

NRC Fall Slalom Training

Hello NRC Team Athletes and Parents,

This is Lee. I want to begin by congratulating the NRC slalom team athletes on a fantastic summer racing season! This summer we had junior and cadet athletes competing (and on the podium) in a 4-week international race series in Europe, US Age Group Nationals in Wausau, WI, Junior Olympics at NOC and US Slalom Team Trials #2 in Dickerson, MD. We've also had senior and junior NRC Team athletes winning medals at the Pan American Slalom Championships, competing in the Senior World Championships in London, and at the Junior/U23 Slalom & Wildwater World Championships.

The following is a quick primer on Fall slalom training. Even with the US Slalom Nationals on the Nantahala a few weeks away (BTW, we'll need your help...Oct 11 & 12), it's time to start preparing for 2016. This will be an exciting season as it is an Olympic Year and Junior Team trials are only 10 months away. For those serious about competing on a national or international level in 2016, now is the time create a training schedule to work on longer-term slalom performance goals – such as technique, endurance and strength. Just paddling a couple hours a week is not enough!

To start with, everyone is invited to our Tuesday and Thursday slalom sessions at NOC from 4:00 - 5:30. In addition to these sessions, we will have several weekend camps this fall on the Nantahala, Ocoee and at Charlotte. Dates/details TBA. Even if you can't be on whitewater during the week, there are quite a few things that can be done on flatwater to improve slalom technique.

Below is a sample training schedule; if possible, it's recommended that one of the NRC coaches fine tunes a plan for each athlete.

2 Week Fall Training Plan -

WEEK 1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<i>Early Morning</i>	OFF	Stretching/light run	Flatwater paddle (30 - 40 min, aerobic pace - use GPS to log speed & distance)	Stretching	Aerobic run, bike ride, or swim (30 - 40 min - use GPS to log speed & distance)	Slalom full length course on whitewater (5 runs race pace)	Slalom technique on whitewater or River run
<i>Afternoon</i>	OFF	Slalom Technique (specific skills: upstream, offsets, sweeps, etc)	Strength exercises or gym + stretching	Slalom Short Courses (timed 5 x 5)	Strength exercises or gym + stretching	Slalom broken runs on whitewater	

WEEK 2	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<i>Early Morning</i>	OFF	Stretching/light run	Flatwater paddle w/ resistance (15 min distance w/ 10 x 15 second sprints)	Stretching	Aerobic run, bike ride, or swim (30 - 40 min - use GPS to log speed & distance)	Slalom Technique on whitewater (w/ video)	Slalom full length course on whitewater or River run
<i>Afternoon</i>	OFF	Slalom Stroke Drills (flatwater gates or moving water)	Strength exercises or gym + stretching	Slalom 60 Second Courses (timed 5 runs race pace)	Strength exercises or gym + stretching	Slalom short courses w/ hard moves	

Goal Setting

- It's important to have paddling goals! There are two types:

1. **Outcome goals** – example: making the Junior Team, top 3 at Nationals, etc.
2. **Performance Goals** – example: 10 pull-ups in 15 seconds, making the Worlds hole attainment 2 out of 5 tries, etc.

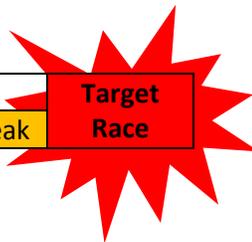
While outcome goals can be the most inspirational, they often involve things that athletes don't have complete control over (ex. we can't control how other athletes perform). So, it is just as important to have solid performance goals to help reach the big outcome goals. Here are some guidelines for creating good performance goals:

1. **They must be quantifiable:** ex. 10% off fastest boat at US OPEN, paddling a mile in under 15 minutes, running a 5k in under 24 min, bench press 75% of body weight. Avoid ambiguity, "I want to get faster." doesn't cut it.
2. **They should be positive:** focused on things athletes CAN do, not things to avoid.
3. **They must be realistic:** working with a coach can help with this.
4. **They must be acknowledged regularly:** writing these down and posting them will remind athletes of their goals. It can also point out important milestones and accomplishments once performance goals are reached!

