

PROJECT DETAILS

Project Title:

Prehabilitation for women at high risk of breast cancer

Project Summary:

This study aims to examine the feasibility and efficacy of a 16-week combined exercise and nutrition intervention with behavioural support to reduce fat mass while maintaining lean mass in participants at risk of breast cancer. Secondary outcomes include improvements in muscle strength, physical function, quality of life, and clinical outcomes. The study will recruit 25 participants with a BMI > 30 kg/m² who are clinically diagnosed with a breast cancer gene mutation or deemed at high risk of breast cancer. Participants will complete pre-surgical interventions comprising supervised resistance training (3 sessions/week) and self-monitored aerobic exercise targeting 300 minutes/week, alongside personalized nutrition guidance and behavioural support. Assessments of body composition, physical function, and quality of life will occur at baseline, 8 weeks, and 16 weeks.

This research is significant as it targets a critical gap in pre-surgical care for individuals at high risk of breast cancer. Expected outcomes include improved body composition and physical function, potentially enhancing surgical outcomes and quality of life. The findings may provide a model for integrating structured lifestyle interventions into pre-surgical pathways, contributing to improved long-term health for this vulnerable population.

Preferred Applicant Skillset:

The ideal PhD candidate should have a background in exercise science, nutrition, or a related health field, with experience in designing and delivering clinical or lifestyle interventions. Proficiency in exercise programming (resistance and aerobic training), body composition analysis, and physical function testing is essential. Knowledge of behavioral science and prior work with clinical populations is advantageous. Strong analytical skills, including statistical analysis, and excellent communication abilities for reporting and participant engagement, are required. The candidate should be organized, collaborative, and passionate about translational research aimed at improving health outcomes for at-risk populations through evidence-based interventions.

Internship Opportunity:

Industry Experience with Breast Cancer Network Australia (BCNA)

In collaboration with Breast Cancer Network Australia (BCNA), we explored opportunities to enhance research engagement through industry partnerships. BCNA provided support in two key ways:

1. **Involvement of Trained Consumer Representatives (CRs):** Through the *Seat at the Table (SATT)* program, BCNA offered the expertise of one or two trained CRs to participate in the research project working group.
2. **Assistance with Participant Recruitment:** BCNA leveraged its extensive networks to support recruitment efforts. This included reaching out to its *Lived Experience Reference Groups*, *Online Network members*, and individuals who had opted into BCNA's *Review and Survey Group*.

This industry partnership with BCNA exemplifies how integrating consumer voices into research strengthens its impact, fosters community trust, and enhances the relevance of findings to those directly affected by breast cancer.

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