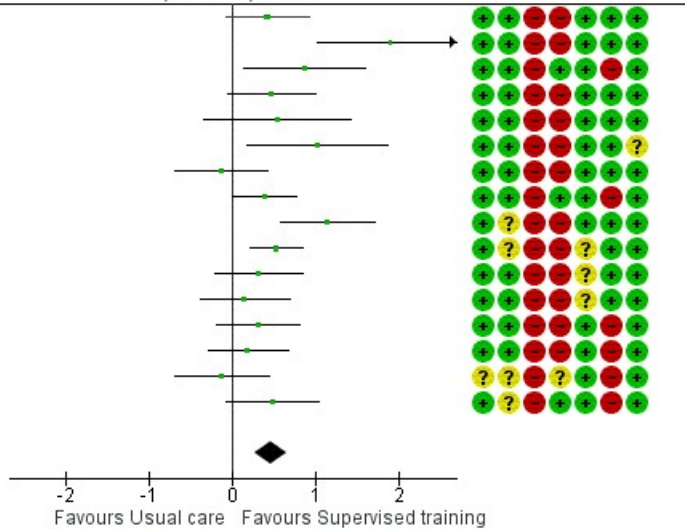
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.6 Fysisk funktion (physical function) rejse/sætte sig test.

Figure 6 (Analysis 1.7)

Study or Subgroup	Supervised training Mean	SD	Total	Usual care Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Cormie 2015 (1)	157.9	52.9	32	141.7	9.6	31	7.0%	0.42 [-0.08, 0.92]
Dawson 2018 (2)	288.7	80.1	12	130.3	82.4	19	3.6%	1.89 [1.01, 2.77]
Focht 2018 (3)	19.56	35.47	16	-5	16.32	16	4.6%	0.87 [0.14, 1.60]
Galvao 2010 (4)	134.6	52.8	29	109.6	53.3	28	6.7%	0.46 [-0.06, 0.99]
Galvao 2018 (5)	65.8	14.4	9	57.8	14.1	12	3.5%	0.54 [-0.34, 1.42]
Harrison 2018 (6)	107.8	105.75	13	6.67	83.99	12	3.8%	1.02 [0.18, 1.86]
Ndjavera 2020 (7)	34.2	5.3	24	35	6.7	26	6.3%	-0.13 [-0.69, 0.43]
Newton 2020/Taaffe 2019 (8)	138.8	51.6	54	119.5	48	50	8.6%	0.38 [-0.00, 0.77]
Nilsen 2015 (9)	228	61	26	168	42	30	6.2%	1.14 [0.58, 1.71]
Segal 2003 (10)	11.8	25.3085	82	-1.6	25.3085	73	9.6%	0.53 [0.21, 0.85]
Segal 2009a (11)	134.1	41.6	40	119.2	55.9	21	6.6%	0.31 [-0.22, 0.84]
Segal 2009b (12)	128	60.9	40	119.2	55.9	20	6.6%	0.15 [-0.39, 0.68]
Taaffe2017/Newton 2019/Wall2017a (13)	156.8	59	50	138.8	57.6	23	7.1%	0.30 [-0.19, 0.80]
Taaffe 2017/Newton 2019/Wall2017b (14)	149.2	55	57	138.8	57.6	24	7.3%	0.18 [-0.29, 0.66]
Uth 2014 (15)	71.7	18.8	26	73.9	16	22	6.2%	-0.12 [-0.69, 0.45]
Winters Stone 2015 (16)	142.4	52.2	29	120.8	30.6	22	6.3%	0.48 [-0.08, 1.04]
Total (95% CI)			**539**			**429**	**100.0%**	**0.46 [0.26, 0.65]**

Heterogeneity: Tau² = 0.08; Chi² = 30.45, df = 15 (P = 0.01); I² = 51%
Test for overall effect: Z = 4.62 (P < 0.00001)



Footnotes

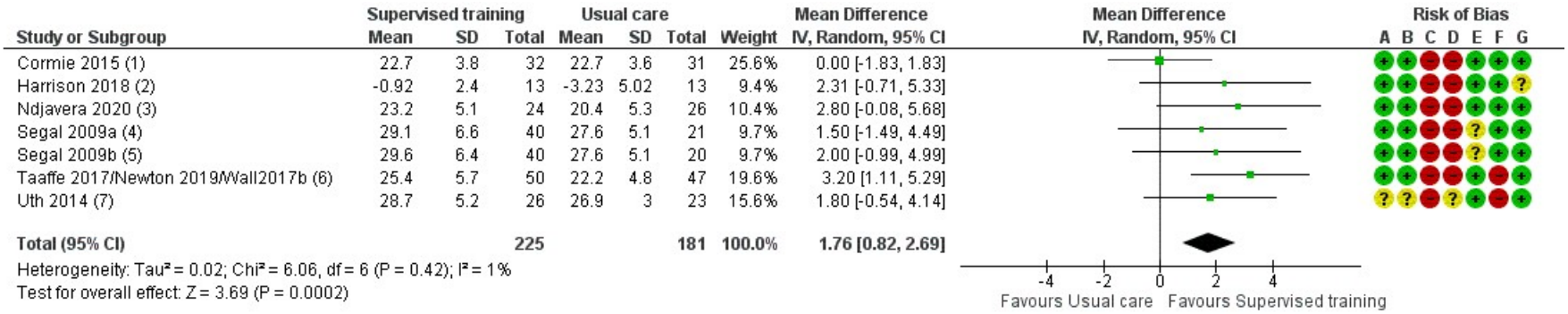
(1) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(2) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT: 15 (intervention)...
(3) Intervention: resistance and aerobic exercise in groups, control: usual care including advice on physical activity according to...
(4) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18 (intervention) and 10...
(5) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT: 2...
(6) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT began 4 weeks...
(7) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care, beginning ADT,...
(8) Intervention: impact loading, aerobic and resistance exercise in groups, Control: usual care (delayed exercise), mean days on...
(9) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on ADT: 9 months,...
(10) Intervention: Resistance exercise, individual training, control: usual care, mean months on ADT: 12 (intervention) 13 (control),...
(11) Intervention: Resistance exercise, no information on group or individual training, control: usual care, no information on...
(12) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no information on duration of...
(13) Intervention: resistance + aerobic training in groups, control: usual care (delayed exercise), mean months on ADT: 5...
(14) Intervention: Impact loading + resistance training in groups, control: usual care (delayed exercise), mean months on ADT: 5...
(15) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control), 100% in ADT
(16) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean months on ADT: 39...

Risk of bias legend

(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.7 Muskelstyrke (Strenght).

