

PHYSICAL TRAINING FOR SAILORS

When racing, both the skipper and crew need to keep the boat going fast by concentrating on helming, sail trim, balance and tactics. Fatigue or pain during the race causes loss of boat speed and bad decision making. The result is usually a bad race or regatta. No matter what type of sailboat racing you do, it's more fun when you are in good shape. My purpose is to give some general guidelines and specific exercises. You must realize that getting into reasonable sailing shape requires time – six to eight weeks. Many people start too fast and set fitness goals too high. In short order they become discouraged and quit.



There are four areas to improve physical fitness: cardiorespiratory training, flexibility training, weight training and nutrition. I suggest you start by picking out areas where you can benefit the most and start with a simple program today.

CARDIOVASCULAR TRAINING



There are two methods of training the heart-lung system. The anaerobic method has the runner sprinting at full speed for short distances with short rest periods in between. The muscles gradually become accustomed to working without enough oxygen. Conversely, the aerobic (with oxygen) method stresses long distance training at slow speeds – 40 minutes or more at a pace where you could carry on a conversation. Aerobic conditioning increases an individual's maximum oxygen consumption and reduces the resting heart rate. In addition to running, biking, cross country skiing, and inline skating are excellent aerobic activities.

FLEXIBILITY TRAINING

Many athletes mistakenly neglect to stretch which causes the muscles to become hard and short. Tight muscles have several bad consequences: inhibiting the movement of joints, misaligning the body, increasing the possibility of injury and general discomfort. The static stretch method used in many Yoga positions involves positioning the body so that a muscle or muscle group is stretched, then holding this position for 30 seconds to as much as several minutes. A variation of this method is to hold the initial stretch for 10 seconds then stretch further for the remaining 30 seconds. Discipline yourself to stretch regularly and you will be rewarded with increased flexibility, greater sensitivity to how your body feels and a better sense of balance. The following are stretches from head to toe.

NECK- Sailors need flexible neck muscles to look over their shoulder while in a hiked position to see the wind and other competitors.

1. Neck Stretch (static) – Tilt head to the right using gentle pressure with your right hand, then back to the left using the left hand. Also, move the head forward and back.
2. Neck Stretch (dynamic) – Rotate your head slowly clockwise, then counterclockwise.

BACK- Hiking, tacking and trimming can put a great deal of stress on the upper and lower back. A flexible spine is the sailor's friend. I like to do the following exercises for at least 30 seconds in pairs.

1. Cat Stretch – Start on your hands and knees, then round your back (arch) pulling in your abdominal muscles and contracting the buttocks.



CAT STRETCH

2. Dog Stretch – Start on your hands and knees, lift your buttocks and allow the back to arch. You could also do the Cat and Dog stretch lying on your back with knees bent.
3. Press Up – Lie down on your stomach, bring your head up and arch your back. Then use your hands to push the trunk up until you are bending from the middle of the spine with arms straight.
4. Curl Up – Lie on your back, bend your knees, wrap your hands around them and press your knees to your chest. Then raise your chin to the knees.
5. Trunk Rotation – Lie on your back, bring your right leg over the left and with your left-hand try to push the knee to the floor. At the same time your right arm should be straight out and pushing the right shoulder to the floor. The head should be turned to the right so the whole spine is rotated. Hold for 30 seconds and repeat the rotation in the opposite direction bringing the left leg over the right.

HIPS & GROIN - stretch this area for better tacks and general movement in the boat.

1. Hip Stretch – Kneel down on your left knee with your right foot forward, be sure the kneecap doesn't extend ahead of your toes. Lean your hips forward and down to create a stretch with your arms straight and hands on the floor 18 inches apart and no farther forward than the forward foot. Hold for 30 seconds and then switch legs.

LEGS – Whenever you move in the boat flexible leg muscles will prevent knee injuries.

1. Hamstring Stretch – Stand straight, feet 6-8 inches apart, and bend first from the waist keeping the upper back straight. Now try to touch your toes feeling the hamstrings stretch. You can stretch further by stretching for 10 seconds, holding, then stretching a little further for at least 30 seconds.
2. Quad Stretch – While balancing on your left leg, bend your right knee and grab your right ankle with the right hand. Pull your ankle toward your buttock, keeping your right knee close to your left leg until you feel the stretch.



HAMSTRING STRETCH

WEIGHT TRAINING

There are three goals for weight training. Using heavy weights with a low number or repetitions develops **STRENGTH**. Strength is directly related to size and number of muscle fibers. You should start with a weight you can just lift for 3 sets of ten repetitions using good form. Sailors also need to develop **ENDURANCE** by using lighter weight with a high number of repetitions. For example, use half the strength training weight for 3 sets of 25 repetitions. **FLEXIBILITY** is achieved by using the full range of movement when doing either strength or endurance training. It is also important to warm up the muscles by running in place, shadow boxing or any other movement that gets your body moving. Best results come from weight training every other day in the off season and a minimum of twice a week in the summer. If you are patient and set both short and long term goals your will be able to sail harder and longer in all wind and wave conditions.