Training Recommendation: Write out your goals on an index card and post them on your refrigerator. Include a checkbox next to each goal for when you reach it!

Training Phases - Training for slalom is typically broken down into four phases in order to maximize the body's system development. These phases change as the peak competition (or competitions) approach; in most cases, this peak is Team Trials. In general, areas that take longer to develop, such as paddling technique, strength and endurance, are prioritized towards the beginning of the training cycle. As competition season approaches (May-June), the priorities change to maximize the athlete's level of fitness in preparation for competitions.

Month	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	Target Race	
PHASE	Base						Intensity		Pre-Race		Peak	



Base: Begins 6 - 10 months before peak performance - this phase is where long-term gains are made.

- > Aerobic (endurance, does not all have to be in a boat)
- > Technique (stroke technique, running rivers, specific slalom practice)
- > Strength (stretching, body weight exercise and/or gym workouts)

Intensity: Begins 4 months before peak performance - this phase increases the volume and intensity of the base phase. It only lasts 2-months because it's really hard and puts a lot of strain on the body.

- > More aerobic
- > More technique
- > Specific strength

Pre-Race: Begins 2 months before peak performance - this phase is intended to optimize an athlete's current condition.

- > Race simulation
- > Anaerobic (high intensity workouts)
- > Speed
- > Aerobic, technique, and strength maintenance

Peak: Begins 16 days before peak performance - this is physically the easiest phase but mentally the most difficult. Emphasis is on workout quality and adequate recovery.

- > Lots of rest
- > Race simulation
- > Anaerobic
- > Speed

Slalom Technique - Improving strokes and paddling technique will make paddlers faster and create HUGE gains in slalom performance. Since we define good slalom technique as "being the fastest", it takes time to learn exactly how to do this. Video sessions can help athletes visualize what they need to work on. When working with video, it is important to watch the top slalom paddlers to make sure athletes have a vision for what good technique looks like. Here are two very good links with video to specific slalom technique:

Upstream gates with Daniel Molmenti (2012 Olympic Champion): <https://www.youtube.com/watch?v=ygnrKg3IMQs>

BCU Slalom Technique Library: <http://www.slalomtechnique.co.uk/k1technique.php>

Here are some important things to look for in a good kayak forward stroke:

K1 Forward Stroke

Body:

- *Forward lean from hips (not from mid or upper back)*
- *Top arm extends out between shoulder and eye level*
- *Good shoulder rotation*
- *Flat boat with minimal rocking*

Catch (first part of stroke):

- *Full vertical blade driven downwards as close as possible to boat*
- *Back straight, torso rotated, lower arm fully extended*
- *Clear 'A' shape with boat, paddle and body*

Pull (last part of stroke):

- *Vertical blade pulling with back, then arm*
- *Pressure through foot brace on same side as stroke*
- *Blade exiting before hips*

