



Welcome to St. Louis Rowing Club

On behalf of the members of the St. Louis Rowing Club, welcome to our Learn-to-Row Program! As you will come to learn, rowing has a long and storied history in the St. Louis area, and the St. Louis Rowing Club has played an integral part. Our club is comprised of men and women, adults and juniors who have a passion for this sport. We row because we love the sport; we enjoy the benefits of a great physical workout; we live for the competition at regattas; or we merely enjoy the camaraderie of our fellow crewmates.

Other than our coaching staff, we are completely run by a host of dedicated volunteers who provide everything from boat and boathouse maintenance to on-the-water coaching of our summer Learn-to-Row workshops and full LTR programs. We are a 501c(3) organization with plenty of opportunities to volunteer your time and talents, or to make a tax deductible donation. We depend on our membership to donate time, and funds at our annual fundraisers. Membership dues pay to run the club and boathouse. Equipment needs are funded by our annual fundraisers. Please plan to participate by volunteering your time and by making donations!

As you begin the process of learning the correct rowing technique, relax! It will seem completely foreign, but, hopefully in time, you will come to enjoy it as much as we do. Phrases like "ready, row", "way-enough", "up over heads", "one foot up" seem like gibberish now, but they will become second nature to you. Head Coach Tim Franck, his coaching staff, or any member of SLRC's Executive Committee is available to answer your questions. Welcome and we'll see you on the water!

Rower's World, January 4 2012

The classic sport of rowing can take place on any large body of water – examples include the ocean, lakes, or rivers. It is an extremely strenuous sport that requires a supple body and high stamina and endurance. Officially, rowers command the boat by sitting backwards, towards the stern of the boat, and using oars to create friction with the water, which propels the boat forward.

While the mere action of rowing and rowing equipment remain relatively consistent throughout the world, ways of competition can be very different. For example, there can be endurance races, time trial races, bumps races, stake races, and the 'side by side' races that are demonstrated in the World Olympic games.

The Two Forms of Rowing:

Sculling: In sculling each athlete holds two oars – one in their left hand, and consequently, one in their right hand. The oar in the sculler's right hand points towards port while the oar in the sculler's left hand points towards starboard.

Sweep (Sweep-Oar Rowing): In sweep-oar rowing, each athlete only holds one oar with both of their hands. Sweep-oar rowing can be done in pairs, fours, or eights – never an odd number.

Anatomy of the Rowing Stroke

The two most important aspects when one is using the rowing stroke are the catch and the release or finish.

In the catch, the rower dips his or her oar into the water, then applies pressure to both the oar and counter-pressure to boat (with his or her legs). As the rower's legs begin to reach their fullest extension, the rower rotates his or her torso toward the bow of the boat and then pulls ones arms towards his or her chest. It is important to note that it is bad for ones shoulders to hunch up at any point during the catch. Furthermore, at the very end of the stroke, while the oar is still in the water, ones hands slightly drop so energy is not wasted by causing the oar to splash. These key stages of rowing comprise what one would call the drive of the stroke.

After the drive, the 'recovery stage' begins. This stage involves removing the oar from the water, and coordinating ones body movement to move the oar to the catch. The rower pushes down on the oar handle to simply lift the blade from the water at the moment of release. Immediately following the release, the rower rotates the oar, which causes the blade of the oar to become parallel with the water. This technique is also known as 'feathering the blade.' While feathering the blade rowers simultaneously will push the oar handle away from their chest. Finally, the rower will then rotate his or her body forward. Continuing, as soon as the rower's hands are past the knees, they will crunch their legs, which moves the seat towards the stern of the boat. It is important to note that the leg compression is relatively slower compared with the rest of the stroke which allows the rower to "recover" themselves, hence the term. Lastly, close to the end of the recovery, the rower will 'square their blade.' 'Squaring the blade' means rotating ones oar paddle so it is perpendicular to the water. The stroke then repeats again, beginning with the catch. When rowing in a boat with multiple people, it is necessary that each athlete act in accordance with another.

Thoughts of Breathing While Rowing

The two main schools of thought involving how to breathe while rowing include either having one's lungs full of breath at the catch or completely empty at the catch.

Full of breath: This school of thought involves rowers inhaling during recovery while exhaling during the stroke.

