Effects of a clinician referral and exercise program for men who have completed active treatment for prostate cancer: a multicentre cluster randomized controlled trial [ENGAGE study]

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Disclosure of Interest: None Declared
INVESTIGATION TEAM
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BACKGROUND

• There is increasing evidence that physical activity improves health outcomes of men living with PCa

• RCTs: significant functional, physical, and psychological benefits from exercise

• Gaps in knowledge on type and amount of exercise that men with PCa should undertake
BENEFITS OF PHYSICAL ACTIVITY AMONG PCa PATIENTS

• Hormone therapy: PCa patients at high risk of osteoporosis

  ➢ benefits from strength training to maintain bone density & prevent further bone loss

• Therapeutic impact; reduces side effects of treatment
AUSTRALIAN EXERCISE AND SPORT SCIENCE ASSOCIATION

Recommend that people living with cancer participate in

- moderate / vigorous exercise 3-5 times/week
- at least 20 minutes per session
- involving aerobic, resistance or mixed exercise
- improves cardiovascular endurance & health
- increases muscle & bone health
- lowers BMI

Knowledge has not been translated into practice
- 20% of clinicians promote lifestyle changes

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KEY CHALLENGE

• key challenge is to make information accessible to all men living with prostate cancer

• one strategy to increase information is via clinicians with referrals to an exercise program supervised by accredited exercise physiologists (EPs), tailored to the individual

  • EPs are Allied Health professionals who specialise in the benefits of exercise to support patients improve on fitness outcomes
  • EPs are University trained and are accredited by Exercise and Sport Science Australia (ESSA); form part of Australia’s universal healthcare system (Medicare)
ENGAGE Study Aims

• **Primary aim**: to determine the efficacy of a referral and exercise program for survivors of PCa

• **Secondary aims**: to determine the effects of the exercise program on psychological well-being, quality of life
RANDOMISATION OF CLINICIAN

Men living with Prostate Cancer Present for Follow up Consultation

Intervention: Physical Activity Group

Recruitment

Baseline questionnaire

Baseline session: Fitness Assessment

12 week program: 2 gym sessions and 1 home session each week

12-week follow up fitness assessment & questionnaire

6-month follow up questionnaire

12-month follow up questionnaire

Control Group

Recruitment

Baseline session: Fitness Assessment

Baseline questionnaire

12-week follow up fitness assessment & questionnaire

6-month follow up questionnaire

12-month follow up questionnaire

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ELIGIBILITY CRITERIA

Adults who
1. Completed active treatment for PCa 3-12 months prior
2. were treated with curative intent
3. Stages I, II, or III cancer; and
4. Could complete surveys in the English language
5. Patients excluded if they had musculoskeletal or neurological disorders that could limit them from exercising
6. Patient’s treating clinicians assessed eligibility
INTERVENTION

Clinicians* randomised into intervention condition referred sequential patients to 12 week exercise program, using referral slip

*urologists, radiation oncologists, urology nurses
INTERVENTION

Participants undertake 12-week exercise program

- 2 supervised exercise sessions per week and 1 individual home-based exercise per week
- Gym: combination of cardiovascular (30m) & strength training, balance & flexible exercises
- Home-based: balance, thera-bands; flexible exercises
1. Participation in Physical Activity
   • Leisure Score Index [Godin Leisure-Time Exercise Q]
     • assesses average frequency / duration of mild, moderate & vigorous activity during leisure time in typical week (performed for >15m duration)
       ▪ mild (eg easy walking)
       ▪ moderate (eg brisk walking (6kph); cycling)
       ▪ vigorous (eg running; swimming; jogging (10kph); fast cycling; lifting weights)
SECONDARY OUTCOME MEASURES

1. Quality of life
   - European Organization for Research and Treatment of Cancer (EORTC) quality of life questionnaire PC focuses on treatment-related symptoms & sexual functioning

2. Anxiety & Depression
   - Memorial Anxiety Scale for Prostate Cancer measures anxiety related to PC
   - Centre for Epidemiological Studies Depression Inventory (CES-D) measures depressive symptoms
RECRUITMENT

- October 2011 – June 2013
- Sites: Peter Mac, Austin & Eastern Health, Epworth HealthCare, private clinicians
- 741 patients screened: 40% ineligible
- 320 patients approached: 147 (46%) participated
- Age: 39 to 84 years (M= 65.6; SD=8.5)
- majority had stage I or II disease
- no significant differences in patient demographics at baseline

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PRIMARY OUTCOMES

• Significant intervention effect was observed for vigorous-intensity exercise (effect size: 0.46; 95% CI: 0.09, 0.82; p=0.010)

• Significant intervention effects observed for % meeting exercise guidelines (≥150 minutes per week) based on combined moderate-vigorous physical activity (Odds Ratio: 3.9; 95% CI: 1.9, 7.8; p=0.002)
RESULTS

• Positive intervention effects observed in the intervention group for
  
  ➢ cognitive functioning (effect size: 0.34, 95% CI: -0.02, 0.70; p=0.06) and
  
  ➢ depression symptoms (effect size: -0.35, 95% CI: -0.71, 0.02; p=0.06)
RESULTS

• 80% reported clinician influenced decision to attend the exercise program
• 85% adhered to the supervised component of the exercise program (completing 18/24 gym sessions)
• 81% completed between nine and 12 of the prescribed home-based weekly sessions
• 91% reported the program was rewarding
• 75% would recommend program to others
DISCUSSION

Men in the intervention group

• completed >twice as much vigorous exercise
• nearly four times the odds of meeting exercise guidelines
• Reported improved alertness and reduced depression symptoms
• Tailored program targeted to individual fitness levels and abilities
DISCUSSION

Further study required to determine

• sustainability of the exercise program & generalizability to other cancer populations

• whether the supervised 12 week program is better suited for men who are more sedentary in behaviour
SIGNIFICANCE OF STUDY

1. Clinicians are ideally suited to
   • provide a *teachable moment* to promote exercise to improve health outcomes, and
   • refer men to tailored exercise programs as part of their clinical care following active treatment for prostate cancer

2. A tailored exercise program can improve physical and mental health outcomes for men living with prostate cancer

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