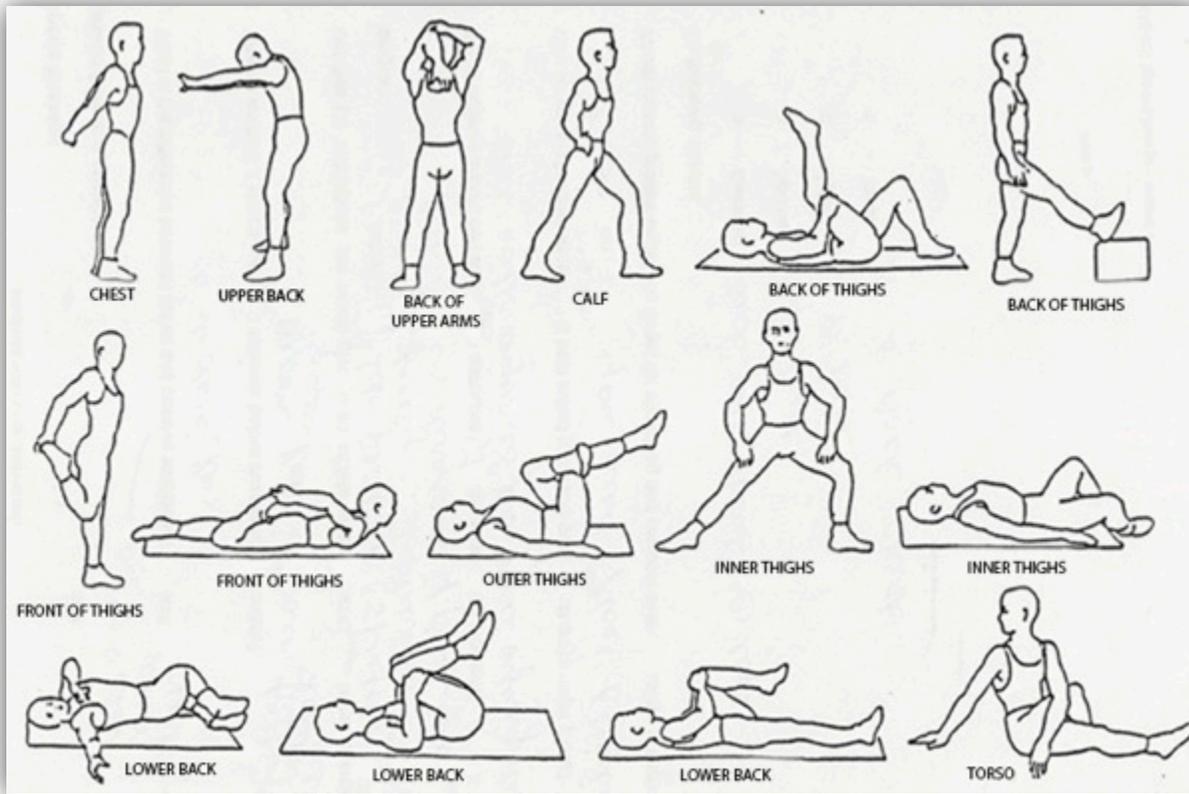
Training Recommendation: Watch several runs from the 2015 World Championships or the 2015 World Cups each week. It's important to see what the best in the world are doing so you can compete with them (and win) some day.

Aerobic Training - (AKA Aerobic Endurance) training helps slalom athletes paddle hard all the way down the course. Aside from paddling, this can include running, swimming, biking, soccer or things that make you breathe hard. It's important to do lots of endurance exercise over the fall, as well as running at least one time a week for 25-45 minutes (even if you don't like running). Running is important because it uses larger muscles than paddling requires and can generate a higher heart rate. Since aerobic training is all about training your heart, this can make it more efficient.

In a boat, it's important to do at least one aerobic paddling session per week. These sessions should be on flatwater and involve 30 - 45 minutes of constant paddling. Having a 2-3 mile stretch of calm lake, river or reservoir is ideal since it allows athletes to record their time and log progress during the fall/winter training. A GPS watch or phone app is highly recommended to keep track of pace and distance while paddling...these can be a lot of fun to paddle with. A GPS can also be programmed to beep if under a certain pace and can act like a digital coach for flatwater paddling.

Training Recommendation: Find a fun 5K race to run over the fall and try to set a personal record.

Strength (part 1) Flexibility - Keeping your muscles flexible increases strength and improves your strokes. This is probably the most important aspect of strength training for slalom. Athletes should do a daily stretching routine to stretch all of your major muscle groups, especially your legs. Ideally, stretching should be done daily following a short warm-up. Try not to bounce during stretches but try to hold each stretch for 30 - 60 seconds.



Training Recommendation: Start stretching every time you start watching TV. If you do not watch TV (good for you!), stretch every day at the same time.

Strength (part 2) Exercise with body weight- Three basic exercises will help athletes get stronger: Sit-Ups, Push-Ups and Pull Ups. These should be done every other day (ex. Mon, Wed, Fri) in three sets of 10 - 20. The most difficult (and important) exercise is the pull-up...these may take some practice. If you cannot get them at first, practice every day...you will get it!

