

Exercise protocol

Intervention

The intervention will be a home-based total-body exercise training program (prehabilitation) based on a protocol with proven efficacy in improving the function of non-frail surgical patients in less than 4 weeks of preoperative utilization(13,17). Prehabilitation will consist of 3 components: 1) strength training; 2) aerobic exercise and 3) flexibility. Prehabilitation will be prescribed as 1-hour sessions performed a minimum of 3 times per week. Patients will be provided with paper-based materials outlining the prehabilitation program, access to a video tutorial, and nutritional advice. The trained Research Assistant will provide individualized prehabilitation teaching for patients randomized to the intervention group. Activity logs and weekly phone calls will be used to measure compliance and to answer questions. Patients will also be asked to wear a pedometer from the time they are enrolled until their surgical date. Patients will also be able to call study personnel with any questions that may arise.

Strength training: This component consists of 1 set of 10 repetitions of each exercise: **a. push-ups** (modified to the individual's level of function as either wall push-ups or knee push-ups); **b. seated row** (performed with an elastic resistance band); **c. chest fly** (performed with an elastic resistance band); **d. deltoid lift** (performed with an elastic resistance band); **e. biceps curls** (performed with an elastic resistance band); **f. triceps extensions** (performed with an elastic resistance band); **g. chair squats**; **h. hamstring curls**; **i. standing calf raises**; **j. abdominal crunches** (modified to be performed seated in a chair). All exercises will be modified to meet the abilities of participants and to ensure their comfort with the exercises through regular telephone follow up by team members.

Aerobics: Participants' choice of cardio (i.e. walking, biking, swimming, exercise machine) for 20 minutes at moderate intensity (as defined by perceived exertion). Patients will be provided with and oriented to a BORG scale to guide their exertion perception. They will be asked to wear their pedometer from the time they are enrolled in the study until their surgical date.

Flexibility: Chest, arm, leg and trunk stretches, with each stretch to be held for 20 seconds, done for 2 repetitions.