Figure 7 (Analysis 1.8)



Footnotes

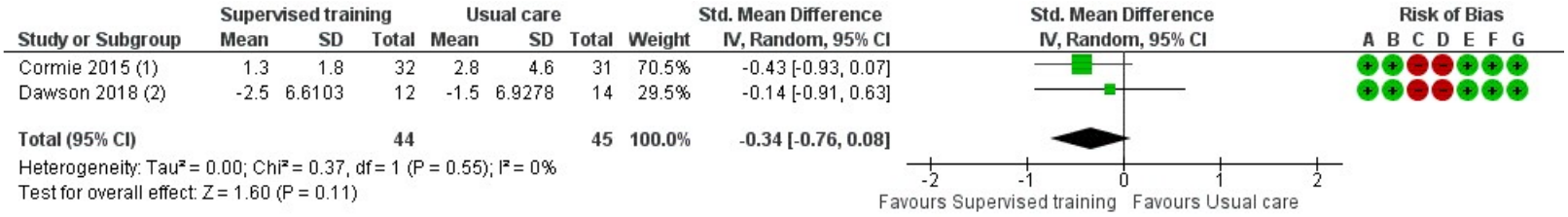
(1) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(2) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT began 4...
(3) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care, beginning...
(4) Intervention: Resistance, no information on group or individual training, control: usual care, no information on duration...
(5) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no information on...
(6) Data kun rapporteret for den ene træningsgruppe, in groups (resistance and aerobic exercises), Intervention: Impact...
(7) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control), 100% in...

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.8 Vo2 max (Vo2 peak).

Figure 8 (Analysis 1.9)



Footnotes

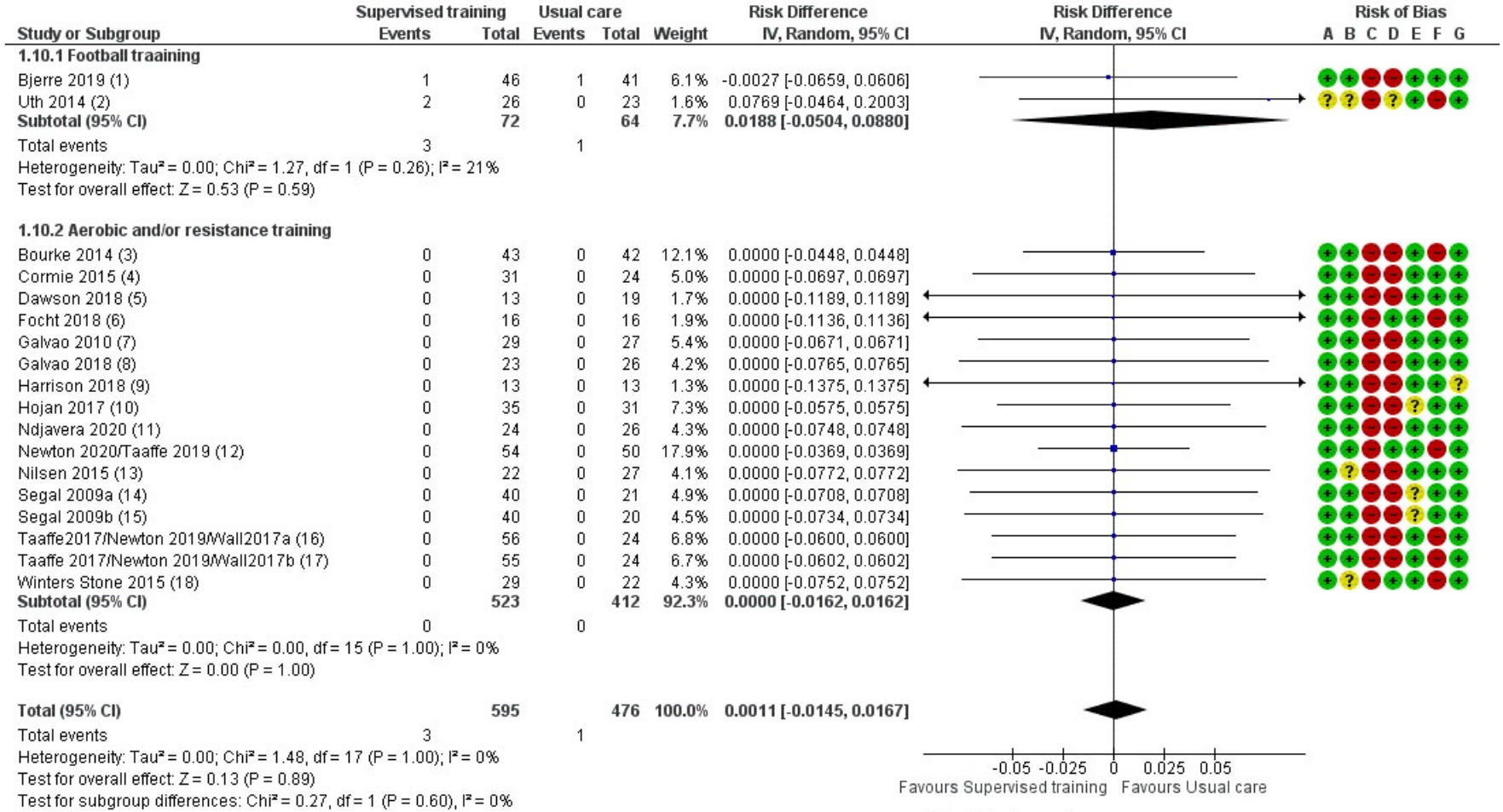
(1) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6,...
(2) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months...

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.9 Depressions symptomer (depressive symptoms).

Figure 9 (Analysis 1.10)



Footnotes

(1) Intervention: football (group), control: usual care (advice on physical activity according to guidelines), medain days on...
(2) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control), 100% in...
(3) Intervention: Aerobic and resistance exercise in groups + dietary advice and behavioral change support, control: usual...
(4) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(5) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT: 15...
(6) Intervention: resistance and aerobic exercise in groups, control: usual care including advice on physical activity...
(7) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18 (intervention)...
(8) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT: 2...