SIT-UP

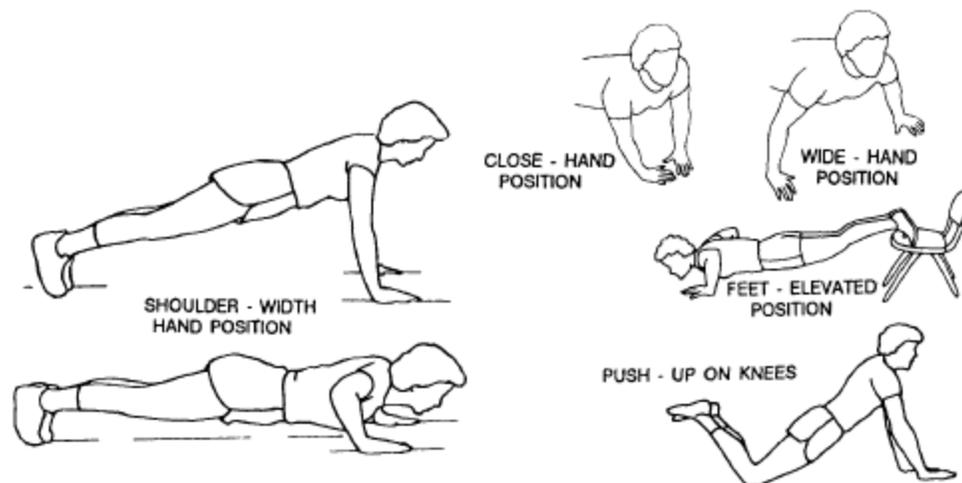


Position: Lie on the back with the feet together or up to 12 inches apart, the knees bent so that an angle of 90 degrees is formed by the upper and lower legs, and the fingers interlocked behind the head.

Action: Raise your upper body forward to the vertical position so that the base of the neck is above the base of the spine, then lower yourself in a controlled manner until the bottom of the shoulder blades touch the ground.

Sit-Up Variations: Variations include keeping the feet elevated and crossing the hands on the chest.