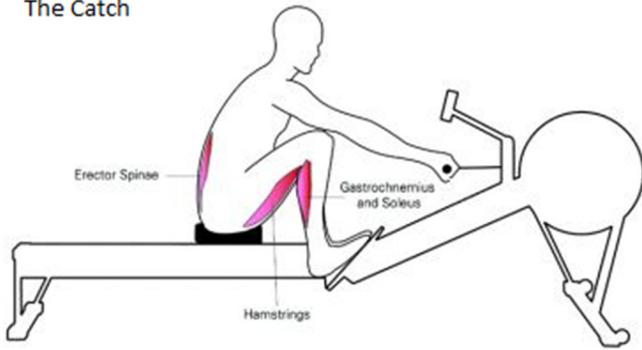
The empty-lung technique involves having empty lungs during the catch. Rowers will inhale during the drive and exhale during the recovery. While different athletes prefer different methods of breathing while rowing, a scientific study showed no real benefit with either school of breathing technique.

That said, perhaps the best advice is to not over-think how you're breathing and let the rhythm of your breathing cycle occur naturally along with the rhythm/pace of your workout or race.

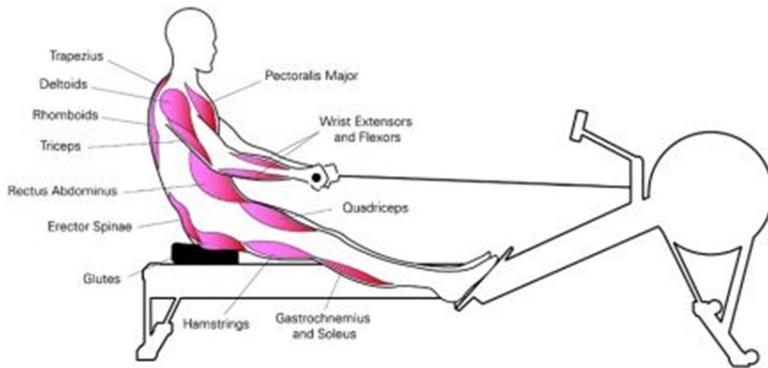
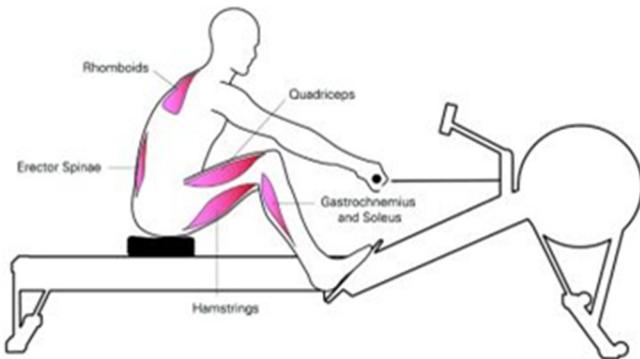
Fitness and Health with the Row

The act of rowing works many muscles in the human body. These muscles include the quads, the biceps, the lats, glutes as well as abs. Rowers require strength and endurance. Furthermore, rowing is considered a low impact sport, and immediate injuries like sprains and twists tend to be rare. However rowing can cause repetitive stress injuries and strains that can be minimized with proper technique.

