

MASTER STROKES

There's more to life than rowing . . . but not much!



Training for Masters

The training information which follows is designed to provide basic guidelines which will enable you to plan workouts which will be effective, appropriate and enjoyable. Rowing can be a wonderful lifetime sport because of its non-impact motion and overall body conditioning. However, the aging process causes several physical changes which impact the way our bodies function and respond to workouts. Because of this, it is important to understand how to modify workouts in order to gain maximum results and reduce the chance of injury.

Of course before you begin your new year of training, have a physical exam. It will identify any disorders or limitations that either preclude certain types of physical activity or require modifications to your exercise program. If medical reasons don't convince you to have an examination, just think, it may eliminate your doubts about your ability to push yourself physically.

The Systems

Words like transportation, utilization, intervals, aerobic or anaerobic workouts may be foreign to you. Aerobic workouts use oxygen for energy; anaerobic workouts produce energy without oxygen but create waste – lactic acid.

The aerobic system can be described as the large efficient engine of the body which allows you to sustain long periods of effort by utilizing oxygen for energy with little waste. This system is often considered the "foundation" of training and requires continued maintenance. Head races usually rely, for the most part, on the aerobic system.

The anaerobic system is the smaller higher revolution engine which starts quickly but is not very economical. It becomes important when a quick intense performance is required. The down side of this system is that it can only operate for a short period of time due to the accumulation of lactic acid. In terms of a 1,000 meter rowing race, the first 90-120 seconds are dependent upon the anaerobic system to get things moving while the aerobic system takes longer to get warmed up. The body of the race relies upon the aerobic system. As you raise the stroke rate and go all out for the final sprint, the anaerobic system comes into play once again. Anaerobic training workouts help your body learn to tolerate lactic acid and push boundaries before your body starts producing it.

Transportation workouts strengthen your heart and prepare body muscles to use the oxygen. Building a strong heart is imperative to a good performance since it sends fuel to the muscles. Transportation workouts are important because they increase the oxygen flow from the heart. These workouts lift your heart rate to just below the maximum, thus pumping the fuel to the muscles. Interval workouts increase transportation and can be done early or late in the season.

As transportation is built, utilization must be nurtured. The two work together – the heart sends the blood loaded with oxygen and the muscles must learn how to use this energy source efficiently and effectively. Oxygen utilization can be improved by using rowing specific exercises and working at medium intensities for a longer time. This will strengthen the exact muscles rowing uses and maximize the oxygen conversion to energy in these muscles.

Planning Workouts

A planned program of workouts improves performance by alternating periods of work with periods of recovery. These are scheduled through the year in your calendar which is divided into major periods, dependent upon what your goals are. Within each period, monthly and weekly workouts must also be planned. A planned program of workouts improves performance by alternating periods of work with periods of recovery. This rhythmic pattern of load and recovery must be considered both in terms of weekly and monthly training. If the levels are appropriate, the body overcompensates and performance increases. Insufficient loads limit the desired training effect. It is important to understand the intended effect of a workout and note how you respond. This will allow you to make load changes in the workout without losing the desired result.

Most year-long programs are based on a series of periods, often 2-3 months in length which focus on different types of training. The three main periods are preparation, competition and transition. To determine each period in your training program, work backward from your season peak (four to six weeks when you want to be in top form) to design a workout plan. Divide the year into appropriate periods. Determine the race pace for priority races, or your maximum stroke rates. Allowing 3-4 weeks for each two stroke per minute increase, work backwards to fill in the max race pace for each block of time. For each week, indicate what type of workout to use for each session. Keep in mind the wave principle of balancing increases in training load and recovery time. Then choose workouts or design your own for each session. Keeping a record of any changes necessary will help you in future planning.

For most, the late summer and early fall are the final peak, so with the winter and end of the annual racing season commencing, this is the transition period.

