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Contribution ID: **340** Type: **1 - Scientific Poster**

Home-based exercise training for medically underserved men undergoing treatment with ADT

Thursday 23 July 2026 14:55 (20 minutes)

Background: Androgen deprivation therapy (ADT) for intermediate and high-risk prostate cancer (PC) improves survival but leads to negative changes in body composition, muscular strength, and physical fitness that compromises quality of life (QOL) and places men at risk of secondary commorbidities.

Methods: Twenty-seven medically underserved men (≥75 years of age, and/or Black, and/or rural dwelling) were recruited to a single-arm pilot-feasibility study testing a 12-week, home-based exercise intervention designed to increase daily activity, and regular resistance and aerobic training. Men wore accelerometers for 7 days and completed home-based assessments of physical function and self-reported quality of life at baseline, 8 weeks and 12 weeks.

Results: We approached 94 eligible men from 234 screened, enrolling 27 (28.7%). At baseline, 35% of men were 75 years of age or older, 25% percent were Black, and 23% lived in a metropolitan high commuting area (RUCA >2). On average men were 7 years from PC diagnosis, with 60% having had a prostatectomy and 80% having radiation. The average time on ADT was 4.5 years and 54% of men had hypertension. Steps per day and minutes of moderate to vigorous physical activity remained stable at approximately 6500 steps and 10.5 min/day, while daily sitting dropped from 9.76 to 8.89 hours. Daily sit-to-stands increased from 44 to 52, grip strength increased from 70 to 77lbs and 64 to 72lbs in right and left hands, respectively. Chair stands in 30 seconds increased from 9.7 to 13.1 and 6-minute walk distance increased from 437 to 445m. Facit-fatigue improved by 3.5 points, a minimally important change.

Conclusions: In older men with PC, home-based exercise training and assessments are feasible, though resistance training was more effective than aerobic walking, reflected in improved grip and leg strength. Remote interventions show promise, yet higher intensity training is needed to improve cardiovascular fitness.

Keywords

Prostate Cancer, Androgen Deprivation Therapy, Home-Based Exercise, Physical Activity

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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Session Classification: Poster Session