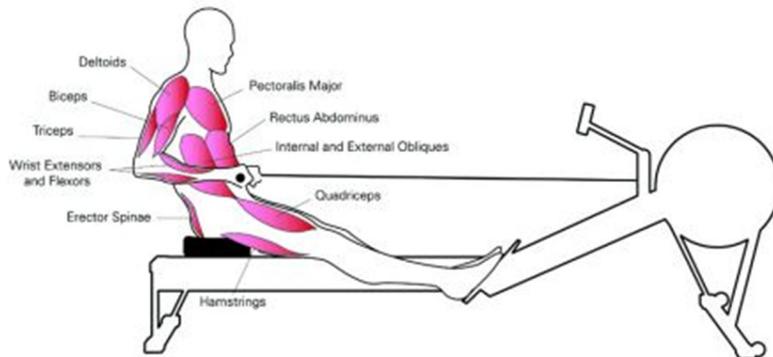
Rowing movement -
The Catch



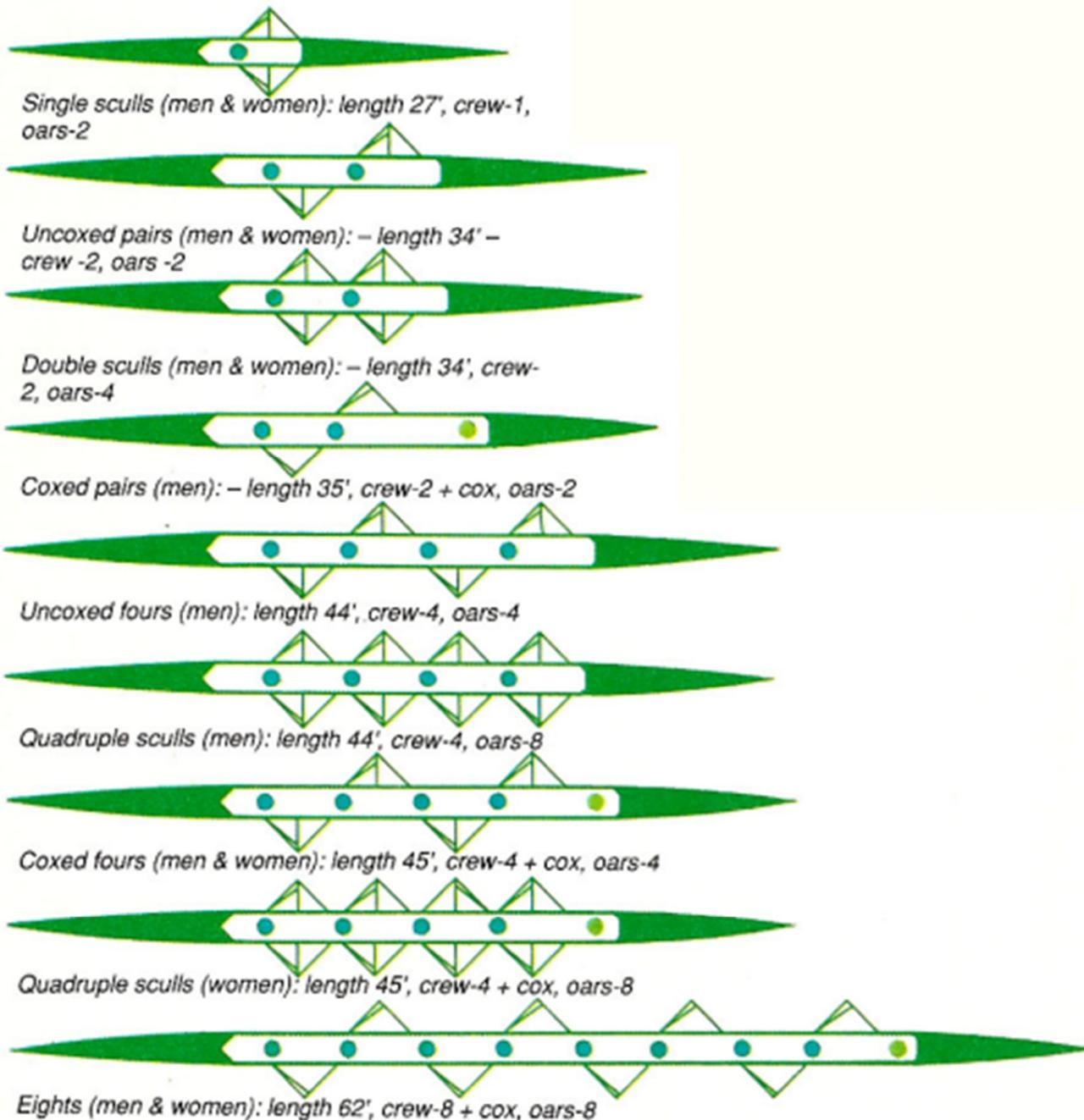
The Drive



The Finish



Rowing Equipment



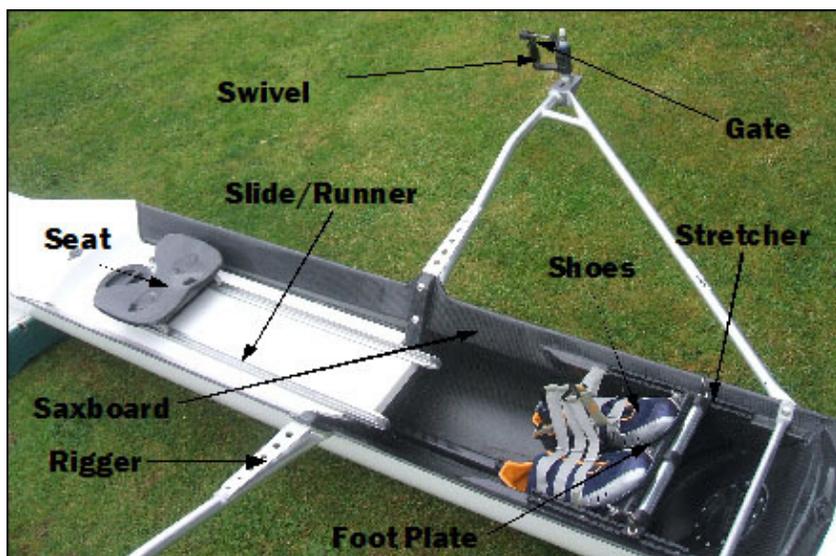
Boats can come in many different lengths. 60 to 62 foot long boats are Eight-oared shells, which are about the biggest rowing boats or racing shells that are usually purchased and raced.

Rowing boats are made of carbon fiber, reinforced plastic in a honeycombed structure and the heaviest boats usually weigh about 200 pounds. All sculls are shells, but not vice versa. The word shell is often used in reference to the boats used because the hull is only about 1/8" to 1/4" thick to make it as light as possible. These shells are also rather long and as narrow as possible, which makes the boats very fast, but also quite hard to 'sit.

The normal configuration of a sweep boat has oars alternating between right and left, or starboard and port sides of the boat. The symbol following the shell size indicates whether with a coxswain (+) or without a coxswain (-), or whether it is a sculling boat (x). The image below is of port-stroked, stern-coxswained eight-oared shell (8+). The Coxswain is the on-the-water coach and strategist who also steers the boat.



Inside a Rowing Boat



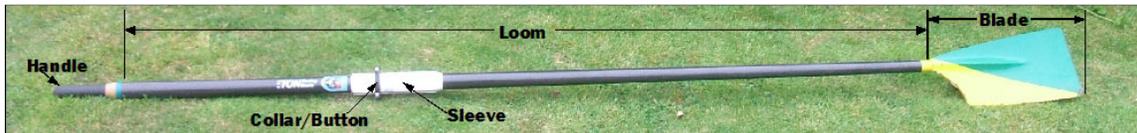
Each rower sits on a sliding seat that rolls on wheels along a fixed track called the slide. As these allow the rower to move back and forth in the boat, utilizing their full leg power, it is important to keep these well maintained throughout the year.

Feet are tied into shoes which are bolted onto footplates in the boat. The footplate and foot stretcher is a fixture in a boat that contains shoes screwed into a piece of carbon or metal. This equipment holds the rower's feet into the boat and is the only part of the boat where the rower is firmly attached. The shoes have quick release velcro straps, but should not be over tightened as you may need to release your feet in the event of a capsize. The position of the feet is adjustable to accommodate different height rowers. This is achieved by loosening the three wing nuts securing the

stretcher to the tracks and then lifting and sliding the footplate to the required position. If you are rowing in the same boat regularly, it is a good idea to remember the position of the shoes so that you can adjust the boat before you get in.

Each oar is held in place by riggers, ie. the metal supports that are bolted into the gunwale, ie. the top side of the boat. The rigger holds the oar lock or gate in which the oar sits. The rower opens the oar lock, places the oar into it, then shuts the top metal bar, screwing it tightly shut. The oar lock holds the oar in place during the rowing stroke. The oar lock is carefully set up so that the oar is held in the water with a specific amount of pitch or tilt. This is usually about 5 degrees at the midpoint of the stroke although it can change through the stroke, depending how it is set up.

