

# Pilates and Breast Cancer: A Feasibility Study

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## Introduction

### BACKGROUND:

Cancer-related fatigue (CRF) and cognitive impairment (CRCI) are two of the most common symptoms of cancer survivors that negatively affect their quality of life.

- **CRF:** Physical, mental, and/or cognitive tiredness that interferes with daily functioning and does not go away with sleep.
- **CRCI:** Difficulties with memory, focus/attention, or multi-tasking.

There have been no studies looking at the relationship between acute exercise, CRF and CRCI in breast cancer survivors.

## Methods

### Gorilla

- Due to COVID19, the online platform Gorilla was used to conduct the experiment.
- The cognitive tasks were programmed on Gorilla to match the standard neurocognitive tasks.
- The experiment is programmed to be completely automatic.
  - Gorilla will direct participants to complete specific study components at pre-specified timepoints.
  - Gorilla will send emails to participants after a certain amount of time has elapsed to provide specific directions and links to complete the study.

### Experimental Design

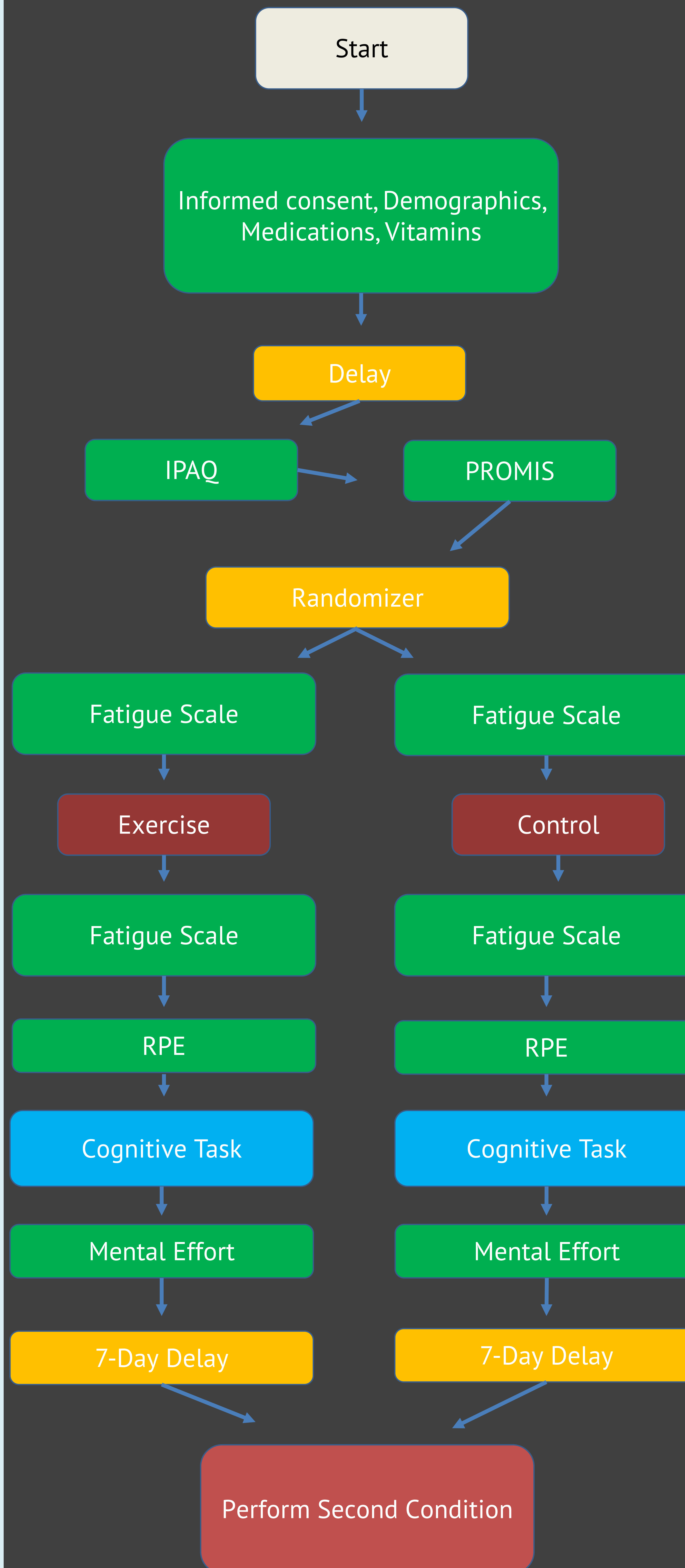
The study uses a randomized, crossover, control design that consists of questionnaires, an exercise & control condition, and cognitive games.