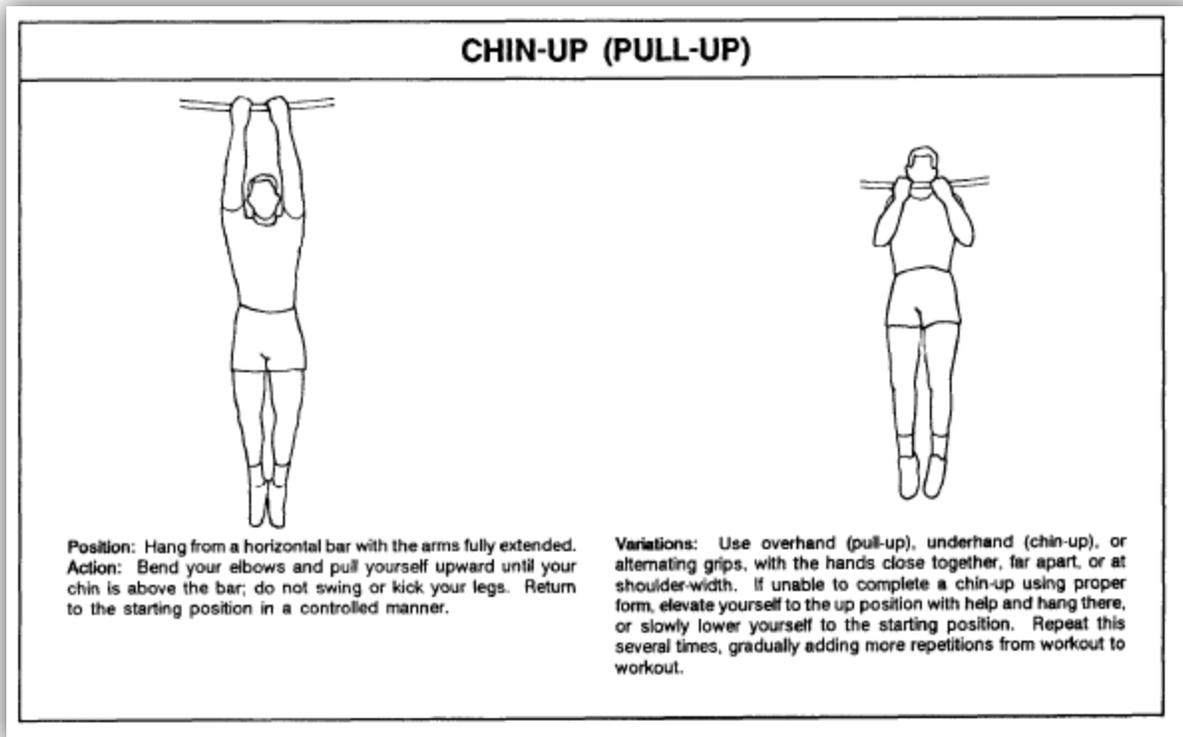
PUSH-UP



Position: Assume the front-leaning rest position with the hands placed comfortably apart, the feet together or up to 12 inches apart, and the body forming a generally straight line from the shoulders to the ankles.

Action: Keeping the body straight throughout the exercise, lower the body until the upper arms are at least parallel to the ground. Then, push yourself up to the initial position by completely straightening the arms.

Push-Up Variations: To train the muscles more completely, place the hands at varying widths. They may be wider apart or closer together than shoulder width. Elevating the feet to different heights makes push-ups more difficult. The higher the feet, the more difficult the exercise. Push-ups are also more difficult when the hands and feet are placed on boxes or chairs. This helps the soldier exercise through a fuller range of motion. To do extra repetitions when fatigued, drop to the knees while keeping the knees, hips, and shoulders in a straight line.



Training Recommendation: Find a convenient location, like a doorway, to hang a pull-up bar. If you are having difficulty getting 10 in a row, try a pull-up every time they pass the bar. For under \$20, this bar works well: [Pure Fitness Multi-Purpose Workout Bar](#).

Strength (part 3) Weight Training - A weight training plan is an efficient way to build strength and is only recommended for older athletes (> 13) and under adult and/or trainer supervision. The main goal of a weight training plan for paddling is to first develop a general level of fitness and to then work towards a more specific plan. Weight training is only a small portion of the overall training picture and can be done along with a normal training schedule or set up as individual workouts. It is very important to develop good training habits and technique as improper weight training can lead to injury. When done correctly, however, athletes may see a significant increase in competitive ability due to increased strength.

The first stage of a strength-training program begins with instruction from a coach or trainer on general safety and technique. A heavy emphasis should be placed on form instead of simply how much weight is being lifted.

As a tool to monitor the progress of the program and to maintain consistency, a training log should be used. This is simply a daily record of what exercises are being done and what weight amounts are used. This log or journal should be brought to (or left at) the gym and used as a reference for each piece of equipment or exercise. It is important to keep the training log up to date: consider it as much a part of the workout as actually lifting the weights. Training logs are also important for establishing a pattern that works well for the individual athlete as well as helping them to set and reach their training goals.

Each session begins with five minutes of light aerobic activity (a treadmill or Stairmaster) and then about a 15 minutes of stretching. This helps to warm up the muscles and to give them greater flexibility, which will make the session more effective and reduce the chances of injury. During each strength development session, complete each exercise three times (three sets) at three different weights. We want between 5-12 reps per set, and weight is increased incrementally for each set. If an athlete can complete at least 10 reps for all sets, the weight should be increased. On the contrary, if the athlete cannot complete 5 reps on their final set, the weight should decrease. Adequate time should be taken between sets (about two minutes) to allow for recovery. It is a good to begin working the larger muscle groups first and then going to more specific lifts or exercises. Each session should be completed two to three times per week.

