



LEARN TO ROW

jOURNEY

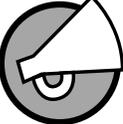
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SKILLS PROGRAM



ROWING
CANADA
AVIRON

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Welcome

MESSAGE FROM THE PRESIDENT OF ROWING CANADA AVIRON

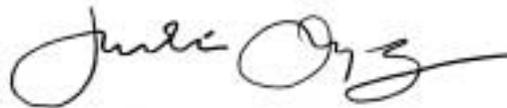
Congratulations on embarking on this "journey" designed by Rowing Canada Aviron to develop or improve your rowing skills. Whether you are a complete beginner or have rowed before, I know that you will find the trip challenging and rewarding.

The challenge is that rowing looks easy, and at one level it is, but to row well requires instruction, concentration and practice. The reward is the wonderful sensation of moving a boat at speed with confidence and enjoyment.

As in most activities there is a right way and a wrong way of doing things. We want you to learn the right way and to provide you with the skills you need to enjoy rowing all your life. Safety is a prime concern so please pay close attention to the safety features of the program.

Rowing provides you with peaceful enjoyment of being on the water, satisfaction at being able to move a boat and the rewards of fitness, well-being and teamwork. It is a sport that builds both strength and aerobic capacity without the risks of injury posed by contact sports or those that involve impact such as running. In short, it is a sport for life!

Have fun and revel in the expertise you acquire as a result of this journey into rowing.

A handwritten signature in black ink, appearing to read "Justin Fryer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Justin Fryer, President
Rowing Canada Aviron

Safety

Nothing is more important in the sport of rowing than your safety. In the introduction to rowing you should be briefed on the safety procedures of your club. This instructional session will provide information on the traffic flow patterns for your club. It is important to always follow the rowing traffic rules. There have been serious accidents when people have rowed on the wrong side of the course.

Here are some basic rules about safety:

- Always have an approved PFD (Personal Floatation Device)
- Stay with the boat
- In an emergency, use the oar or boat as a floatation device
- NEVER row alone or in the dark.

SAFETY IN YOUR EQUIPMENT

Bowballs: Attached to the bow of every shell should be a white rubber ball. The bowball provides protection against the sharp prow of the boat in the event of a collision. Boat manufacturers include the bowballs as part of the boat at the time of purchase, but sometimes they can be knocked off. The bowball must be replaced immediately. Rowing without a bowball is a violation of rowing safety rules.

Safety straps for shoes: Shells fitted with shoes rather than clogs must have a very important safety precaution in place. Attached to the heel of each shoe must be a string or a shoelace that is secured to the footstretcher. This tie should be loose enough to allow the heel to rise at the beginning of the stroke but strong enough to hold the shoe down in case a rower has to pull the feet out if the boat capsizes.

Lifejackets: Wearing a normal, bulky lifejacket does not allow someone to row properly. A lifejacket can get in the way of necessary hand and arm movements, as well as blocking the elimination of heat from the body. This could be a major health concern during the summer months. Effective in 1999, Canadian Coast Guard Regulations require rowing shells to have life jackets aboard unless:

- it is attended by a safety craft carrying an approved PFD or lifejacket of appropriate size for each member of the crew of the largest vessel being attended; or
- if it is competing or training during a provincially, nationally, or internationally sanctioned regatta or competition.

In general, you should have a life-jacket in the rowing shell with you (one per person) or the motor boat beside you must carry them.

Canadian Coast Guard · www.ccg-gcc.gc.ca/
U.S. Coast Guard · www.uscgboating.org



WATCH WHERE YOU ARE ROWING!

A Canadian rower was injured when two crews collided on the Thames River in England. Erik Oinonen of Thunder Bay, Ont., a member of Canada's lightweight eight men's crew, injured his back when a U.S. double boat collided with the Canadian boat at Henley-on-Thames.

"Erik had to be taken out of the boat immediately and driven back to the boat tent area. His back started swelling right away and was cut from the impact."

The collision occurred above the race course where there are no buoys or markings and the lack of pleasure boats made it the best place to warm up," Dave Boyes said, a crew member.

"The bow of the Canadian boat slit the US boat in the collision, which happened almost head-on," said Jackie Skender, a spokesperson for Rowing Canada. "It could have been a lot worse because they are moving at such a pace," Skender said.