Risk of bias legend

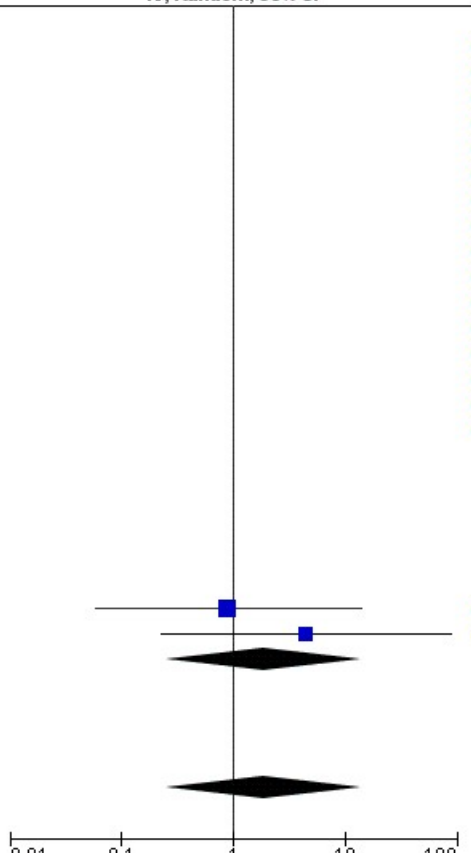
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

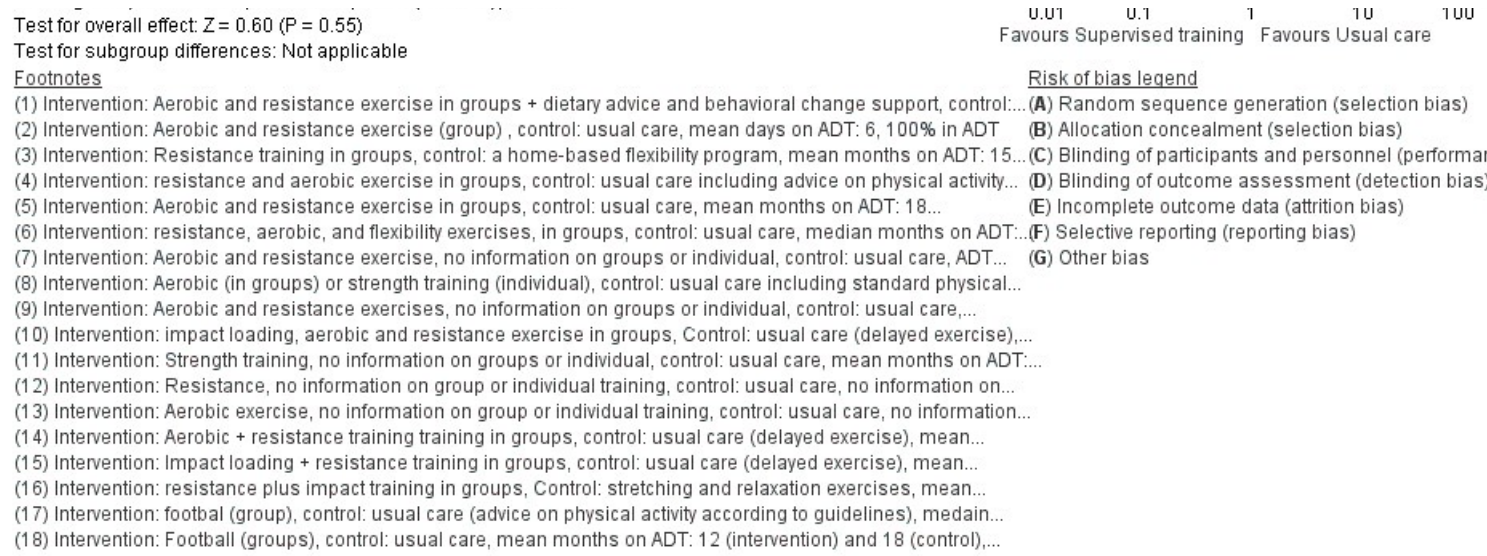
(9) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT began 4...
(10) Intervention: Aerobic (in groups) or strength training (individual), control: usual care including standard physical...
(11) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care, beginning...
(12) Intervention: impact loading, aerobic and resistance exercise in groups, Control: usual care (delayed exercise), mean...
(13) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on ADT: 9...
(14) Intervention: Resistance, no information on group or individual training, control: usual care, no information on duration...
(15) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no information on...
(16) Intervention:Aerobic + resistance training training in groups, control: usual care (delayed exercise), mean months on...
(17) Intervention: Impact loading + resistance training training in groups, control: usual care (delayed exercise), mean...
(18) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean months on...

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.10 Frakturer (fractures) Risk diff. antal personer med.

Figure 10 (Analysis 1.11)

Study or Subgroup	Supervised training Events	Total	Usual care Events	Total	Weight	Risk Ratio IV, Random, 95% CI
1.11.1 Aerobic and/or resistance training						
Bourke 2014 (1)	0	43	0	42		Not estimable
Cormie 2015 (2)	0	31	0	24		Not estimable
Dawson 2018 (3)	0	13	0	19		Not estimable
Focht 2018 (4)	0	16	0	16		Not estimable
Galvao 2010 (5)	0	29	0	27		Not estimable
Galvao 2018 (6)	0	23	0	26		Not estimable
Harrison 2018 (7)	0	13	0	13		Not estimable
Hojan 2017 (8)	0	35	0	31		Not estimable
Ndjavera 2020 (9)	0	24	0	26		Not estimable
Newton 2020/Taaffe 2019 (10)	0	54	0	50		Not estimable
Nilsen 2015 (11)	0	22	0	27		Not estimable
Segal 2009a (12)	0	40	0	21		Not estimable
Segal 2009b (13)	0	40	0	20		Not estimable
Taaffe2017/Newton 2019/Wall2017a (14)	0	56	0	24		Not estimable
Taaffe 2017/Newton 2019/Wall2017b (15)	0	55	0	24		Not estimable
Winters Stone 2015 (16)	0	29	0	22		Not estimable
Subtotal (95% CI)		**523**		**412**		**Not estimable**
Total events	0		0			
Heterogeneity: Not applicable						
Test for overall effect: Not applicable						
1.11.2 Football training						
Bjerre 2019 (17)	1	46	1	41	54.3%	0.89 [0.06, 13.80]
Uth 2014 (18)	2	26	0	23	45.7%	4.44 [0.22, 88.04]
Subtotal (95% CI)		**72**		**64**	**100.0%**	**1.86 [0.25, 13.99]**
Total events	3		1			
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 0.60$, df = 1 (P = 0.44); $I^2 = 0\%$						
Test for overall effect: Z = 0.60 (P = 0.55)						
Total (95% CI)		**595**		**476**	**100.0%**	**1.86 [0.25, 13.99]**
Total events	3		1			
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 0.60$, df = 1 (P = 0.44); $I^2 = 0\%$						



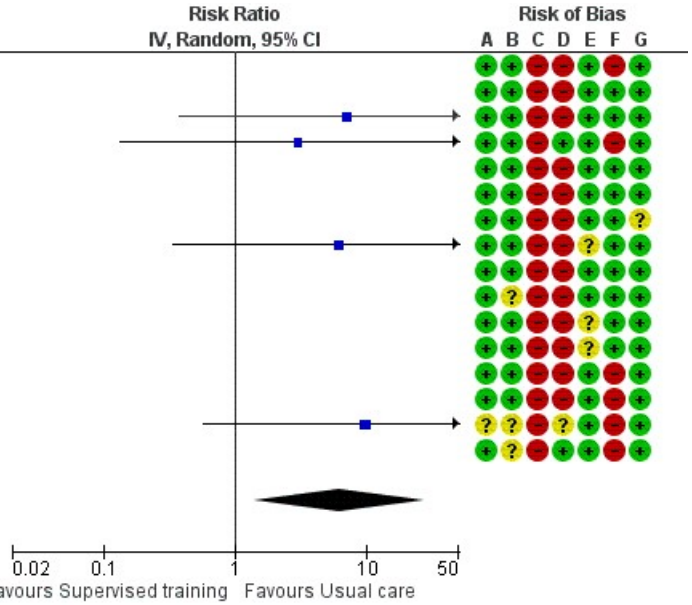


Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.11 Frakturer (fractures) Risk ratio, antal personer med.