The Rowing Oar



The diagram above is of a sculling oar. These move boats through the water and act as balancers. There are two types of oars: sweep oars and sculling oars. Sweep oars are 12 to 13 feet long, approximately two feet longer than sculling oars. The standard blade shape since the 90's is a hatchet. The diagram above shows the handle at the end of the oar where a rower's hands are placed while they are in the boat and rowing. On a sweep oar, you will have two places to grab the oar; on a sculling oar you will have one place to grab. The button or collar is a critical part of the oar because it is what stops oars from going through the oar lock when pressure is exerted on the oar. The sleeve is the part of the oar shaped perfectly for the oar lock, so that the oar can be twisted when a rower needs to feather the oar. There are two flat areas on the sleeve designed as resting spots when the blade is squared and when it is feathered. Feathering is done to reduce wind resistance on the oar. The blade is critical to the oar because this is what catches the water and allows the rowers to move the boat.

ROWING TERMINOLOGY

SHELL - Another term for a boat. Specifically, a boat used in racing.

BOW - End of the boat closest to the direction of travel. Also can be used to refer to one-seat, or in conjunction with either four or pair. Bow-four refers to seats four through one. Bow-pair refers to seats two and one.

STERN - End of the boat farthest from the direction of travel. Also can be used in conjunction with either four or pair. Stern-four refers to seats eight through five. Stern-pair refers to seats eight and seven.

PORT - Side of the boat to the coxswain's left and to the rowers' right.

STARBOARD - Side of the boat to the coxswain's right and to the rowers' left.

OARLOCK - Square latch to hold the oar and provide a fulcrum for the stroke against the rigger

RIGGER - An apparatus on the side of the boat to provide a fulcrum for the lever (oar).

FOOT STRETCHER - Part of the boat where the shoes are attached and where the rower pushes his legs against on the drive.

SLIDE - The tracks in which the rolling seat rolls .

SPLIT - The time to row the equivalent of 500 yards on an Erg.

RUDDER - A little fin on the bottom of the boat that the coxswain can control to steer the boat.

COXSWAIN - A very important member of the crew. Their primary job is steering, but also provides race feedback about location on the course and relative to the other crews and stroke rate per minute. They serve as an in the boat coach during races. They do call "power tens" and encourage, but don't go "stroke, stroke, stroke."

COX BOX - A small electronic device which aids the coxswain by amplifying his/her voice, and giving him a readout of various information.

COACH - someone who follows the boat in a motor launch or on a bike on the bank yelling through a loudspeaker.

THE STROKE

STROKE - One full motion to move a boat. Consists of the catch, drive, finish, and recovery. Can also be used to refer to eight-seat.

CATCH - The part of the stroke where the oar enters the water. The catch is the last part of the recovery

CHECK - Bad technique that slows the boat down. Essentially, the momentum of the rowers sends the boat in the opposite direction.

DRIVE - Part of the stroke where the rower pulls the blade through the water using legs, back and arms to propel the boat.

LEG DRIVE - Term used for driving the legs against the foot stretchers on the drive.

LAYBACK - Term for how much you lean back at the finish. Too much is bad, too little is, well, bad also.

FINISH - Part of the stroke after the drive where the blades come out of the water. The rower removes the oar from the water, by first pushing downward then away with the hands.

RELEASE - Another term for finish.

FEATHERING - Rotating the oar in the oarlock so that the blade is parallel to the surface of the water.

RECOVERY - Part of the stroke where the rower comes back up the slide slowly towards the catch. The oar is pushed away from the body by extending the arms, reaching the body forward and compressing the legs so the shin is vertical, preparing for the next Catch. The oar should not drag on the water.

STROKE RATE - How fast a stroke is being taken. In terms of strokes per minute.

ROWING COMMANDS

"READY ALL, ROW" – Coxswain call to begin rowing.

"WAY-ENOUGH!" - Coxswain call to have all rowers stop rowing. Call actually sounds like "way-nuff".

"CHECK IT DOWN!" - Coxswain call that makes all the rowers drag their oarblades through the water perpendicularly, effectively stopping the boat.

"HOLD WATER!" - Coxswain call. Another way of saying CHECK IT DOWN.

"LET IT RUN!" - Coxswain call for all rowers to stop rowing and to pause at the finish, letting the boat glide through the water and coast to a stop. Used as a drill to build balance.

"ONE FOOT UP, AND OUT" - command for exiting a team boat. Procedure: The outside hand holds the oar(s) away from the body. The inside hand holds the gunwale to the dock. The inside foot is removed from the foot stretchers and placed on the step-in board, the body weight is shifted forward as the athlete stands supporting himself on their inside leg. The outside foot is placed on the dock and you get out of the shell.