The London Free Press



SAFETY POSITION

THE SAFETY POSITION

The safety position is a secure position for the sculler or crew where the shell is very stable and there is no chance of turning over. The oars are extended from the sides of the boat at about 90 degrees and the rower sits with his/her legs straight and blades flat on the surface.

The safety position is assumed if there is any special problem that makes the crew nervous or unstable (swells from a motor boat). The safety position is very reliable. Try this a few times and see how quickly your boat stabilizes.

CLOTHING

APPROPRIATE CLOTHING FOR ROWING

No special uniforms are required for training. The main criteria for rowing clothing is that 1) it does not restrict the correct movement, 2) it allows for the dissipation of heat during training and racing, and 3) it does not hang out so that it can be caught on any equipment or cause the fingers to catch at any point during the stroke cycle.

Despite cold temperatures in Canada and northern states, rowing can continue until the ice comes and starts again when the ice disappears. However, it is extremely important to dress properly in cold weather or hot weather.

COLD WEATHER

Several layers of clothing are better than one thick one. Wear two pairs of socks with the first one being a little lighter than the second. Polypropylene long underwear is great because it draws sweat away from the skin. Body outfits such as lycra suits are particularly effective. Sweat pants and windbreakers are also very effective. Remember your hat! About one third of the body's heat loss is from the top of the head.

SUMMER WEATHER

In summer, the weather can be extremely hot and humid. A rower should always wear a hat, one that covers the ears and neck. Sunscreen, 15 SPF or higher, is critical to protect against the sun's ultraviolet rays. You may also want to protect your skin with lightweight and light coloured clothing.

Always have dry clothes at the boathouse in both winter and summer.

Equipment

FOOTSTRETCHER ADJUSTMENTS

In **Journey 1**, a participant is expected to be able to move the footstretcher. This involves loosening two wing nuts and a thumbscrew located on the footstretcher. After loosening these, the participant can move the foot boards in to the bow or the stern.

WHY AND WHICH WAY?

A basic adjustment that crew members can make at the dock is moving their footstretcher. Adjusting the feet toward the bow or the stern of the boat enables the crew to individually place themselves so that the arcs of their strokes are roughly in the same position.

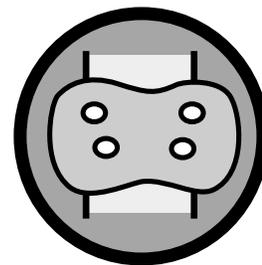
If a person sits too far to the bow, the oar handle comes across the boat too much at the finish, thereby weakening the final pull.

If a person sits too far to the stern, the oar handle does not come back far enough to push the boat ahead effectively.

In sweep, rowers should start by setting their footstretcher so that the butt ends of the handles come just to the outside edges of their bodies at the release position. This is a good initial setting.

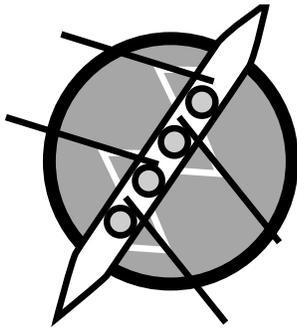
In sculling boats, the initial setting should be made so that the butt ends of the sculling are 15cm apart.

Your instructor will help you determine where your footstretcher should be.



EQUIPMENT CHECK:

- Always go over your equipment before heading out on the water.
- Ensure rigger is snug and all wingnuts are tightened.
- Check to make sure there is no visible damage to hull.
- Check to make sure all parts are present and accounted for - seat, footstretcher, bowball.
- Once ready to push off ensure gate is closed properly and topnut is tight.
- Adjust footstretcher to correct position (with help of an instructor).



BOAT MATERIALS:

Wood was the material of choice for constructing rowing shells from the 1880s to the 1930s. Pieces of plywood or planks of long, narrow strips would be tacked on to a wood frame.

In the 1880s, an attempt was made to construct racing shells out of compressed cardboard with a varnished finish. These 'paper' boats were not very practical - when the boat became scratched or gashed the water would get in the cardboard and cause the paper to swell.

In the early 1900s, copper and aluminum rowing shells were constructed. They were found to have difficulties in being too heavy and hard to repair when damaged.