CHEST AND SHOULDERS - Strong shoulders and chest muscles are necessary tacking and trimming in heavy wind conditions.

1. Bench Press – If you can use a weight room, select the right weight for you, lie on your back, lift the weight from the stand and press it up using the full extension.
2. Push Ups – If you can not use weights, push-ups are a good alternative.
3. Rotator Cuff – Start by using a 2-5lb weight because the shoulder's rotator cuff muscles are small. Lie on your left side with the weight in your right hand on the floor by your left hip. Keeping the right arm bent ninety degrees rotate your arm up until the weight is pointed at the ceiling, then return it back to the floor. Do 10-20 repetitions and three sets.



BENCH PRESS

ARMS – Arm strength and endurance are essential for trimming the sheets, tacking, raising the spinnaker and jibbing the pole.

1. Triceps Curl – Use a weight in your right hand, bend over at the waist and extend the weight straight back then return the weight ninety degrees doing 10-20 repetitions. Alternate with the left hand for the same number of repetitions. Repeat for 3 sets.
2. Rowing – Stand with your feet about thirty inches apart, with the weight in your right hand and the left hand resting just above your left knee. Lower the weight toward your left foot so that it is close to the floor then raise it level with your right armpit. Do 10-20 repetitions and alternate with the left hand. Repeat each arm for 3 sets.
3. Biceps Curl – Start sitting down with the weight in your right hand. Rest your right elbow on the inside of the right leg and contract the biceps up. Then lower the weight so that your arm is straight. Do 10-20 repetitions and alternate the curl using your left arm. Repeat each arm for 3 sets.
4. Wrist Curls – Using relatively light weight in a sitting position do 3 sets of 10-20 repetitions resting the right forearm on your right leg. Curl the weight palm up then palm down with each hand.
5. Grip – Squeeze a tennis ball, alternating hands.
6. Lateral arm raise – Take a light weight in each hand, while standing raise both arms to a position slightly above parallel to the floor then return to the arms down position.



BICEPS CURL

TORSO – You are not in shape for any sport until the back and stomach muscles are strong enough to support the loads to your spine.

1. Bent Knee Sit Ups – Sit with knees bent, back on the floor then raise up and touch your elbows to your knees. You can work the sides of the stomach by twisting so that you touch the opposite knee.
2. Back Extension – Lie on your stomach, arms forward and legs straight. You can lift both arms and shoulders off the floor then return doing 3 sets of 10-20 repetitions. You then lift your legs keeping the shoulders down for 3 sets and 10-20 reps. A variation of this is to alternate lifting the right arm and left leg simultaneously. You may also want to try the “Superman” —raising both arms and legs at once.
3. Abdominal Crunches – There is less strain on your lower back if you lie down face up and curl your shoulders up 6-7 inches by contracting your stomach muscles. You can fold your arms on you chest or put a small weight behind your head to increase the resistance.



ABS CRUNCHES

LEGS – Hiking power comes from strong legs and ankles.

1. Deep Knee Bends – With your hands on your hips and back straight, bend the knees to a ninety degree angle and then return to the standing position. Do 3 sets of 30-60 reps to develop endurance
2. The Chair – Stand against a wall then lower your buttocks and bend the knees to a ninety degree angle. Try to hold this static position for 1 minute and build up to 5 or more minutes.
3. Hamstring Curl – Many exercise clubs have a hamstring curl machine where your lie on your stomach, add weight, contract the back of your legs toward your buttocks then return to a straight leg position. You can do the same exercise standing by adding weight to your ankle and contracting the leg toward your buttocks.
4. Calf Raise – Stand on the stairs with your heel over the edge, then rise up on your toes and return to a position where the heels are below the stairs. Do 3 set of 30-60 repetitions to develop endurance.
5. Leg Extension – From a sitting position lift your right leg until it’s straight. Hold for 10 seconds and work up to 30 seconds for 1 to 3 reps.



THE CHAIR

NUTRITION

To get the full benefit from training most athletes use a diet that will give energy and build muscle. A sports oriented diet consists primarily of whole grains (more protein and fiber than processed foods), fruit, vegetables and lean protein. Change poor eating habits gradually, allowing yourself the time to adjust to your new lifestyle. Eat the right amount of calories for your sport – Finn sailors are bigger than the 470 sailors. A nutritious breakfast will help you feel alert and energetic all day and reduce muscle breakdown, which can occur after too many hours without eating.

The following chart will calculate the calories needed to maintain your current weight:

Your weight ____ x 14 = total calories needed

Your weight ____ x 2.8 = protein calories needed / 4 = grams of protein

Your weight ____ x 2.8 = fat calories needed / 9 = grams of fat

Your weight ____ x 8.4 = carbohydrate calories needed / 4 grams of carbohydrate

If you are trying to lose weight, subtract a few hundred calories a day. To gain solid muscle weight add a few hundred calories a day and lift heavier weights. Also, continue with the rest of your physical training for at least one hour a day. Over the long haul you will achieve your desired weight, muscle mass and endurance. Sailboat racing is more fun when you are not sore and stiff at the end of the race. Start today!

Consult your doctor before beginning this or any other exercise program.