MISSING WATER - Bad technique the blade is not in the water soon enough at the catch. Therefore, missed water equals less movement of the boat.

WASHING OUT - Similar to MISSING WATER except it means taking the blade out of the water too soon at the finish.

"POWER 10" (or 20 or 30 etc.) - Coxswain call to take a certain number of power strokes. A power stroke is a stroke that musters all the strength you can give.

RUN - The distance the boat moves after a stroke. Long run is very good. Run can be visually measured by the distance between the last puddle made by two-seat and where eight-seat's blade enters the water.

RUSHING THE SLIDE - Bad technique that causes check. Comes from coming towards to the catch too fast during the recovery.

SKYING - Bad technique where the blade is too high off of the surface of the water at the catch.

CRAB - A stroke that goes bad. The oar blade slices into the water at an angle and gets caught under the surface. A bad crab can catapult you out of the boat.

REGATTA - An organized crew race.

HEAD STYLE RACING is done in the fall and can be done on river, where there are twists and turns. The shells do not line-up, but race against the clock, after starting one behind the other. You need not pass another crew to beat it, but if you pass someone that started in front of you, you have surely beat their time. The race distance is usually 3 miles long.

SPRINT RACING is done with the crews starting with the bow of their shells even and racing parallel to each other. They start together, and the first crew to cross the finish line wins. We do this racing in the spring. On the collegiate level and internationally, the race distance is 2000 meters. High school race 2000 meters. Master rowers (age 27 and older) race 1000 meters.

NOVICE - a rower in their first 12 months of rowing. Since it takes most people a while to refine the basics of rowing and racing, they can row against others of similar experience level.

BASIC COXWAIN COMMANDS

Coxswains have a very important job in making sure all of the rowers are working in unison and are moving/rowing safely. It is important to learn the basic coxswain commands listed below. Another easy way to learn the commands is to listen to our experienced coxswains and at races the coxswains from other teams. There are many modifications and adaptations to the terminology, each coxswain develops a bit of their own style. The important piece is that the rowers understand and can hear what you are asking them to do. If you have questions, never hesitate to ask a coach or other rower/cox.

Back-it (Stern-pair back, ports back-starboards row...ready back) Means to have the rowers place their blades at the release position, squared, and push the oar handle toward the stern of the boat. This motion causes the shell to move backwards.

Blades-down: This command is used to tell the rowers to place their blades flat on the water after the end of a piece

Check-it-down: Tells the crew to square their blades and drag them across the surface to the water. Used to slow and stop the shell quickly. Similar to hold water.

Count-Down: This command tells the crew to call out their seat number, starting at bow, when they are ready to row.

Ease-up, Firm-up: These commands tell the rowers to reduce the pressure on the oar, or apply more pressure as needed.

Even-it-out: This command tells the rowers to pull even pressure on both sides. This is the complement to ease-up or firm-up above.

(#) Drop-out, (#) Add-in: These commands tell the rower(s) to either stop rowing, or to start rowing with everyone else. (#)= the number of the rower(s) to start or stop. i.e. "Bow pair drop out, stern pair add in, in two. . ."

Hands-on: Tells the rowers to grab the boat, next to their seats, so that the boat can be moved or lifted.

Lean away: Tells the rowers to lean away from the dock to allow riggers to clear the dock when pulling into or leaving the dock.

Heads-up: The command, tells everyone within ear shot that a shell is being moved, and to be alert as it passes nearby.

Up over heads, ready, up: Tells the rowers to press the boat above their heads.

Hold-Water: Tells the rowers to stop rowing and square their blades immediately; dragging them across the surface of the water to slow and stop the boat quickly! Used to avoid collisions. Similar to "check-it-down."

Let-it-run: This tells the rowers to stop rowing with blades off the water at the arms away position.

Paddle: This tells a crew to row with just enough pressure to move the boat. The paddle command is also used to bring a crew down from full pressure at the end of a workout piece or race.

Ratio: This is the relationship between how fast the rowers pull the oars through the water (the drive) versus how fast they move on their slides between the release and the catch (the recovery). The average ration is 3:1 (Three times slower on the recovery than on the drive). The ration will vary with stroke rating and speed. At a 36 or higher the ratio is close to even.

Set-it-up: Reminds the rowers to keep the boat set.