In the mid-1970s, a Canadian rowing shell builder constructed the first wood shells that had a smooth exterior. A plywood 'skin' was shaped and then glued to a wood mahogany frame using epoxies - eliminating the ribbing, and exterior tacks common to other shells.

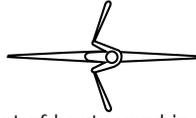
In the mid-to-late 1970s, the first fibre-glass shell was perfected. The popularity of the fibre-glass shell has increased until the mid-to-late 1990s when the major boat makers eased out of hand crafting wood singles.

Rowing shells in the late 1990s are formed in moulds and baked in large ovens at high temperatures to cure the epoxy resins - making the shell more rigid and stiff.

Modern shell materials include carbon, kevlar, and fibreglass. There is very little if any wood left in a modern rowing shell.

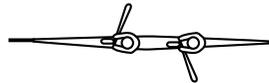
Rowing Shells

SINGLE



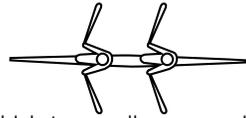
The smallest of boats used in the sport. The single shell is used by one sculler with a sculling blade(oar) in each hand. Training in a single may be the best overall method to learn to row because performance feedback is immediate and therefore the rate of learning is usually higher than in any other boat type. Schedules can be individually tailored in a single, and this is definitely one of the attractions of this type of boat.

PAIR



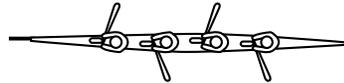
A shell rowed by two athletes, each using a sweep oar.

DOUBLE



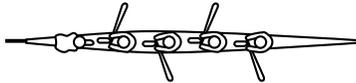
A shell in which two scullers row using a set of sculling oars each.

STRAIGHT FOUR



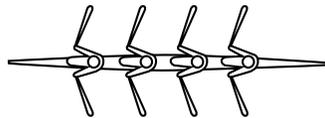
A shell in which four athletes row, each using a sweep oar. The rower in the bow of the boat steers with a rudder by a tiller wire attached to the toe of one shoe.

COXED FOUR



A shell in which four athletes row, each using a sweep oar. A coxswain steers the boat and calls the commands.

QUAD



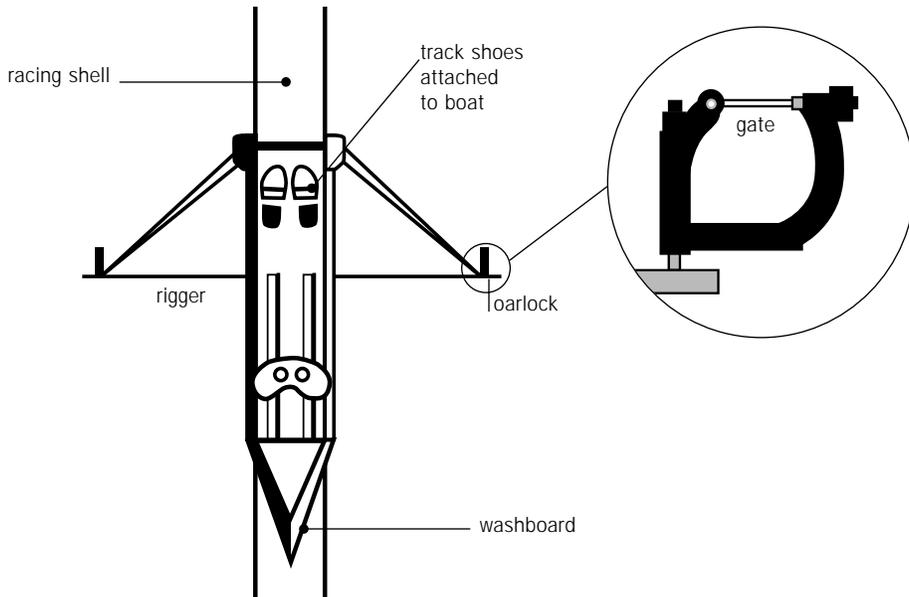
A shell in which four scullers row, each using a pair of oars or sculls.