Figure 11 (Analysis 1.13)

Study or Subgroup	Supervised training Events	Total	Usual care Events	Total	Weight	Risk Ratio IV, Random, 95% CI
Bourke 2014 (1)	0	43	0	42		Not estimable
Cormie 2015 (2)	0	31	0	24		Not estimable
Dawson 2018 (3)	2	13	0	19	25.0%	7.14 [0.37, 137.64]
Focht 2018 (4)	1	16	0	16	22.3%	3.00 [0.13, 68.57]
Galvao 2010 (5)	0	29	0	27		Not estimable
Galvao 2018 (6)	0	23	0	26		Not estimable
Harrison 2018 (7)	0	13	0	13		Not estimable
Hojan 2017 (8)	3	35	0	31	25.6%	6.22 [0.33, 115.91]
Ndjavera 2020 (9)	0	24	0	26		Not estimable
Nilsen 2015 (10)	0	22	0	27		Not estimable
Segal 2009a (11)	0	40	0	21		Not estimable
Segal 2009b (12)	0	40	0	20		Not estimable
Taaffe2017/Newton 2019/Wall2017a (13)	0	56	0	24		Not estimable
Taaffe 2017/Newton 2019/Wall2017b (14)	0	55	0	24		Not estimable
Uth 2014 (15)	5	26	0	23	27.1%	9.78 [0.57, 167.75]
Winters Stone 2015 (16)	0	29	0	22		Not estimable
Total (95% CI)		**495**		**385**	**100.0%**	**6.18 [1.41, 27.14]**
Total events	11		0			

Heterogeneity: Tau² = 0.00; Chi² = 0.31, df = 3 (P = 0.96); I² = 0%
Test for overall effect: Z = 2.41 (P = 0.02)



Footnotes

(1) Intervention: Aerobic and resistance exercise in groups + dietary advice and behavioral change support, control:...
(2) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(3) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT: 15...
(4) Intervention: resistance and aerobic exercise in groups, control: usual care including advice on physical activity...
(5) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18...
(6) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT:...
(7) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT...
(8) Intervention: Aerobic (in groups) or strength training (individual), control: usual care including standard physical...
(9) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care,...
(10) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on ADT:...
(11) Intervention: Resistance, no information on group or individual training, control: usual care, no information on...
(12) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no information...
(13) Intervention: Aerobic + resistance training in groups, control: usual care (delayed exercise), mean months on...
(14) Intervention: Impact loading + resistance training training in groups, control: usual care (delayed exercise),...
(15) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control),...
(16) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean...

Risk of bias legend

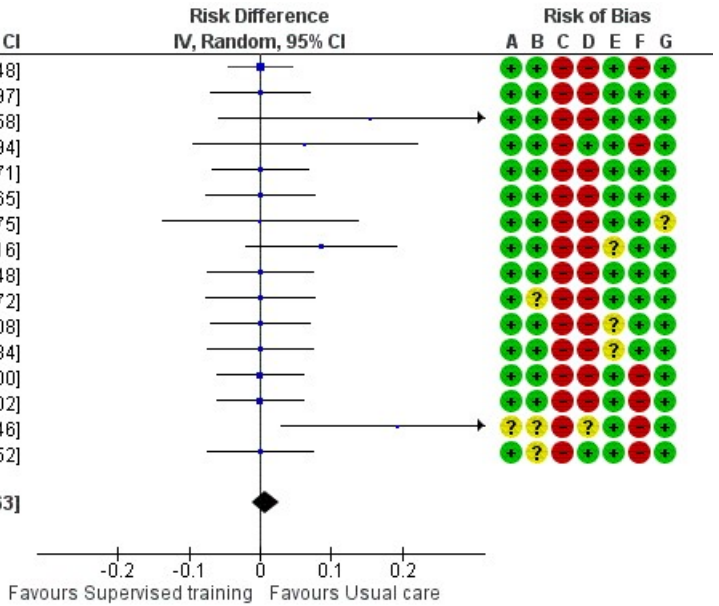
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.13 Træningsrelaterede skader (Exercise related injuries) risk ratio, antal personer med.

Figure 12 (Analysis 1.12)

Study or Subgroup	Supervised training Events	Total	Usual care Events	Total	Weight	Risk Difference IV, Random, 95% CI
Bourke 2014 (1)	0	43	0	42	17.8%	0.0000 [-0.0448, 0.0448]
Cormie 2015 (2)	0	31	0	24	7.3%	0.0000 [-0.0697, 0.0697]
Dawson 2018 (3)	2	13	0	19	0.8%	0.1538 [-0.0581, 0.3658]
Focht 2018 (4)	1	16	0	16	1.4%	0.0625 [-0.0944, 0.2194]
Galvao 2010 (5)	0	29	0	27	7.9%	0.0000 [-0.0671, 0.0671]
Galvao 2018 (6)	0	23	0	26	6.1%	0.0000 [-0.0765, 0.0765]
Harrison 2018 (7)	0	13	0	13	1.9%	0.0000 [-0.1375, 0.1375]
Hojan 2017 (8)	3	35	0	31	3.2%	0.0857 [-0.0202, 0.1916]
Ndjavera 2020 (9)	0	24	0	26	6.4%	0.0000 [-0.0748, 0.0748]
Nilsen 2015 (10)	0	22	0	27	6.0%	0.0000 [-0.0772, 0.0772]
Segal 2009a (11)	0	40	0	21	7.1%	0.0000 [-0.0708, 0.0708]
Segal 2009b (12)	0	40	0	20	6.6%	0.0000 [-0.0734, 0.0734]
Taaffe2017/Newton 2019/Wall2017a (13)	0	56	0	24	9.9%	0.0000 [-0.0600, 0.0600]
Taaffe 2017/Newton 2019/Wall2017b (14)	0	55	0	24	9.9%	0.0000 [-0.0602, 0.0602]
Uth 2014 (15)	5	26	0	23	1.4%	0.1923 [0.0300, 0.3546]
Winters Stone 2015 (16)	0	29	0	22	6.3%	0.0000 [-0.0752, 0.0752]
Total (95% CI)		**495**		**385**	**100.0%**	**0.0075 [-0.0114, 0.0263]**
Total events	11		0			

