**(SDC 2) Table S2.** Study characteristics: treatment stage, sample size, exercise prescription, adherence, attendance, compliance and outcomes assessed.

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| Author, year | Disease stage | Treatment stage | Experimental design | Exercise prescription and sample | Adherence  Attendance  Compliance | Adverse events | Outcomes |
| Segal et al., 2009(8) | I-IV;  Gleason Score: 6.7±0.9 | Radiotherapy;  Radiotherapy plus ADT | 121 randomised  RT vs. AT vs. UC | **Resistance training**  n=40, 3 sessions per week for 24 weeks performing 2 sets of 8-12 reps at 60-70% of 1-RM | Adh: 82.5%  Att: 88.0%  Comp: NR | In the resistance training group, one man experienced chest pain during exercise. | Body fat;  Cardiorespiratory fitness;  Chest press and leg press 1-RM;  PSA |
| Galvão et al., 2010(5) | Localised and nodal metastases;  Gleason Score: 7.3 | ADT | 57 randomised  Combined resistance and aerobic training vs. UC | **Combined resistance and aerobic training**  n=29, 2 sessions per week for 12 weeks;  RT: 2-4 sets of 6-12RM  AT: 15-20min at 65-80% HR | Adh: 96.6%  Att: 94.0%  Comp: NR | No adverse events. | Body fat, Fat mass, Trunk fat mass, Lean mass, Appendicular lean mass;  400-m walk, 6-m usual, fast and backwards walk, stair climb, repeated sit-to-stand;  Chest press, leg press and seated row 1-RM;  PSA |
| Bourke et al., 2011(42) | Gleason Score: 7±1.1 | ADT | 50 randomised  Lifestyle intervention (combined resistance and aerobic training, nutrition advice, and home-based AT) vs. UC | **Combined resistance and aerobic training**  n=25, 2 sessions per week for 12 weeks;  AT: 30min at 55-85% HR;  RT: 2-4 sets | Adh: 84.0%  Att: 95.2%  Comp: 87.0% | No adverse events. | 30s sit-to-stand repetitions;  BMI |
| Cormie et al., 2013(43) | Gleason Score: 8.2 | Bone metastasis | 20 randomised  RT plus home-based AT vs. UC | **Resistance training**  n=10, 2 sessions per week for 12 weeks performing 2-4 sets of 8-12RM | Adh: 80.0%  Att: 83.0%  Comp: 93.2% | No adverse events. | Body fat, Fat mass, Trunk fat mass, Lean mass, Appendicular lean mass;  400-m walk, 6-m usual and fast walk, Timed up-and-go;  leg extension 1-RM |
| Galvão et al., 2014(6)  (RADAR trial) | II-IV | Previous ADT and radiotherapy | 100 randomised  Combined resistance and aerobic training plus home-based AT vs. physical activity material | **Combined resistance and aerobic training**  n=50, 2 sessions per week for 24 weeks  RT: 2-4 sets of 6-12RM  AT: 20-30min at 70-85% HR | Adh: 84.0%  Att: 77.0%  Comp: NR | One participant with pre-existing back pain elected to cease the exercise program, as did one patient with a pre-existing knee injury. | Body fat, Fat mass, Lean mass, Appendicular lean mass;  400-m walk, repeated sit-to-stand;  Chest press and leg extension 1-RM;  PSA |
| Bourke et al., 2014(44) | NR | ADT | 100 randomised  Lifestyle intervention (combined resistance and aerobic training, nutrition advice, and home-based AT)  vs. UC | **Combined resistance and aerobic training**  n=50, 2 sessions per week during 12 weeks;  AT: 30min at 55-75% of HR;  RT: 2-4 sets of 8-12 reps at 60% of 1-RM | Adh: 94.0%  Att: 94.0%  Comp: NR | No adverse events. | BMI;  PSA |