The goal of the transition or vacation period should be physical and mental relaxation. Consider spending time in another sport, sculling if you usually row sweep boats or vice versa. Fall head races are good aerobic training. You will want to continue conditioning workouts in order to maintain your aerobic base, but try to give yourself a break at some point. Long steady-state workouts and circuits that stress your aerobic abilities more than raw strength help develop general fitness. With a good base, you can pay attention to improve maximum

Continued on page 3

Training for Masters... cont'd from p. 1
strength, flexibility and both general and muscular endurance. Weight workouts with greater repetitions at a lesser weight are useful. During this time you may find yourself doing more non-rowing exercises than later on in the spring. Without the proper fitness preparation, you will not have an adequate base to utilize when the time comes to shift into the high-intensity workouts.

At this time of year, workouts can be done on land using running, in-line skating, cross-country skiing, swimming, or biking following the same workout variables. The key variables are still the duration, heart rate, and rest period. It may take some time to determine how much effort you need to expend in order to achieve the correct heart rate. Just as in the boat, be sure to allow adequate time for warming up before beginning the actual workout.

Suggested Transition Period Workouts

The information that follows may be used to design workouts which will be specific for your age and fitness level.

Utilization workouts can be carried out as one period of continuous activity or smaller segments done one after the other. A low intensity utilization workout lasts from 60-80 minutes and is carried out at 65-75 percent of maximum effort. Medium intensity workouts can be done in 45-60 minutes and should be at 70-80 percent effort. Toss out the "No Pain, No Gain" philosophy. Improvements can be made with workouts which are comfortable and enjoyable. These

sorts of workouts also will be used when the rower moves into the preparation period. Intensity and duration will change as fitness improves.

Monitoring workouts with a heart rate monitor is an effective way to determine the amount of effort being expended with ease. The formula to determine your training heart rate is simple:

Training Heart Rate = $(220 - \text{your age}) - \text{average resting heart rate}$; multiply this by intensity of your workout; add this number to your resting heart rate.

For example: A 45-year-old athlete wants to determine a THR for 70% workout. $(220 - 45) - 73 = 102$; $102 \times 70\% = 71$; $71 + 45 = 144$ beats per minute.

Experts say that at least 20 minutes of exercise is necessary to achieve training effects. Workouts that allow the rower to talk as he or she is exercising are ideal. Utilization workouts are probably the easiest to do with any mode of exercise since they are a steady-state piece at a moderate intensity. Transportation workouts, long or short intervals, increase the intensity within the workout. Try using hills for running, in-line skating, or cross-country skiing. Stairs can quickly increase the intensity for runners; bikers can change gears or ride up hills; swimmers can use resistance equipment, change the stroke style or increase the stroke rate.

Utilization Workouts

Low Intensity #1

Duration: 60 minutes

Rest: None (because these workouts are

conducted as a low intensity level)

Intensity: 70%

Workout: 2 minutes at 18 spm* / 2 minutes at 22 spm*

* strokes per minute

Low Intensity #2

Duration: 40-60 minutes

Rest: 0-2 minutes

Intensity: 65 %

Workout: 2 or 3 x 20 minutes at 18-22 spm

Medium Intensity #1

Duration: 60 minutes

Rest: None

Intensity: 80%

Workout: 6 x 10 minutes, during the 10 minutes - 4 minutes at 20 spm/3 minutes at 22 spm/2 minutes at 24 spm/1 minute at 26 strokes per minute.

Medium Intensity #2

Duration: 45 minutes

Rest: None

Intensity: 70 %

Workout: 45 minutes of continuous rowing at 20 spm

Moving into the Preparation Period, you can develop or enhance your overall fitness with a greater number of utilization workouts. The "specific" phase of the preparation period brings in more transportation workouts and less utilization workouts, bringing the stroke rate up gradually.

Your workout plan will continue to change as you move closer to competition. The next issue of MasterStrokes will include more information for developing a training plan. USRowing has a Masters Training Guide available to members, from which much of this information was derived.