Heterogeneity: Tau² = 0.00; Chi² = 9.94, df = 15 (P = 0.82); I² = 0%
Test for overall effect: Z = 0.77 (P = 0.44)



Footnotes

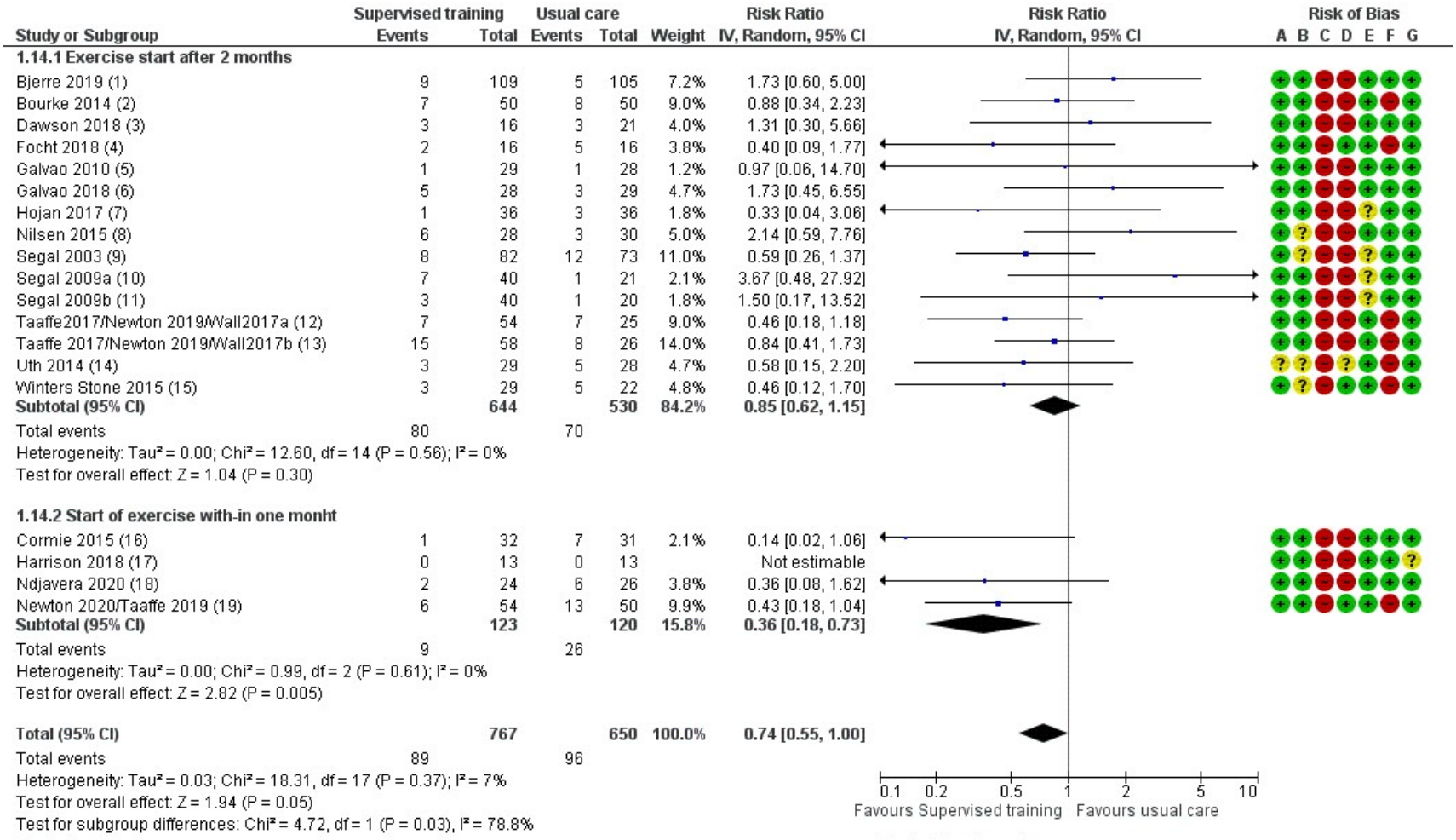
(1) Intervention: Aerobic and resistance exercise in groups + dietary advice and behavioral change support, control: usual...
(2) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(3) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT: 15...
(4) Intervention: resistance and aerobic exercise in groups, control: usual care including advice on physical activity...
(5) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18 (intervention)...
(6) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT: 2...
(7) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT began 4...
(8) Intervention: Aerobic (in groups) or strength training (individual), control: usual care including standard physical activity...
(9) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care, beginning...
(10) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on ADT: 9...
(11) Intervention: Resistance, no information on group or individual training, control: usual care, no information on...
(12) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no information on...
(13) Intervention: Aerobic resistance training in groups, control: usual care (delayed exercise), mean months on ADT: 5...
(14) Intervention: Impact loading + resistance training in groups, control: usual care (delayed exercise), mean months on...
(15) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control), 100% in...
(16) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean months on...

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.12 Træningsrelaterede skader (Exercise related injuries) risk. diff, antal personer med.

Figure 13 (Analysis 1.14)



Footnotes

(1) Intervention: footbal (group), control: usual care (advice on physical activity according to guidelines), medain days...
(2) Intervention: Aerobic and resistance exercise in groups + dietary advice and behavioral change support, control:...
(3) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT: 15...
(4) Intervention: resistance and aerobic exercise in groups, control: usual care including advice on physical activity...
(5) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18...
(6) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT:...
(7) Intervention: Aerobic (in groups) or strength training (individual), control: usual care including standard physical...
(8) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on ADT:...
(9) Intervention: Resistance exercise, individual training, control: usual care, mean months on ADT: 12 (intervention)...