General Weight Lifting Session:

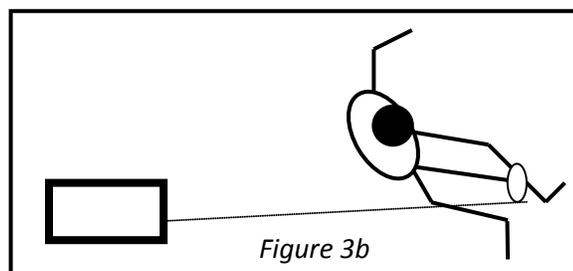
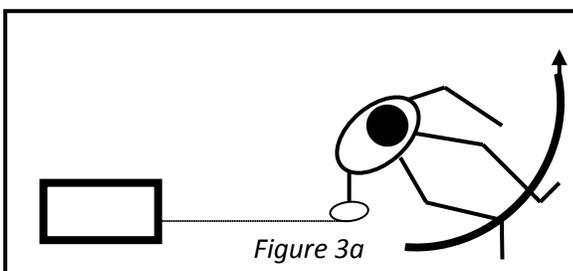
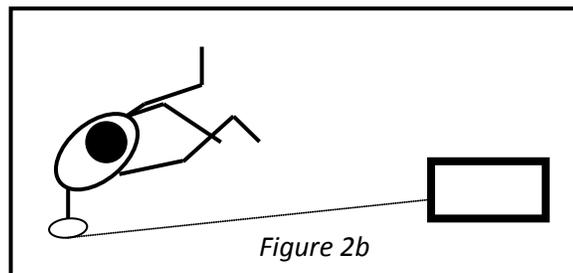
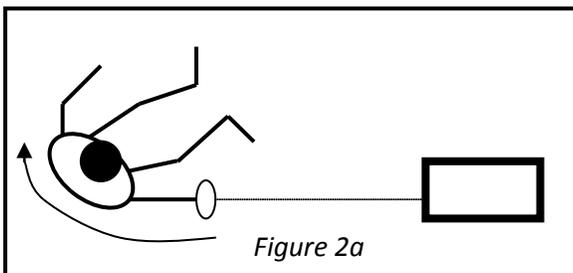
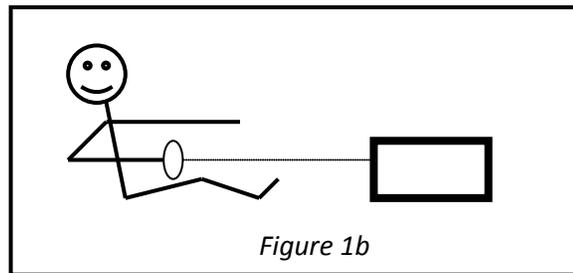
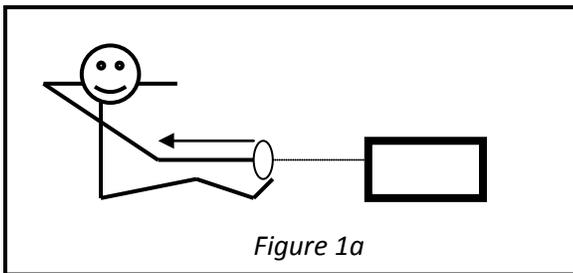
The first week of this session should start quite easy as athletes are developing technique, recovering between sessions, and finding what weights to use in order to gain optimal performance.

1. Bench press or Push ups
2. Lat pulldown or Pull ups
3. Lawnmowers
4. Flys
5. Sit – ups (incline or weight)
6. Curls
7. Triceps pulldown
8. Shoulder shrugs

Specific Session:

It is very important to maintain good technique during specific cable exercises as bad form could lead to serious injury. Pay special attention to shoulder location: *the elbow should never get behind the shoulder in an extended position*. Use torso rotation to maintain proper placement of the elbow and shoulder. These exercises should start a very low weight in order to learn proper technique.

- All General Session exercises
- Cable forward stroke (figures 1a and 1b)
- Cable sweep (figures 2a and 2b)
- Cable Draw (figures 3a and 3b)



interesting paper on Whitewater slalom long-term paddler development from Canoe Kayak Canada:

<http://www.canoekayakbc.ca/downloads/ltad-slalom.pdf>