### 2 Sessions

- Participants will be randomized to condition order
  - a) Exercise Condition then Control Condition
  - b) Control Condition then Exercise Condition
- The recruitment goal of this study is 12 participants

## Schematic Study Flow Chart\*



## Feasibility

### Primary Objectives

- Calculate the percentage of participants who
  - a) complete both sessions, b) complete study measures
    - Feasibility is set a priori at  $\geq 80\%$
- Calculate the number of screened eligible participants

### Secondary Objectives

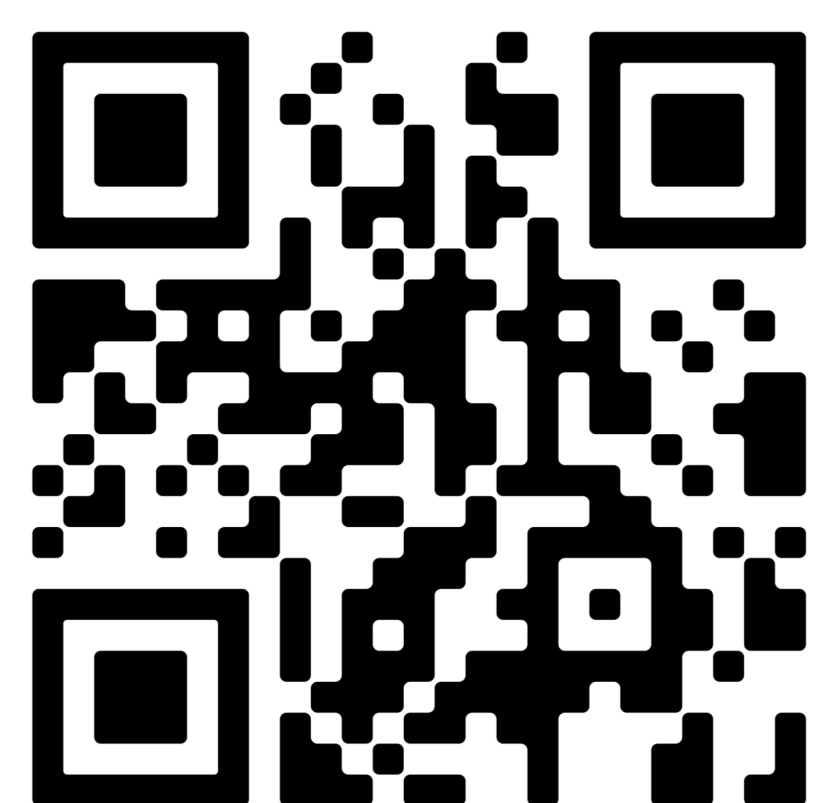
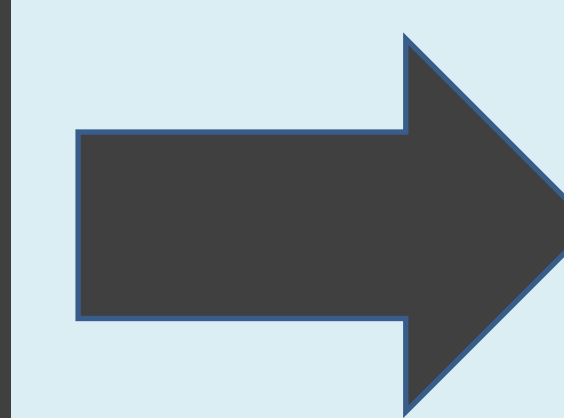
- Use data from questionnaires and cognitive tasks to perform power analyses to inform subsequent study
- Assess participants' experience with Gorilla

### Experiment Key:

- Questionnaire
- Auto-Direct
- Condition
- Cognitive Task

\*This figure is a simplified recreation of what the experiment design looks like on Gorilla.

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Status: Currently recruiting participants.