EIGHT

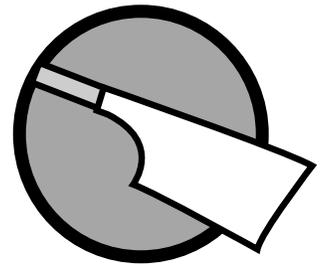
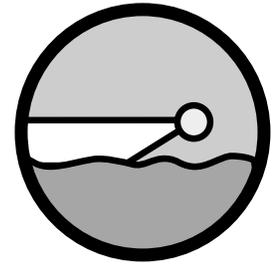
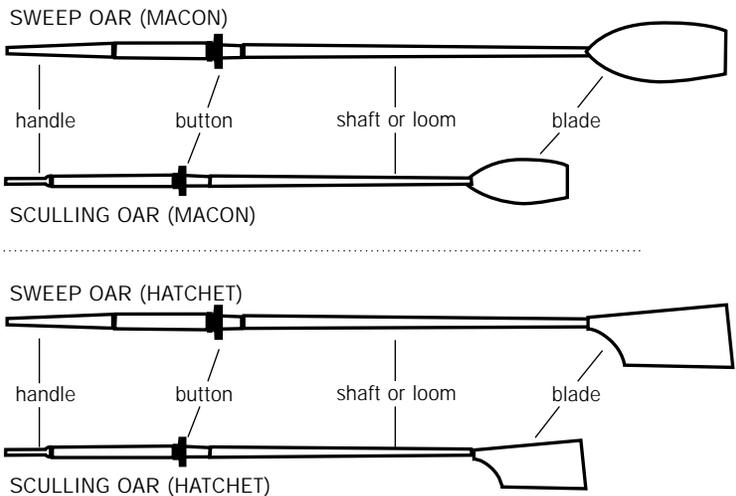


The largest of all rowing shells. It is manned by eight rowers, each using one sweep oar. A coxswain steers the boat.

PARTS OF THE BOAT



PARTS OF THE OAR

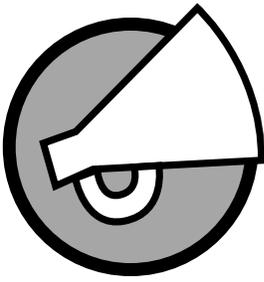


BLADE EVOLUTION:

The 'Toothpick' is the old style rowing oar in use from the 17th century to the late-1960s. The toothpick tapers from its widest point at the end of the blade to the loom, strongly resembling a toothpick.

'Spoon' or 'Macon' oars, which look like elongated teaspoons, were being used as early as the 1930s. By the 1970s, the Macon became the dominant blade of choice.

The 'Big Blade' or 'Hatchet' was first introduced to rowing in 1991. Within a few years it had become the blade of choice.



Terminology

COMMON TERMS

Blades: Another term for oars.

Bow (front of the boat): There should be a bow ball on the bow.

Collar: The plastic ring part way down the shaft of the oar that provides the fulcrum in conjunction with the oarlock.

Coxswain (cox, coxy): The person who steers the boat and gives the commands to the crew.

Decking: The plastic material which is used to cover the bow and stern of the boat where no one sits.

Fin: A short piece of metal toward the stern of the boat on the bottom of the hull. This helps to keep the boat moving in a straight line.

Footboards: This is where the participant places his/her feet when sitting in the boat. These are adjustable to permit shorter or taller people to sit in the same position relative to the desired arc of the oar. Some boats have clogs and other boats have shoes.

Gate: The top part of the oarlock which closes the oar into the oarlock.

Gunwales: Located above the boat's hull, rowers sit between the gunwales and the riggers are attached here. It provides some rigidity but is not as strong as it looks. One of the main purposes of the gunwale is to keep water out of the shell in rough conditions.

Oarlock: Holds the oar and acts as a swivel during the drive and recovery.

Port: This is the right side of the boat if you are rowing (on the left side of the boat for the cox). In some clubs, port oars are marked with red tape.

Rigger: The metal support that holds the oar. This is adjustable to make the participant more comfortable.

Rudder: This can be located in the very stern of the boat or attached to the fin. It is used to steer the boat.

Sculling: The participant rows with one oar in each hand.

Shaft: The long "stick" part of the oar.

Slide: The two metal tracks that the seat slides on.

Spoon: The large flat part of the oar which is in the water during the stroke.

Starboard: This is left side of the boat if you are rowing (on the right side for the cox). In some clubs, starboard oars are marked with green tape.

Stern (back of the boat): This is usually where the coxswain sits and is where the rudder is.

Stretchers: The slings that the crew may put the boat on in order to make adjustments to the boat before going on the water.