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

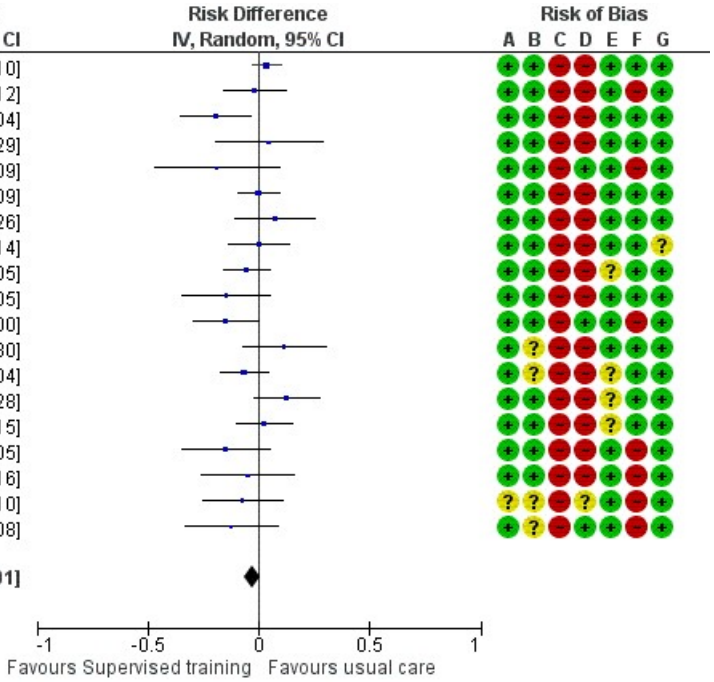
(10) Intervention: Resistance, no information on group or individual training, control: usual care, no information on...
(11) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no information...
(12) Intervention: Aerobic + resistance training in groups, control: usual care (delayed exercise), mean months on...
(13) Intervention: Impact loading + resistance training or aerobic + resistance training in groups, control: usual care...
(14) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control),...
(15) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean...
(16) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(17) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT...
(18) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care,...
(19) Intervention: impact loading, aerobic and resistance exercise in groups, Control: usual care (delayed exercise),...

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.14 Frafald (dropouts) risk ratio, antal personer.

Figure 14 (Analysis 1.15)

Study or Subgroup	Supervised training Events	Total	Usual care Events	Total	Weight	Risk Difference IV, Random, 95% CI
Bjerre 2019 (1)	9	109	5	105	12.8%	0.03 [-0.03, 0.10]
Bourke 2014 (2)	7	50	8	50	5.7%	-0.02 [-0.16, 0.12]
Cormie 2015 (3)	1	32	7	31	4.7%	-0.19 [-0.35, -0.04]
Dawson 2018 (4)	3	16	3	21	2.3%	0.04 [-0.20, 0.29]
Focht 2018 (5)	2	16	5	16	1.8%	-0.19 [-0.47, 0.09]
Galvao 2010 (6)	1	29	1	28	9.2%	-0.00 [-0.10, 0.09]
Galvao 2018 (7)	5	28	3	29	3.9%	0.08 [-0.10, 0.26]
Harrison 2018 (8)	0	13	0	13	5.8%	0.00 [-0.14, 0.14]
Hojan 2017 (9)	1	36	3	36	8.3%	-0.06 [-0.16, 0.05]
Ndjavera 2020 (10)	2	24	6	26	3.4%	-0.15 [-0.34, 0.05]
Newton 2020/Taaffe 2019 (11)	6	54	13	50	5.3%	-0.15 [-0.30, -0.00]
Nilsen 2015 (12)	6	28	3	30	3.7%	0.11 [-0.07, 0.30]
Segal 2003 (13)	8	82	12	73	8.1%	-0.07 [-0.17, 0.04]
Segal 2009a (14)	7	40	1	21	5.2%	0.13 [-0.02, 0.28]
Segal 2009b (15)	3	40	1	20	6.6%	0.02 [-0.10, 0.15]
Taaffe2017/Newton 2019/Wall2017a (16)	7	54	7	25	3.3%	-0.15 [-0.35, 0.05]
Taaffe 2017/Newton 2019/Wall2017b (17)	15	58	8	26	3.0%	-0.05 [-0.26, 0.16]
Uth 2014 (18)	3	29	5	28	3.9%	-0.08 [-0.26, 0.10]
Winters Stone 2015 (19)	3	29	5	22	3.1%	-0.12 [-0.33, 0.08]
Total (95% CI)		**767**		**650**	**100.0%**	**-0.03 [-0.07, 0.01]**
Total events	89		96			

Heterogeneity: Tau² = 0.00; Chi² = 25.33, df = 18 (P = 0.12); I² = 29%
Test for overall effect: Z = 1.44 (P = 0.15)



Footnotes

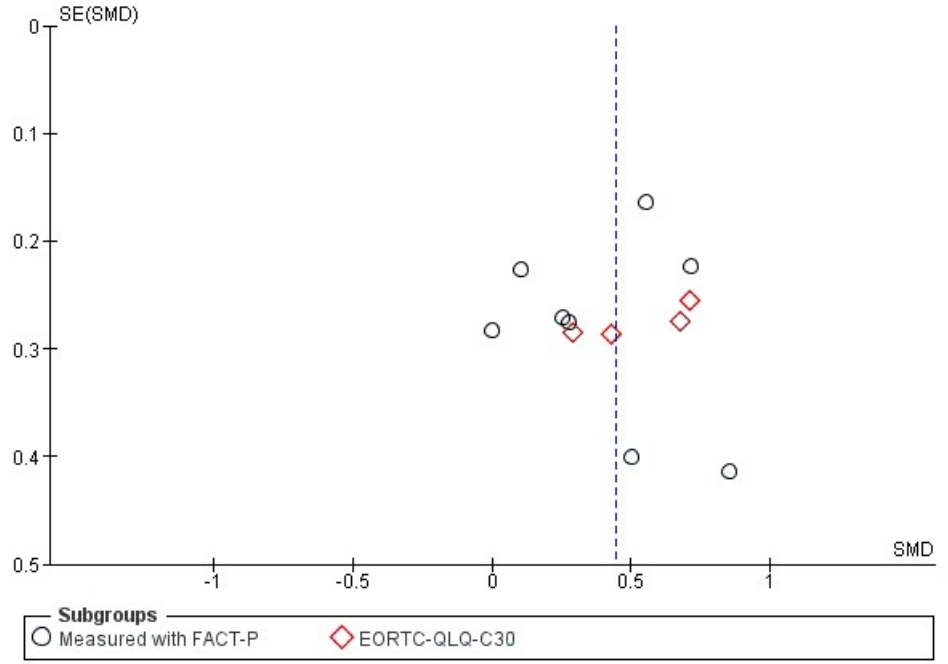
(1) Intervention: footbal (group), control: usual care (advice on physical activity according to guidelines), medain days...
(2) Intervention: Aerobic and resistance exercise in groups + dietary advice and behavioral change support, control:...
(3) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(4) Intervention: Resistance training in groups, control: a home-based flexibility program, mean months on ADT: 15...
(5) Intervention: resistance and aerobic exercise in groups, control: usual care including advice on physical activity...
(6) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18...
(7) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT:...
(8) Intervention: Aerobic and resistance exercise, no information on groups or individual, control: usual care, ADT...
(9) Intervention: Aerobic (in groups) or strength training (individual), control: usual care including standard physical...
(10) Intervention: Aerobic and resistance exercises, no information on groups or individual, control: usual care,...
(11) Intervention: impact loading, aerobic and resistance exercise in groups, Control: usual care (delayed exercise),...
(12) Intervention: Strength training, no information on groups or individual, control: usual care, mean months on ADT:...
(13) Intervention: Resistance exercise, individual training, control: usual care, mean months on ADT: 12...
(14) Intervention: Resistance, no information on group or individual training, control: usual care, no information on...
(15) Intervention: Aerobic exercise, no information on group or individual training, control: usual care, no information...
(16) Intervention: Aerobic + resistance training in groups, control: usual care (delayed exercise), mean months on...
(17) Intervention: Impact loading + resistance training in groups, control: usual care (delayed exercise), mean...
(18) Intervention: Football (groups), control: usual care, mean months on ADT: 12 (intervention) and 18 (control),...
(19) Intervention: resistance plus impact training in groups, Control: stretching and relaxation exercises, mean...

