

Training Guide

Introduction

There are valid contraindications to strenuous exercise. Individuals with high blood pressure, heart or respiratory disease and severe arthritis can aggravate these medical problems with intense exercise. Dragon boating is hard work and ***you must consult your family physician prior to beginning this program.*** If you have any medical concerns about this program the time to address them is now, prior to commencing the training program.

Medical Concerns

With specific reference to breast cancer, we must recognize a few potential problems.

1. Lymphedema

Lymphedema is an obvious concern and for this reason compression sleeves are strongly recommended for all paddlers. We suggest that these should be worn at every workout. The first portion of each training session emphasizes flexibility. This is followed by specific resistance exercises to develop strength in the upper arm, back and shoulder areas. These activities prepare you for the paddling activities. There is likely a higher risk of developing lymphedema during this initial phase of increased activity, relative to the paddling phase. **WE CANNOT EMPHASIZE ENOUGH, THE NEED TO PROGRESS IN A SLOW, GRADUAL FASHION.** Too rapid an increase in any activity is the main factor in the development of musculoskeletal injury or a change in your lymphedema status. By introducing paddling with low intensity but a progressive fashion, we gradually improve the ability of the upper extremity to do more intense exercise. It is the graduated focus of the program that allows adaptation to this activity. We do have an excellent track record in avoiding lymphedema, and there are some very good reasons to believe that a supervised, graded exercise program is an important part of the prevention or treatment of this condition.

In the past we have monitored paddlers throughout the season, with circumferential measurements of both arms, and have found that there is no increase in size in comparison to the non-affected arm. Several paddlers with pre-existing lymphedema have found that there has been no change in size but an improvement in symptoms with this exercise program. Gradually we have come to believe that the relationship between exercise and the development of lymphedema is likely

coincidental. Nevertheless, it is important to be cautious and to prepare properly for the exercise that this program represents.

2. Musculoskeletal Injury

There are risks associated with unaccustomed physical activity. Inadequate strength and flexibility can lead to overuse injuries once the paddling practices commence. Post surgery there may be a restricted range of motion in the shoulder and lack of use of the chest wall and shoulder muscles can result in a loss of strength. Thus, the physical preparation for training takes on an especially important role for our crews. The rate of progression of training once paddling begins will be monitored by the Coaches to minimize injury. This is a recreational team, but in order to prepare for paddling it is necessary to do a minimum of three workouts per week. The program contains adequate recovery from the paddling sessions to allow for optimal adaptation and a low risk of injury.

There is tremendous variation on how team members adapt to training exercises and paddling. Some of the variability is related to your original state of fitness. Members who exercise regularly throughout the year will be less inclined to develop a physical problem. Other factors include age, medical status, the stage of breast cancer and its treatment, occupation, motivation and how well you follow the program.

3. Other Health Issues

Certain medications can limit your exercise capacity and, once again, your personal physician is in the best position to advise you about any interactions between medication and exercise.

The bottom hand on the paddle can be injured if it strikes the side of the boat. For this reason, we recommend the use of a glove for protection. The hand and arm do get wet and cold during practice. Prompt treatment of any abrasion or other injury to the hand or fingers is necessary to avoid infection. Good hygiene and appropriate skin care are essential.

Safety Rules

A Safety Committee will be formed each season to address water safety issues. It will be composed of a representative from each boat and a member of the Board of Directors.

Each year the Safety Committee will:

Review existing water safety rules and recommend revisions and/or additions to the Board.

Design and deliver, in collaboration with the Coach and Captain from each boat, the water safety orientation for all paddlers.

Document safety-related incidents and recommend action to the Board.

The Safety Rules for the 2009 season are:

Each paddler must participate in a water safety orientation to be held at the first boat meeting or practice.

Each paddler must be water safe, i.e. comfortable in the water.

Each paddler must wear a lifejacket and clothing appropriate to weather conditions.