| Winters-Stone et al., 2015(45) | NR | ADT; Chemotherapy; Radiotherapy; Bone metastasis | 51 randomised  Impact + RT plus home-based AT vs. home-based AT and FLX | **Impact + Resistance training**  n=29, 2 sessions per week for 48 weeks;  Impact: 50 two-footed jumps from the ground with weighted vests  RT: 1-3 sets of 8-12RM | Adh: 82.8%  Att: 83.0%  Comp: NR | No adverse events. | Repeated sit-to-stand;  Chest press and leg press 1-RM |
| Cormie et al., 2015(46) | Gleason Score: 7.5 | ADT; Chemotherapy; Radiotherapy | 63 randomised  Combined resistance and aerobic training plus home-based AT vs. UC | **Combined resistance and aerobic training**  n=32, 2 sessions per week for 12 weeks;  AT: 20-30min at 70-85% HR;  RT: 1-4 sets of 6-12RM | Adh: 93.8%  Att: 96.2%  Comp: NR | One participant from the exercise group withdrew from the intervention due to feeling too nauseous, dizzy and fatigued to attend the exercise sessions. | Body fat, Fat mass, Trunk fat mass, Lean mass, Appendicular lean mass;  400-m walk, 6-m usual, fast and backwards walk, stair climb, repeated sit-to-stand;  Cardiorespiratory fitness;  chest press, leg press and seated row 1-RM;  PSA |
| Winters-Stone et al., 2015(47) | Including bone metastases | ADT;  Chemotherapy; Radiotherapy | 51 randomised  Impact + RT plus home-based AT vs. home-based AT and FLX | **Impact + Resistance training**  n=29, 2 sessions per week for 48 weeks;  Impact: 50 two-footed jumps from the ground with weighted vests  RT: 1-3 sets of 8-12RM | Adh: 82.8%  Att: 84.0%  Comp: NR | No adverse events. | Body fat, Fat mass, Trunk fat mass, Lean mass |
| Nilsen et al., 2015(48) | Intermediate and high-risk based on PSA and primary tumour | Radiotherapy plus ADT; following ADT | 58 randomised  RT vs. UC | **Resistance training**  n=28, 3 sessions per week for 16 weeks performing 1-3 sets of 10RM on Mondays, 2-3 sets of 10 reps at 80-90% of 10RM on Wednesdays, and 2-3 sets of 6RM on Fridays. | Adh: 78.6%  Att: NR  Comp: 85.0% | Three patients in the resistance training group discontinued the intervention due to pain, two due to pain in the knee and one patient due to back pain. | Body fat, Fat mass, Trunk fat mass, Lean mass, Appendicular lean mass;  30s sit-to-stand-test, stair climb;  Chest press and leg press 1-RM;  BMI |
| Gilbert et al., 2016(49) | NR | ADT | 50 randomised  Multimodal exercise program plus home-based AT and RT vs. UC | **Multimodal exercise program**  n=25, 2 sessions per week for 12 weeks;  AT: 30min at 55-75% HR  RT: 2-4 sets of 8-12 reps at 60% of 1-RM  BAL: NR | Adh: 80.0%  Att: 93.0%  Comp: NR | No adverse events. | Fat mass, Lean mass  BMI;  PSA |
| Winters-Stone et al., 2016(50) | NR | Patients following primary treatment other than hormone therapy and not currently undergoing radiation or chemotherapy | 64 randomised  Impact + RT vs. UC  Sessions with patients and spouses training together | **Impact + Resistance training**  n=32, 2 sessions per week for 24 weeks;  Impact: 1 set of 8–15 repetitions with weighted vests  RT: 1 set of 8-15RM | Adh: 100%  Att: 78.0%  Comp: 94.0% | No adverse events. | Body fat, Fat mass, Trunk fat mass, Lean mass;  repeated sit-to-stand;  Chest press and leg press 1-RM |