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

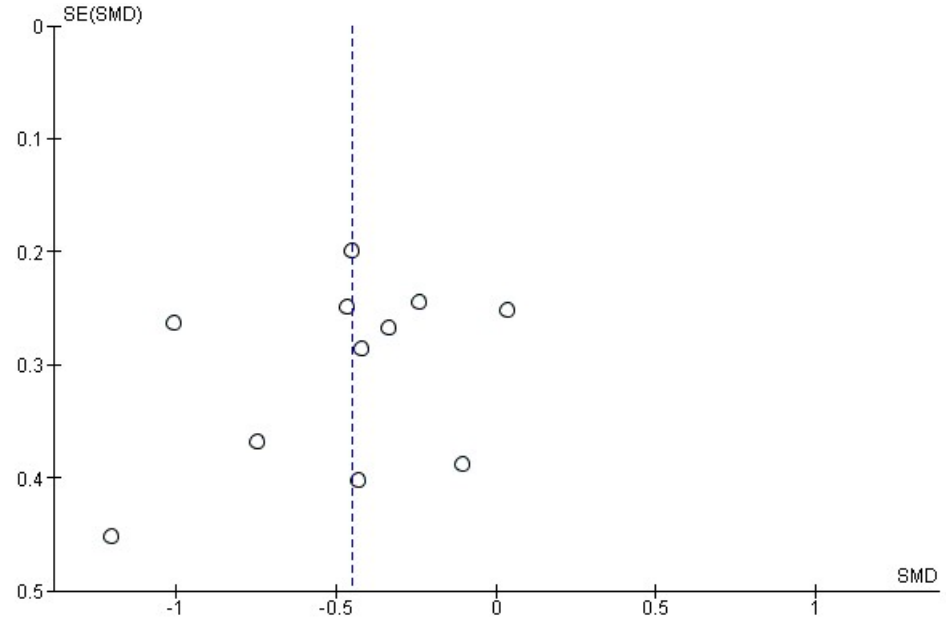
Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.15 Frafald (dropouts) risk diff, antal personer. Analysen bruges til tjek af udregning af absolutte tal i MAGIC.

Figure 15 (Analysis 1.1)



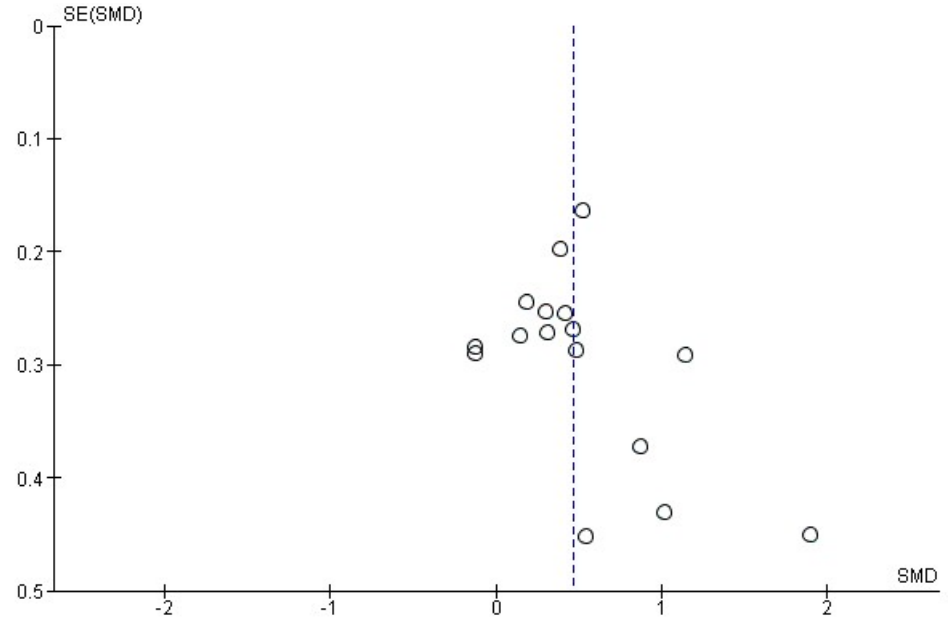
Funnel plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.1 Livskvalitet (quality of life) Diagnosespecifik livskvalitet.

Figure 16 (Analysis 1.5)



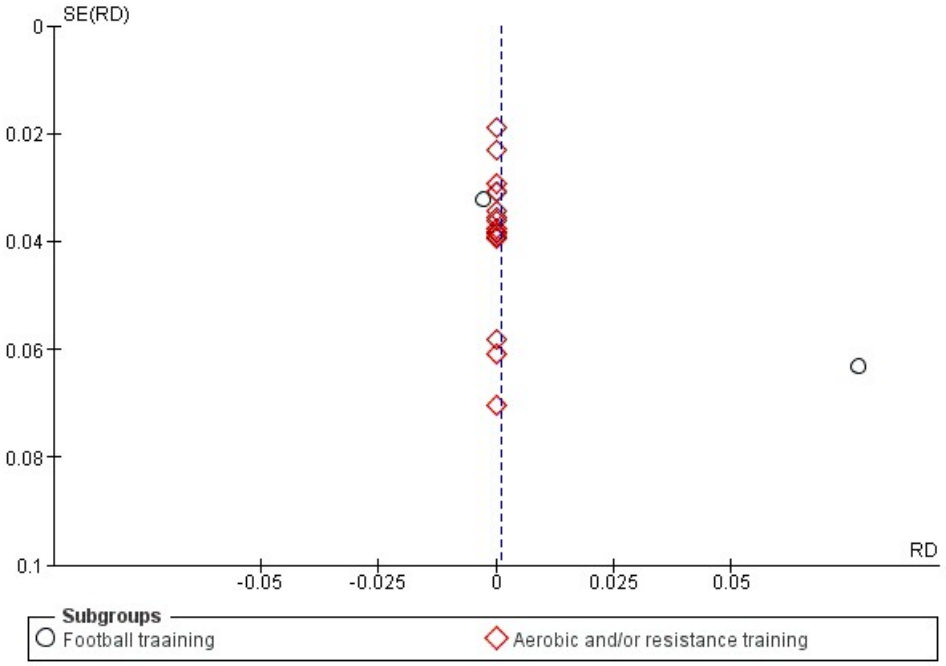
Funnel plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.5 Fysisk funktion (physical function) gangtest.