Each paddler must be aware that her seatmate is her “buddy,” and confirm her safety in the event of an accident on the water.

Each Coach and steersperson will be responsible for safe loading and unloading of boats and for appropriate assessment of weather/boating conditions.

Each crew must have a minimum of 16 paddlers before the boat can be taken out for a practice.

Each crew must have two members that are familiar with CPR.

Each Coach must have an Emergency Response Card for each crewmember along with the cell phone on the boat during every practice. Everyone must know the emergency phone number of the Coast Guard - *16 - from your cell phone or **1-800-567-5111** all of which information is to be in the dry bag.

Training Principles

WHEN CAN I BEGIN?

It is necessary to recover both physically and mentally from the treatment phase of breast cancer. We recommend a minimum of six months of recovery after completion of therapy before beginning this program.

The Physical Training Program consists of a dry-land phase and a paddling phase; the purpose of the first phase being the preparation for the second. Ideally, the dry-land training should begin at least six weeks prior to getting on the water. It should be continued, albeit in a modified form, during the paddling season.

There are four objectives of the training program.

1. A Commitment to Exercise
2. Improved Flexibility
3. Improved Strength
4. Improved Aerobic Fitness

1. Commitment to Exercise: Involvement with this training program throughout the entire year will encourage the adoption of exercise into your lifestyle. *This is very important to you;* there are measurable benefits to improved levels of fitness and these include an improved immune system and maintenance of body weight.

2. Flexibility: To maintain or increase flexibility, stretching exercises are recommended and diagrams of suggested exercises are presented below for you to use in your workouts. Choose at least one stretch for each major body part.

3. Strength: It is important to increase upper body strength and endurance in preparation for the paddling phase of training. Weight training is advised and specific exercises are listed below.

Begin with a very light weight at first.

Frequency = 3 workouts per week.

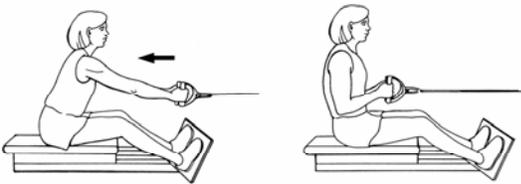
4. Aerobic Fitness: Cardio respiratory fitness is improved significantly by paddling but it is to your advantage to include aerobic training in your fitness program. Once again, you should choose an activity that uses as much muscle mass as possible. Walk/jog, cycle, swim, cross country skiing, aerobic classes and Stairmaster are examples of suitable activities. Your aerobic program should start with a 10 minute warm up, followed by stretching exercises. You should be continuously active for 30-45 minutes in each session keeping your intensity in the comfort zone, i.e.: you should be able to carry on a conversation with a training partner. Follow each session with a 5-10 minute cool down and stretch. Remember that your warm up and cool down are in addition to your aerobic activity.

Frequency = 3 workouts per week

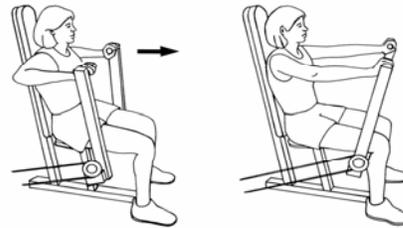
Exercises and Stretches

It is important to do these exercises safely and correctly. **Proper instruction and supervision are essential.** If you are not familiar with these exercises ask a fitness consultant at the gym. Try to workout with a team mate; it's more fun and helps with compliance.

