



WINTER WEIGHT TRAINING and AEROBIC TRAINING

General Comments:

Please see an article in the December 2007 issue of the "Rowing News" (Volume 14, Number 10) titled "More muscle, more speed". In essence, the article states that more muscle mass equals more speed on the water. The article refers to lightweight rowers and making weight but the point of increased muscle mass is relative to all weight classes. Basically, you can reach a threshold of aerobic capacity for your current body size and make-up. In order to increase your performance, you have to develop new muscle and build that muscles aerobic capacity. I have seen where several of our athletes work very hard on the erg to get better only to find out that they have hit a wall. This may be because their body cannot physically get any better aerobically unless there is something to build on, meaning more muscle mass.

As you go into your winter off season conditioning, please consider weight training as an important aspect of what you need to do to eventually go faster on the water in the spring.

Weight Training:

The major muscle groups that rowers need to strengthen are the legs (quads, hamstring and calf), the back (lats, shoulder) and your core (lower back, stomach). When doing weight training, it is important to follow a few important rules:

- Each muscle only needs 40-50 reps of work at each workout. More reps will only increase the amount of recovery time required.
 - This means if you do 3 sets of 10 reps of squats, you have 30 reps of work for the legs. You should only do 10 to 20 reps of lunges and the legs are done.
- Pick a weight that results in muscle failure in about 10 to 12 reps, then only do 8 to 10 reps of the exercise in each set.
- You want high volume at moderate intensity. You do not want to be maxing out in a few reps of work.
- Work each muscle group two to three times a week.
- Proper form is important, do the exercise moderately slow and under control, the 'return' is as important as the initial movement.

All weight training should be supervised by a coach, trainer or someone at your gym who can watch you and assure that you are doing the exercises correctly and safely. If you are using the FHC weight room, you MUST have a coach in the weight room at all times.

Exercises to do:

Legs:

- Squats – These can be done by either holding a bar with weights centered on the shoulders or by holding equal weights in each hand. The back MUST be kept straight while doing this exercise. Start in the up right position and slowly squat down until your knees are just slightly before 90 degrees. Your weight should be back on your heels and NOT on the balls of your feet. When you reach the sitting position, push up with



the legs and return to the standing position. Remember, **THE BACK MUST REMAIN STRAIGHT!** If you are using a bar, please use a spotter to help control the weight.

- If you have access to a gym with squat 'sleds', you can use this machine to do your squats. A sled is safer and takes the weight off of your hips and concentrates the exercise on your legs.
- Lunges – for safety reason, I would prefer that lunges be done by holding equal weights in each hand rather than a bar on your shoulders. Start in the standing position and “lunge” forward by taking a step with one foot. The step should be far enough so that your knee ends up at 90 degrees to the floor and your trailing leg knee almost touching the floor. Once in the down position, push up with the leg and return to the standing position. As with squats, the back **MUST REMAIN STRAIGHT.**

Back:

- Bench pulls – you can use any one of three different bench pull machines in the weigh room. You should follow the instructions printed on each machine.
- Military press – sitting on a bench, start with the bar at chest height either on your shoulders or in front of your chest. Your arms should be spread so that your elbows are at 90 degrees when your hands are at head height. Press up the weight until your arms are fully extended but not to the point here your elbows are locked out. Slowly lower the weight back to the starting point. Keep your back straight.
- Bent over rows – Standing with your legs shoulder width apart and your knees slightly bent; lower your back forward towards the floor while holding either a bar or equal weights in each hand. Slowly pull up on the weight until it is at chest height. Again, keep the back straight and the knees slightly bent.
- Stand up rows – Stand with feet shoulder width apart and the knees slightly bent. Hold the bar or equal weights in your hand with the arms down in front of you, Slowly raise the weight up to your chest and then return. Keep the back straight and the knees bent.

Arms:

- Mix in different arm exercises to work the biceps and triceps such as curls, reverse curls, push downs, etc.

Core: Please see the separate Core Conditioning program



Aerobic Training:

At this time of year, you should be working on your “base” aerobic conditioning. This means a lot of slow steady state type work with your heart rate at 60% to 70% of maximum. You can add in one “tough” workout a week to keep you mentally ready for the test pieces that will come in late winter. A good source for a variety of workouts is Concept2. (<http://www.concept2.com/us/training/tools/workoutoftheday.asp>). This page has a link to a full list of erg workouts that you can do.

- Do aerobic low intensity at least 3 times a week
- Do (1) high intensity workout a week (intervals or a test piece; 2K, 6K, etc)
- Running, biking, skiing, snow shoeing, etc. can be done in place of the erg if you do not have access to one
- Proper technique is important for all types of activity.
- Yoga and Pilates are also very good.

General Notes:

- Try to space out your workouts if you can on different days.
 - If you have to do weights and aerobic at the same time, do the weights first.
 - If you have to do both on the same day, again, do weights first and then leave at least a two hour recovery time before doing the aerobic workout.
- DO NOT do your high intensity aerobic workout on a day following a weight workout.
- Take one full day off each week. Your body needs time to recover in order to build strength and conditioning.
- ALWAYS stretch out at the end of your workout. Stretches should be done slowly and held for at least 30 seconds. Always make sure that your muscles are warm before you stretch!
- Proper nutrition. A good balance of protein and complex carbohydrates is needed.
 - If you can, consume a good meal when you have finished your workout. This will provide fuel to replace what you have burned off and help to rebuild the muscle.
- Muscle mass burns calories. Even when you are idle or resting, muscle cells burn more calories than fat cells. Replacing the fat cells with lean muscle mass is good all around.

“Do not let what you cannot do interfere with what you can do”

John Wooden

“It is time for us all to stand and cheer for the doer, the achiever – the one who recognizes the challenge and does something about it”

Vince Lombardi