Figure 17 (Analysis 1.7)



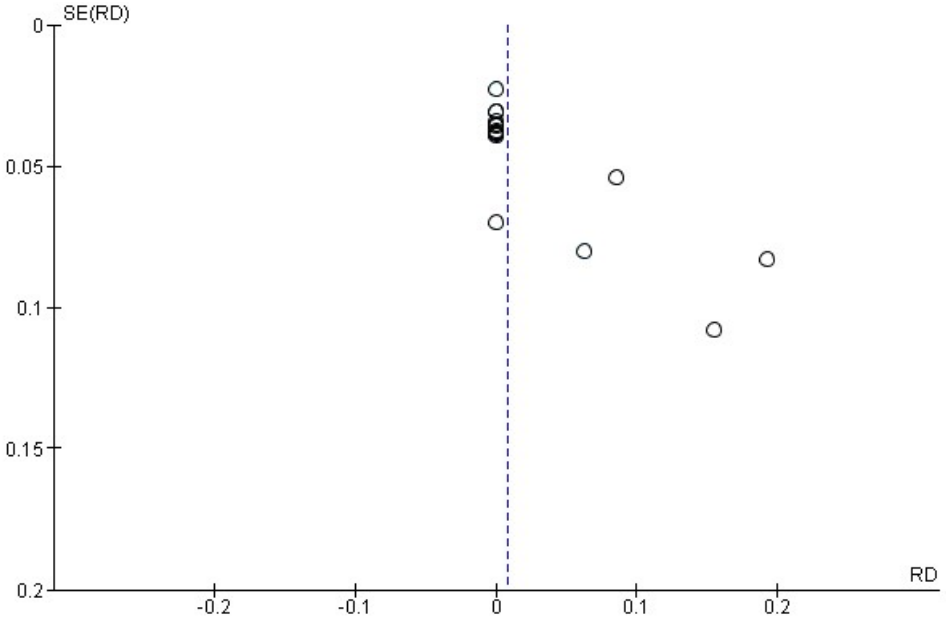
Funnel plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.7 Muskelstyrke (Strenght).

Figure 18 (Analysis 1.10)



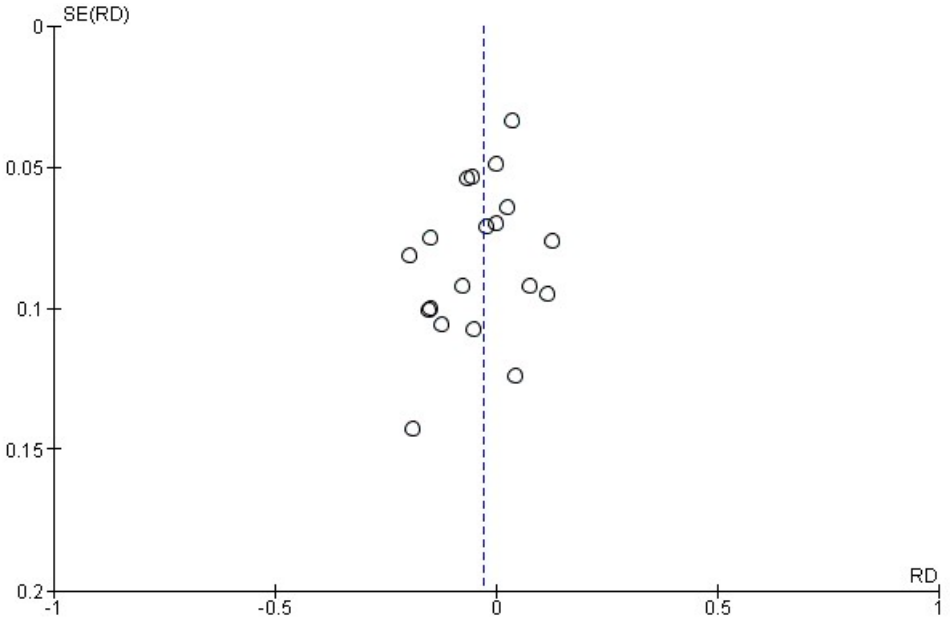
Funnel plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.10 Frakturer (fractures) Risk diff. antal personer med.

Figure 19 (Analysis 1.12)



Funnel plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.12 Træningsrelaterede skader (Exercise related injuries) risk. diff, antal personer med.

Figure 20 (Analysis 1.15)

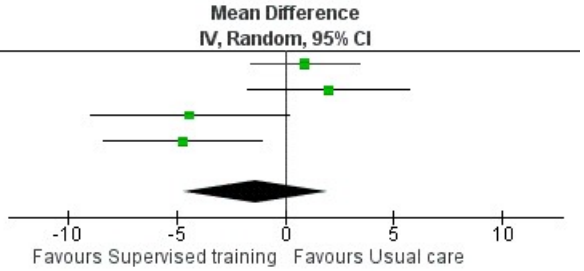


Funnel plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.15 Frafald (dropouts) risk diff, antal personer. Analysen bruges til tjek af udregning af absolutte tal i MAGIC.

Figure 21 (Analysis 1.3)

	Supervised training			Usual care				Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI
Bjerre 2019 (1)	2.7	7.3807	42	1.8	3.5991	37	29.4%	0.90 [-1.62, 3.42]
Cormie 2015 (2)	-51.1	8.3	32	-53.1	6.6	31	24.6%	2.00 [-1.70, 5.70]
Galvao 2010 (3)	-49.2	7.9	29	-44.8	9.5	27	21.1%	-4.40 [-8.99, 0.19]
Galvao 2018 (4)	-49.5	5	22	-44.8	7.8	26	24.8%	-4.70 [-8.35, -1.05]
Total (95% CI)			**125**			**121**	**100.0%**	**-1.34 [-4.67, 1.99]**

Heterogeneity: Tau² = 8.16; Chi² = 10.69, df = 3 (P = 0.01); I² = 72%
Test for overall effect: Z = 0.79 (P = 0.43)



Footnotes
(1) Intervention: footbal (group), control: usual care (advice on physical activity according to guidelines), medain days on ADT: 620, data from ADT population only
(2) Intervention: Aerobic and resistance exercise (group) , control: usual care, mean days on ADT: 6, 100% in ADT
(3) Intervention: Aerobic and resistance exercise in groups, control: usual care, mean months on ADT: 18 (intervention) and 10 (control), 100% in ADT
(4) Intervention: resistance, aerobic, and flexibility exercises, in groups, control: usual care, median months on ADT: 2 (intervention) and 4 (control), 95% in ADT

Forest plot of comparison: 1 Superviseret træning vs vanlig aktivitet, outcome: 1.3 Livskvalitet (quality of life),generel livskvalitet, SF-36, phycical component.