Stroke seat: The rower who sits in the stern seat who sets the rhythm and pace for the crew.

Sweep: The participant rows with both hands on the same oar.

ROWING JARGON

Are you ready? ROW!: The command to start rowing.

Catch a crab: The blade gets caught in the water as a result of going too deep or not getting the blade out quickly enough at the release.

Feathering: During the recovery, the blade is rotated so the spoon is carried parallel to the water.

Hold water: The command used to stop the boat. The blades are held slightly squared in the water.

Inside hand: In sweep, it is the closest hand to the oarlock.

Let it run : This is a command that means stop rowing.

Outside hand: In sweep, it is the hand that is farthest away from the oarlock.

Square blades: The blade is in the working position and stays perpendicular to the water and is in the water throughout the stroke.

ROWING COMMANDS

Getting the boat to the water:

Hands on the boat: Crew places themselves along the boat across from the assigned seats and puts hands on the gunwales, standing ready to lift the boat.

Inside grips.. rolling it toward... : The rowers grab the cross pieces inside the boat and together roll it in the direction they are told. If the crew is going to put the boat onto stretchers, it is important that the boat be rolled away from the stretchers to avoid putting a hole in the boat.

One foot in and down!: Participants step into the boat (instructor will demonstrate and assist) and sit on the seat and always hang on to the oar.

One hand on the dock ..Ready! Push!: All crew members push the boat away from the dock.

Over the head, ready up!: The boat is pushed from shoulder height to over the rowers heads with arms stretched straight with one hand on each gunwale.

Roll it to the water!: Slowly the crew rolls the shell toward the water and sets it down together.

Shoulder height, ready up!: Crew lifts the boat to carry it at shoulder height. This command may not be used depending on the club's boathouse, boat's location on the racks and the height of the riggers on boats in the boathouse.

Take the weight, ready up!: The crew lifts the boat off the racks on the command.

Toe the edge!: Crew places foot at the edge of the dock to ensure that they do not place the boat on the dock and damage it.

Walk it out! And watch the riggers: Crew carefully walks the boat out of the boathouse, watching carefully to make sure that the riggers do not bang on anything. Everyone should avoid chatter except to call out a potential problem.

Water side slide the oars across: The water side blades are pushed out so that the collar is against the oarlock and the blade is feathered on the water. This provides stability while the participants are getting into the boat.

WHAT DOES A COXSWAIN DO?

- steers the shell
- gives the commands
- coaches the crew
- calls strategies during races
- provides motivation in training and races

For racing, the coxswain is usually quite small in stature. A coxswain's minimum weight allowance is 50kg (110lbs.) for women's crews and 55kg (120lbs.) for men's crews. Under Canadian rules of racing, a female coxswain can cox a men's crew and a male coxswain can cox a women's crew. If the coxswain weighs less than this minimum, he/she must carry extra weight in the boat.

It is a tradition that if the crew wins a race, the crew throws the coxswain in the water.



Keep thumbs over the handles



During drive and recovery wrists stay flat



Keep wrists flat as handle draws towards you



Keep wrists flat after release

Grip

As in many sports, the grip can make or break your success and enjoyment of the sport. For example, golfing guru Ben Hogan explains,

“Good golf begins with a good grip...the reason for this is that a correct grip brings into play the correct muscles of your arms and body.”

(From Ben Hogan, *Five Lessons: The Modern Fundamentals of Golf*, A.S. Barnes and Company, NY, NY.)

In any sport where an implement is held and there is a transfer of power, a proper grip is critical.

Learning how to hold the oar correctly from the beginning can prove to be one of the most important lessons of rowing. The rower should be able to square and feather the oar easily without excessive strain on the hands, wrists and arms. The grip should always be relaxed and loose.

SCULLING

- The thumbs should be over the end of the handles at all times.★
- The wrists and knuckles should be flat during the drive and recovery.●
- Keep relaxed fingers without losing control.
- The hand just counterbalances the oar and keeps the blade at the correct height off the water on the recovery.
- It is easier to feather the blade by turning the handle with the fingers instead of bending the wrists.
- The wrists should be flat as the oar handle is being drawn toward the body.☾
- The wrists should be flat while the handles are at the body after the release.■
- During the squaring and feathering action, the handles should be rolled in the fingers rather than being turned by excessive wrist movement.
- If the rower has been taught to square and feather the blade as the handle moves toward the stern, the amount of wrist movement will be minimal.
- Try to square your blade as the oar handle moves toward the stern.
- Try to feather the blade as the handle moves toward the stern.