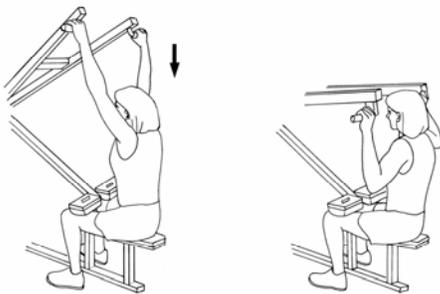
Exercises



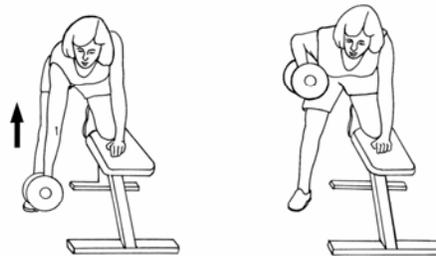
Seated Row



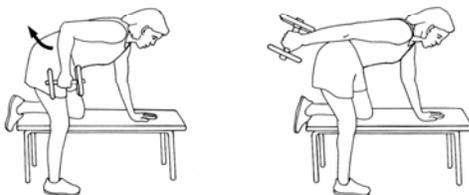
Bench Press



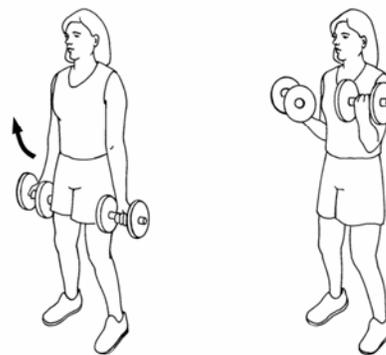
Lat Pull



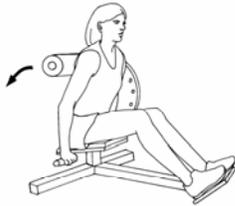
One arm bent-over rowing



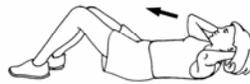
Tricep Extension



Bicep Curl



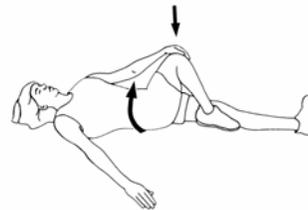
Back Extension



Sit-Up



Stretches



Here is a **sample** resistance training session:

Warm-up: light aerobic activities for 10 minutes. This could be a brisk walk or jog, stationary cycling with little resistance or easy Stairmaster activity. Virtually any activity that involves a large muscle mass will work.

Stretching Exercises: another 5-7 minutes of stretching will prepare you for...

Resistance Training: Strength training is a very important ingredient in the recipe for success in dragon boat paddling. Do 2 sets of 10 repetitions for each exercise the first week and thereafter do 3 sets of 10 repetitions. Do the exercises slowly in a controlled fashion. Increase the resistance only when you are comfortable with the weight that you are using.

Cool-down: should include 5-10 minutes of stretching exercises to remove some of the tension in those muscles affected by the resistance training.

Sample: **NOVICE** Program each workout requires 45-60 minutes

- Sunday: Aerobic fitness
- stretching exercises 10 minutes
 - 5 minutes easy walking
 - 35 minute brisk walk to include some hills
 - easy walk 5 minutes
- Monday: Resistance exercise
- warm-up on a stationary bicycle, 5 minutes pedaling with very light resistance
 - 5 minute stretching exercises
 - weight program 3 sets x 10 reps each exercise, sit-ups
 - 3 minutes stretches
- Tuesday: Aerobic fitness
- stretching exercises 10 minutes
 - 5 minutes easy swimming
 - 25 minutes continuous swimming, any strokes
 - shoulder and upper back stretches 3 minutes
- Wednesday: Off
- Thursday: Resistance exercise
- warm-up on a rowing ergometer, 5 minutes very light resistance
 - 5 minute stretching exercises
 - weight program 3 sets x 10 reps each exercise, sit-ups
 - 3 minutes stretches
- Friday: Aerobic fitness
- stretching exercises 10 minutes
 - 5 minutes easy walking
 - 35 minute brisk walk to include some hills
 - Easy walk 5 minutes
- Saturday: Resistance exercise
- warm-up on a stationary bicycle, 5 minutes pedaling very light resistance
 - 5 minute stretching exercises
 - weight program 3 sets x 10 reps each exercise, sit-ups
 - 3 minutes stretches

NOTE: If you wish, you can do the aerobic and resistance training on the same day. Do the aerobic exercise first. Allow a short recovery and complete the resistance program as prescribed.