Sit-ready: Commands the crew to move to the catch, blades buried, and be ready to start rowing.

Settle/Shift: A command and a part of the race. This tells the rowers that the crew is going to bring the stroke rate down for the body of the race, but still maintain the same pressure. This is usually the middle of the race.

Up/Down to Shoulders, ready, up/down: Tells the crew to lift the boat from any position below their shoulders to shoulder height. Can be reversed to lower the boat from heads to shoulders. i.e. "Shoulders, ready, down!" This is the best position for carrying a shell.

One foot in....ready down: Tells the crew to get into the boat.

Way-enough: Tells the rowers to stop, can be applied to mean stop rowing or many other instances such as when moving a boat.

Up/Down to Waist, ready, up/down: Tells the crew to lift/lower the shell to their waists.

ST. LOUIS ROWING CLUB SAFETY RULES

1. Rowers should know how to swim, be able to tread water for at least 10 minutes and be comfortable around water, to participate in rowing activities.
2. Novices and Juniors are not allowed on the water without a coach present
3. All boats must be signed out in the log book.
4. Boats should never be rowed in lightning storms. Notify the coach immediately and head for the dock if lightning is sighted while on the water.
5. No rowing is allowed when the combined water and air temperature is less than 100 degrees unless accompanied by safety launch.
6. Rowing in high winds and whitecaps is allowed only at the discretion of the coach and only when accompanied by the coach and safety launch.
7. NEVER leave the boat if it swamps or capsizes. DO NOT TRY TO SWIM FOR SAFETY. STAY WITH THE BOAT AND WAIT TO BE RESCUED. The bow and stern compartments are sealed and the boat will float. The oars also float and are recognized as emergency flotation devices by the Coast Guard.
8. If the boat swamps (fills with water) the rowers should get out of the boat as soon as safety permits. The boat may break if half due to the weights of the rowers and water weighing the boat down in the center while the air filled stern and bow compartments float. Get out of the boat two at a time from opposite sides of the boat while the others steady the boat. Hold on to the boat and wait to be rescued.
9. Rowers must be checked-out on the equipment by the Head Coach before unsupervised use of SLRC equipment is permitted.
10. Follow a clockwise traffic pattern on the lake.
11. Blind boats have the right of way
12. Eights should not be rowed without a coxswain. Fours may only be rowed without a coxswain if the boat has an operational bow steering mechanism.
13. Do not tie shoes too tightly. You must be able to slip your feet out of them in the unlikely event that the boat swamps or capsizes.
14. Always hold on to your oar handle, or place it in your lap between your arms and your body.
15. Stretch before and after exercise to avoid injury
16. Use proper posture when lifting boats and heavy equipment to avoid back injury. Keep back straight and upright with shoulders over hips.
17. Scullers who row alone should always tell someone where they have gone and when they expect to return.

SLRC Contact Information

Coaching Staff:

Tim Franck, Head Coach

Competitive Masters, Girls Varsity

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You can find additional bios and contact information on our coaches at:

<http://stlouisrowingclub.com/about-slrc-2/coaches/>

Club Contacts:

Contact information for our current EC can be found at:

<http://stlouisrowingclub.com/about-slrc-2/executive-committee/>

Resources

This is a quick list of videos and articles and only a small representation of what you can find on the internet:

USRowing.com

Concept2.com

Technique Videos: <http://www.concept2.com/indoor-rowers/training/technique-videos>

Getting Started with your Erg: <http://www.concept2.com/indoor-rowers/training/technique-videos/getting-started>

Common Errors: <http://www.concept2.com/indoor-rowers/training/technique-videos/common-errors>

US Rowing Safety Video: https://www.youtube.com/watch?v=Rx5SUE_RdgQ&list=UUv-GR7pR4WtmP59kjLRY-qw

RowHub Introduction to Rowing: <http://rowhub.com/us-rowing-introduction-to-the-sport-of-rowing/>

Rowing Magazine: www.rowingnews.com/

Rowing and Sculling for Rowers and Scullers: www.row2k.com/

Coxswain's Manual: <http://cofcrew.org/wp-content/uploads/2011/02/Coxswain-Manual1.pdf>

Wikipedia Glossary of Rowing Terms: http://en.wikipedia.org/wiki/Glossary_of_rowing_terms