Avoid the following:

- Excessive arching during the drive.
- Excessive depression during the recovery.



Avoid excessive arching



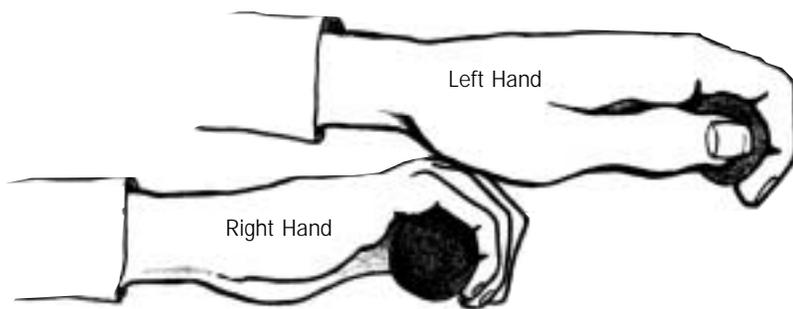
Avoid excessive depression

THE CROSSOVER

"Right hand leads in, left hand leads out."

- Because of the length of the inboards in sculling, the handles will overlap during the stroke (mid-drive/mid-recovery). This overlap in sculling is called the crossover. It is easy to manage in both directions if a couple of simple steps are followed:
- On the drive, the right hand should come through the crossover ahead of and slightly below the left hand. ★
- On the recovery, the left hand is slightly above and ahead of the right hand.
- The top of the right hand fits underneath the left wrist in both directions.
- Both wrists are flat as described previously.
- A common error occurs when a rower bends the left arm too soon and pulls the left hand back over the top of the right hand. Some even incorrectly pull it in ahead of the right hand.
- The arms and wrists must be straight and long during the drive; the arm pull should start as the hands are coming through on the crossover. Right hand leads in, left hand leads out. ☾

These skills can be learned correctly from the start.



GRIP AND CROSSOVER



Left hand sternwards and above right hand



Arms and wrists stay straight before armpull

TIPS ON THE GRIP

"It's not really a grip. The fingers function as more of a hook. The thumbs only assist with the feathering action. Relaxation is the key... loose and relaxed fingers."

Doug White
Head Coach
GORGE ROWING CENTRE
LEVEL 4 COACH



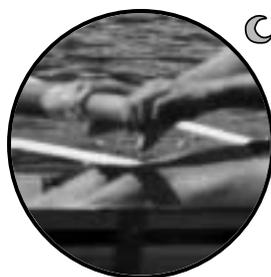
Hands 10 - 15cm apart



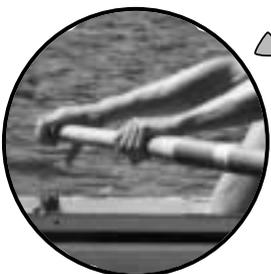
Keep wrists flat



Notice the inside hand during the drive



Keep hands moving towards the stern



Notice the inside hand during recovery

SWEEP

- The outside hand should be positioned on the end of the oar handle.
- The hands should be 10 to 15 cm apart.★
- Put your hands on the oar and stretch both thumbs parallel to the oar handle. Your thumbs should just touch.
- Flat wrist with the second knuckle correctly positioned. This is how the hands should look holding the oar handle. ○ □

During the Drive:

- The wrists are flat and both arms are straight at the beginning of the drive.
- The fingers are around the handle without squeezing it.

After the Release:

- Hands move towards the stern. ☾
- The inside hand conducts the squaring and feathering.
- Notice how the fingers tend to make more of a right angle to the wrist.
- The fingers are around the handle.
- The inside hand should look like this on the recovery. ▲

Technique

The purpose of this section is to provide basic information about rowing technique to assist you in learning more about the skill that you are trying to master. Correct posture will help you to be more comfortable as you learn this new skill.

RELEASE

The release is the point in the stroke where the legs, back and arms have finished the work and the blade is taken out of the water square by pushing down on the handle.