Sample: **INTERMEDIATE** Program

Circuit training is useful to provide both a strength and aerobic training stimulus. It is more intensive and should only be used once you are comfortable with the standard resistance and aerobic programs. This is the Kiwi Circuit used by the team that competed in Wellington in February 1998. Read the instructions carefully - **this is not a fitness contest**. Your goal is to improve your own personal level of fitness. The program consists of 6 workouts per week:

3 aerobic sessions: one paddling practice; two other aerobic activities - walk, jog, cycle, swim; your effort in these sessions should increase your heart rate and make you sweat!

3 strength sessions: one Kiwi Circuit (see below); two regular weight training

Instructions

1. Warm-up: cycle or walk; do stretching **BEFORE & AFTER** 7-10 minutes
2. Do the circuit all the way through with little or no rest between exercise stations.
3. Use a resistance appropriate for your size and strength. There is lots of room for change; start with a light weight and increase it next time if necessary.
4. Repeat the circuit 2 to 3 times. Begin slowly and increase speed as you are able.
5. The goal is to complete the entire circuit (10 stations) 3 times without stopping. Record your time and try to improve each session.
6. Do the circuit once per week.

Station	Exercise	Resistance	Reps
1	Squat thrusts		10
2	Pull downs (lat pull)	20-80 lbs	8
3	Horizontal Press (Bench Press)	30-90 lbs	8
4	Running on spot - high knee lift (90°)		50
5	Seated Row	30-90 lbs	10
6	Sit-ups: horizontal surface		10
7	One arm bent over rowing: Right then Left	5-25 lbs	10
8	Stairs		25
9	Push-ups: against the wall, preferably a corner		15
10	“Finale”: arm curl, out in front, back, overhead, & reverse (use bar or free weight)	5-40 lbs (Total Wt)	8

How do I know if my program is working?

In general, there are subjective and objective means to determine whether the fitness program is having the desired effect. The most important one is that you feel stronger and have more energy. You may notice that your muscles are feeling a little firmer and perhaps they will look a little larger. This program is not designed to make you bigger, just stronger.

Objectively, you should notice an increase in the weight that you are using for each exercise. As the numbers of repetitions do not change, this increase in resistance may be dramatic at first but usually the rate of increase will slow down after 6-8 weeks.

Aerobic improvements will also result in more energy. The objective changes are an improvement in either the time it takes to perform a specific task, or an increase in work done or distance traveled in the same time. There are easy ways to test your own aerobic fitness - the simplest is to record the time it takes you to complete 2.5 kilometers (6 laps of a track). Here are some markers of aerobic fitness:

Age (years)	Average mm:ss	Excellent mm:ss
30 - 39	13:00 - 14:00	< 12:00
40 - 49	14:30 - 15:30	< 13:30
50 - 59	16:00 - 17:00	< 15:00
60 - 69	19:00 - 20:00	< 18:00
70 +	23:30 - 25:00	< 22:30

In the competitive world, very fit recreational-level female athletes complete a 5 Km run in the 20 minute range. The important issue is one of slow but steady improvement in general fitness.

Training: Paddlers

Timing will always be our most important goal. This is a team effort. Remember:

Don't Paddle Hard - Paddle Together.

Now the fun begins and you get to apply the new level of fitness you have attained in the dry-land phase of training. The training program will be planned by your Coach and once again, involves progressive amounts of paddling with slow increases in volume and intensity.

The on-the-water training session is divided into phases....

Warm-up 1: Prior to getting in the boat a minimum of **10-15 minutes of warm-up with your crew is essential**, so arrive on time! This can include some light aerobic activities as well as stretching exercises.