| Gaskin et al., 2016(51) | I-III | Surgery;  Radiotherapy;  Surgery plus radiotherapy;  ADT plus radiotherapy;  Surgery plus radiotherapy and ADT. | 119 randomised  Combined resistance and aerobic training plus home-based AT and RT vs. UC | **Combined resistance and aerobic training**  n=53, 2 sessions per week for 12 weeks;  AT: 20-30min at 40-70% HR  RT: 2 sets of 8-12 reps | Adh: 98.1%  Att: 75.0%  Comp: NR | One man in the intervention condition aggravated a previous rotator cuff injury during exercise training. One man in the control condition aggravated a previous meniscus injury during baseline testing. | 30s sit-to-stand-test, 6-minute walk;  BMI;  Chest press and leg press 1-RM |
| Hojan et al., 2017(52) | Gleason Score: 8.8±1.9 | ADT | 72 randomised  Combined resistance and aerobic training vs. UC | **Combined resistance and aerobic training**  n=36, 3 sessions per week for 12 weeks;  AT: 30min at 70-80% HR  RT: 2 sets of 8 reps at 70-75% of 1-RM | Adh: 97.2%  Att: 86.0%  Comp: NR | Three overuse injuries to the lower extremities were reported in the exercise group. | 6-minute walk; BMI |
| Taaffe et al., 2017(9)  (NHMRC trial) | Localised and nodal metastases;  Gleason Score: 7.8 | ADT;  ADT plus radiotherapy;  ADT plus antiandrogen;  ADT plus surgery | 159 randomised  Impact + RT vs. Combined resistance and aerobic training plus home-based AT vs. Delayed AT | **Impact + Resistance training**  n=57, 2 sessions per week for 24 weeks;  Impact: bounding, skipping, drop jumping, hopping, and leaping activities  RT: 2-4 sets of 6-12RM  **Combined resistance and aerobic training**  n=54, 2 sessions per week for 24 weeks;  AT: 20-30min at 60-85% HR  RT: 2-4 sets of 6-12RM | Adh: 74.1% & 87.0%  Att: 65.0 and 69.0%  Comp: NR | Two men in Impact + RT group withdrew due to compressed spinal discs and shoulder issues. Two men in Combined RT and AT had cardiovascular problems, with one requiring heart bypass surgery while another participant developed back pain. | 400-m walk |
| Wall et al., 2017(53) | Gleason Score: 8.0 | ADT;  ADT plus radiotherapy;  ADT plus antiandrogen | 97 randomised  Combined resistance and aerobic training plus home-based AT vs. UC | **Combined resistance and aerobic training**  n=50, 2 sessions per week for 24 weeks;  RT: 2-4 sets of 6-12RM  AT: 20-30min at 70-90% HR | Adh: 86.0%  Att: 69.0%  Comp: NR | No adverse events. | Body fat, Fat mass, Trunk fat mass, Lean mass;  Cardiorespiratory fitness;  PSA |
| Taaffe et al., 2018(10)  (RADAR trial) | II-IV | Previous ADT and radiotherapy | 57 randomised  Combined resistance and aerobic training plus home-based AT vs. physical activity material | **Combined resistance and aerobic training**  n=28, 2 sessions per week during 24 weeks;  RT: 2-4 sets of 6-12RM  AT: 20-30min at 70-85% HR | Adh: NR  Att: 77.0%  Comp: NR | NR | Leg press 1-RM |
| Galvão et al., 2018(12) | Patients with established bone metastatic disease | ADT;  Prostatectomy;  Radiotherapy;  Brachytherapy;  Chemotherapy | 57 randomised  Multimodal exercise program vs. UC | **Multimodal exercise program**  n=28, 3 sessions per week for 12 weeks;  RT: 2 sets of 10-12 reps at 10-12RM  AT: 20-30min at 60-85% HR  FLX: 2-4 reps for 30-60 seconds | Adh: 82.1%  Att: 89.0%  Comp: NR | No adverse events. | Fat mass and Lean mass;  400-m walk, 6-m usual, fast and backward walk, Timed up-and-go, repeated sit-to-stand;  Leg extension 1-RM |