At the release:

- Lean back but lower back should remain firm.
- Keep chin horizontal.
- Shoulders should be relaxed.
- Hands should be loose and relaxed at this point.
- Legs should be locked.
- Blade(s) should be feathered.

RECOVERY

The recovery is the part of the stroke from the release to the entry. During the recovery, the boat should run as far as possible so nothing should be done to interrupt the boat's glide.

There is a definite sequence to the recovery that can help maximize the glide (run).

EARLY RECOVERY

With the blade being feathered as the oar handle moves away from the release position, the sequence should be: hands first, arms steadily extend and then upper body.

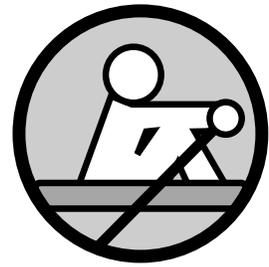
Other key points:

- Legs are relaxed and down until the hands clear the knees and the body swings over the hips.
- Rower's weight is in the middle of the boat.
- Keep a loose relaxed grip.

LATER RECOVERY

The rower is getting ready to take the next stroke. Here are the key points at this phase of the stroke:

- Shoulders and upper body is ahead of the hips.
- Body is relaxed.
- The knees are starting to bend and the slide begins to come forward.
- Arms are completely stretched but are relaxed.



RELEASE



EARLY RECOVERY



LATER RECOVERY



APPROACHING THE ENTRY



ENTRY



MID DRIVE

APPROACHING THE ENTRY

The rower keeps moving toward the stern. The swing forward of the upper body has finished. The blade starts to square as the oar handle passes over the feet. The blade should be fully squared just before reaching the entry position.

ENTRY

The entry is the point in the rowing stroke when the oar is placed in the water. It is a transition phase in the rowing cycle.

- The arms should be straight.
- The body should be in a strong position (strong back).
- There is a quick hand motion to put the oar(s) in the water.
- The shins should be as close to perpendicular as possible.
- Chin/head should be horizontal.

DRIVE

The drive is the propulsive phase when the blade is secure in the water and the oar is pushing the boat ahead.

- The drive is initiated with the legs as soon as the blade is buried;
- The back starts to pull as soon as the hands come over the knees;
- The arms start to bend as the oar comes to a right angle position to the boat, and at this point the legs are almost straight and the back is nearly vertical.

DRILLS FOR SKILLS

Your instructor will teach a number of drills that will help improve your rowing stroke. It is important to understand what the drill is and why it is being used to help you learn the rowing stroke.

1. SQUARE BLADE

In this drill, you will hold the blade on the square. The drill can be used to help teach and/or reinforce a number of rowing skills such as pushing the handle down at the release (before feathering), keeping the blade off the water on the recovery (one full blade width), putting the blade into the water fully on the square.

2. PAUSE DRILL

The instructor will use this drill to help you get the proper sequence of the body on the recovery. It involves pausing part way through the recovery usually with the hands over the knees, the body angle set and legs flat. After this point, the rower glides up the slide keeping the upper body still and ready for the entry.

This drill can also be used to help the crew with timing.

3. POSITIONING DRILL

The positioning drill is used to help reinforce the correct posture at the entry and at the release. Your instructor will ask you to sit at the entry position and will likely coach your body and blade position. You will take a light stroke and your posture will be corrected at the release. The point is to get from the entry position and the release position with the correct posture and blade work.

This drill may also be used from the release position to the entry position.

4. ONE-HAND ROWING

One-hand rowing is another drill that can be used for a variety of purposes. In sculling, your instructor may ask you to row with one hand just working on your grip - squaring and feathering the blade.

In sweep rowing, this drill could help you work on proper use of the inside hand for squaring and feathering the blade. The outside hand only could be used to practice taking the blade out of the water by pushing the handle down and away. This drill can also be used to reinforce the downward pressure of the outside hand to keep the blade off the water.

JOURNEY 1 COMPLETE

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Rowing Canada Aviron has developed the Journey 1, 2, 3 Skills Program to introduce more people to the sport of rowing. In doing so, RCA would like to acknowledge the contributions of many people who have provided ideas, insights, technical feedback and encouragement.

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DON'T FORGET:

Congratulations! You have made it through the Journey 1 booklet. Don't forget to practice the skills you have learned here and get your instructor to check off the components you have mastered. Keep up the good work!



LEARN TO ROW

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