Warm-up 2: On-the-water, the first 10 minutes should be dedicated to very light paddling followed by 2-3 minutes of stretches that are conducted from within the dragon boat.

Specific practice skills: A plan is in place for each practice that is prepared by the coaches. Early in the season most of the time is devoted to skill acquisition through instruction and practice. As we move toward race day, more emphasis will be placed on fitness and race preparation, but the focus will always return to proper technique and timing. Progression to more intense activity must be closely monitored and this is the responsibility of the Coach. There are large individual differences in the capacity to do strenuous exercise. There will be specific times, while paddling, when you feel tired and must rest. Try to paddle with less intensity and concentrate on proper technique and timing rather than physical effort. If the fatigue continues then it is reasonable to pull your paddle in and rest. Get back into the rhythm once you feel up to it.

Cool down: Easy paddling at the end of a paddling session will help return the body towards a resting state. Stretching once you are out of the boat is also advised.

How do you know if you have done too much?

1. Pain during or after paddling.
2. Swelling anywhere.
3. Unaccustomed stiffness that persists to the next day.
4. Generalized fatigue that persists to the next practice.

Treatment options include rest; ice massage; stretching exercises to maintain range of motion; perhaps physiotherapy, massage therapy and medication. Ninety percent of the injuries are due to overuse; prevention is preferred to treatment.

Training: Coaches

This particular athletic population requires special care in the application of training principles. For the most part, you are dealing with very motivated individuals, some of whom have led sedentary lives, often for many years. If you ask any group of 50 year olds to begin a program of unaccustomed exercise, some will experience side-effects. The age range in our boats spans 7 decades (20s - 80s) and clearly the response to training will vary considerably. It is impossible to physically challenge everyone in the boat to the same degree; everyone receives a slightly different training stimulus. The fitter paddlers can simply pull harder while the less fit focus on timing and technique rather than muscular power. The motivation to participate is very strong and can exceed the physical capacity of the athlete. For this reason - GO SLOW - has new meaning. Encourage rest during paddling for those individuals who experience fatigue or discomfort. Obey the cardinal rule of medicine – DO NO HARM.

The initial paddling sessions should focus entirely on technique, timing and lots of recovery with lots of feedback on the technical aspects of the stroke. We paddle two times per week and try to have at least two days recovery between sessions. When we start on-the-water, the first workout consists of 14 - 15 minutes of paddling in a 75 - 90 minute session! Each session involves marginally more paddling: 1-3 minutes more than the last practice. For the first 4 weeks we work on volume and disregard intensity. A sample workout, towards the end of this initial 4 week period, might look like:

Warm-up on shore: 10 -15 minutes, light aerobics and stretching.

Warm-up on-the-water: Paddle 3 minutes easy, stop and stretch in boat.

Training: Paddle 2 minutes. Emphasis on stroke technique. Rest 2-4 minutes. Repeat 3 times. Effort is approximately 60 - 70 %.

Recovery: Rest 4-5 minutes depending on weather. Repeat stretches.

Training: Paddle 2 - 3 minutes. Emphasis on technique and timing. Rest 2-4 minutes. Repeat 3 times.

Training: Seat drills: front half paddle/ back half rest; alternate during paddling. Odd seat numbers paddle/ evens rest; alternate during paddle. Total paddling for drills = 4-6 minutes.

Cool down: Very easy paddling to the dock, 2-4 minutes.

Total paddling time = 21 - 28 minutes including warm-up and cool down (5 -7 minutes).

This effort will result in generalized and local muscle fatigue in most paddlers. That is acceptable as long as it resolves in the 4-6 hours after practice.

As skill and fitness improves, the paddling time is slowly increased to approximately 45 minutes. In the 4 - 5 weeks leading to a regatta, intensity can be increased, starts and interval sessions gradually added. Racing should be done at an 80% effort with the goal of even pacing.