| Dawson et al., 2018(54) | Including bone and nodal metastases  Gleason Score: 7.5 | ADT;  Antiandrogen;  Radiotherapy;  Surgery;  Chemotherapy | 37 randomised  RT vs. home-based FLX  Part of the sample received whey protein isolate (~50%) | **Resistance training**  n=16, 3 sessions per week for 12 weeks performing 3 sets of 8-15 reps at 60-83% of 1-RM | Adh: 87.5%  Att: 93.8%  Comp: 88.3% | No adverse events. | Body fat, Fat mass, Lean mass, Appendicular lean mass;  400-m walk, timed up-and-go, stair climb;  Chest press, leg extension, leg press and seated row 1-RM |
| Alibhai et al., 2019(55) | Gleason score range from 6 to 10 | ADT | 53 randomised  Personal supervised vs. group supervised vs. home-based exercise program | **Multimodal exercise program**  n=19, 3 sessions per week for 24 weeks | Adh: 85.0%  Att: 75.0%  Comp: NR | Three adverse events (two grade 2 events in home-based exercise program participants and one grade 1 event in a personal supervised participant; primarily musculoskeletal) | Cardiorespiratory fitness |
| Ndjavera et al., 2019(56) | Locally advanced and metastatic patients;  Gleason score range from 6 to 10 | ADT;  ADT plus radiotherapy | 50 randomised  Combined resistance and aerobic training plus home-based AT and RT vs. UC | **Combined resistance and aerobic training**  n=24, 2 sessions per week during 12 weeks;  AT: 6 bouts of 5 min at 55-85% HR  RT: 2-4 sets of 10 reps at 11-15 RPE | Adh: 91.7%  Att: 70.0%  Comp: NR | No adverse events. | Fat mass;  Cardiorespiratory fitness;  PSA |
| Taaffe et al., 2019(11) | Gleason score: 7.6 | ADT;  ADT plus surgery;  ADT plus radiotherapy | 104 randomised  Combined resistance and aerobic training + Impact loading plus home-based AT vs. UC  All patients received standard daily  supplementation with calcium and vitamin D3 | **Multimodal exercise program**  n=54, 3 sessions per week for 24 weeks;  Impact: bounding, skipping, drop jumping, hopping, and leaping activities  RT: 2-4 sets of 6-12RM  AT: 25-40min at 60-85% HR | Adh: 88.9%  Att: 79.0%  Comp: NR | No adverse events. | Body fat, Fat mass, Trunk fat mass, Lean mass, Appendicular lean mass |
| Newton et al., 2019(7)  (NHMRC trial) | Localised and nodal metastases;  Gleason Score: 7.8 | ADT;  ADT plus radiotherapy;  ADT plus antiandrogen. | 154 randomised  Impact + Resistance training vs. Combined resistance and aerobic training plus home-based AT vs. Delayed AT | **Impact + Resistance training**  n=57, 2 sessions per week for 24 weeks;  Impact: bounding, skipping, drop jumping, hopping, and leaping activities  RT: 2-4 sets of 6-12RM  **Combined resistance and aerobic training**  n=50, 2 sessions per week for 24 weeks;  AT: 20-30min at 60-85% HR  RT: 2-4 sets of 6-12RM | Adh: 73.7% & 86.0%  Att: 65.0 and 70.0%  Comp: NR | No adverse events. | Fat mass, Lean mass, Appendicular lean mass;  Chest press, leg press, leg extension and seated row 1-RM |

Legend: 1-RM, 1-repetition maximum; Add, Adherece, ADT, Androgen deprivation therapy; AT, Aerobic training; Att, Attendance; BAL, balance exercises; BMI, Body mass index; Comp, Compliance; FLX, Flexibility training; GnRH, Gonadotrophin-releasing hormone; NHMRC, National Health and Medical Research Council; NR, Not reported; PSA, Prostate-specific antigen; RT, Resistance training; UC, Usual care control group; VO2peak, Peak Oxygen Uptake