



Pocock Rowing Center Junior Program Handbook



**“Harmony, rhythm and
balance. There you have it.
That is what life is all
about.”**

George Pocock.

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Welcome

It's 7 pm. Your daughter has just arrived home from the boathouse. You know something happened, but like many kids her age, she's not saying much.

Something about "catching a crab"* . . . *in Lake Union?*

Welcome to rowing. Welcome especially to the Pocock Rowing Center Junior Program where your son or daughter will join one of the great sporting traditions in the Pacific Northwest. If you've already got a rower in the family, you may already know what to expect. If you don't, this handbook is for you. Our objectives are to give you a brief introduction to the sport of rowing, offer a few tips on being a rowing parent, and the rules, regulations and standards for all junior rowers at the Pocock Rowing Center.

The Pocock Rowing Center believes the sport of rowing and the unique team environment provided by the Junior Rowing Program will develop the character of the student-athletes and provide them with tools to succeed in life beyond the boathouse. We intend that the policies described in this handbook be helpful to parents and coaches trying to develop that character and the requisite skills.

We know you had a choice when you entrusted your child to this program. Please do stay in touch with us through the season and take advantage of the many volunteer opportunities to be a part of your rower's experience. We're glad you're here.

Philosophy:

At the Pocock Rowing Center, our greatest concern is the development of human potential, both physical and mental. The Pocock Rowing Center attempts to train and encourage young rowers to achieve their optimum potential on the water in the belief that this will prove to be valuable to them as they grow and face the challenges of life.

The Pocock Rowing Center strives to instill in its oarsmen and women an understanding of and appreciation for such concepts as high self-esteem, personal accountability, constructive self-motivation, goal setting and goal achievement as these ideas relate to the athlete's success in training and competition. It is our belief that this process of achieving is as significant as the achievement itself. This philosophy permeates our program at all levels. All rowers are encouraged to be the best they can be and to strive always to achieve their best.

The Pocock Rowing Center is dedicated to equal opportunity for all rowers. It will not discriminate against any person, either member, family or guest of its program or activities, on the basis of creed, religion, race, color, sex, marital status, sexual orientation, political orientation, ancestry, national origin or the presence of a physical, sensory, or mental handicap unless there is a bona fide inability to perform or participate in an activity.

* "Catching a crab" – while out rowing, one or more of the rowers' oarblades enters the water at an angle instead of perpendicularly. The oarblade gets caught under the surface of the water, causing the boat to slow down – or stop.

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Goals of Competition:

The Pocock Rowing Center seeks to achieve the following goals through its competitive rowing program:

- * Provide a learning program to develop competitive rowing skills.
- * Provide a progressive program based on ability in conjunction with the US Rowing Youth Rowing racing format.
- * Provide an opportunity for all children in the Seattle metropolitan area to engage in a wholesome, lifetime recreational and competitive activity.
- * Provide physical development and encourage proper conditioning and health habits.
- * Provide opportunities for social, emotional and educational development and encourage peer and family participation.
- * Create an atmosphere in which the desire for self-improvement and goal achievement motivates the individual to develop his or her natural abilities and help others to do likewise.
- * Provide the opportunity to learn sportsmanship, responsibility, dedication, self-discipline and team participation while training and competing with peers.
- * Teach acceptance of success and failure while striving to be the best.

Mission for PRC Jr. Team:

Build a legacy of developing highly skilled and competitive youth athletes through education and training in the art of rowing.

The Spring 2011 Rowing Season

February 7 th	Season Begins 4pm
February 9 th	Junior Parent Meeting -- 6pm at the PRC
February 15 th	Novice Parent Meeting – 6 pm at the PRC
March 10 th	Junior Fundraising Party
March 12 th	Ergathon
March 19 th	Green Lake Regatta
March 26 th	Lake Stevens Regatta
April 2 nd /3 rd	San Diego Crew Classic/Husky Invite
April 9 th	NW Sculling Regatta @ Lake Stevens
April 29 th - May 1 st	Brentwood Regatta @ Vancouver Island, BC
May 20 th – 22 nd	Junior Regionals @ Vancouver, WA
May 25 th	Junior Banquet
June 10 th – 13 th	Junior Nationals

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Parent/Guardian Meetings

Parent meetings will be held throughout the season, usually gathering at 6:00 pm in the board room at the boathouse. This is your opportunity to catch up on what is going on with the team, become informed about the plans for upcoming regattas, and ask your questions. We will also discuss upcoming regattas and the volunteer opportunities for parents and families. Look for announcements in your email!

Volunteer opportunities

It takes a village to feed and house a crew on the road. Please become actively involved in the care and feeding of our rowers at the regattas – in particular the Brentwood and Regional regattas, which are two of the major events of your rower's season. If you've got a gift for logistics, please consider co-chairing the planning committee for one of the Junior Program events, or joining the Parent Advisory Committee

Fund-raising

Fundraising is an important component of parent involvement at the Pocock Rowing Center. Our equipment, scholarship needs, and other opportunities are dependent on our ability to raise funds outside of the dues structure. Your time and effort spent in supporting the PRC fundraising efforts have a direct impact on the rowing and racing experience of your child!

Resources

Pocock Rowing Center

3320 Fuhrman Avenue, East
Seattle, Washington
206-328-0778
Email: info@pocockrowingcenter.org

Staff and coaches

Director:	Matt Lacey	director@pocockrowingcenter.org
Office:	Nat Hopper	info@pocockrowingcenter.org
Coaches:	Steve Dani	steve@pocockrowingcenter.org
	Kip Nordby	kip@pocockrowingcenter.org
	Ali Browning	ali@pocockrowingcenter.org
	Ashley Jones	ashley@pocockrowingcenter.org
	Hanna Lauth	hanna@pocockrowingcenter.org
	Kit Culbert	kit@pocockrowingcenter.org

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The Junior Blog

Stay up to date! Not only do we meet, but the PRC maintains a blog that collects all of our email communication, links to important events, paperwork etc.

<http://pocockcenter.blogspot.com>

Websites

PocockRowingCenter.org

To learn all things “Pocock” including information about the Junior Program and registration forms.

USRowing.org

Great site full of useful information about the sport, with a special page to help parents learn more and develop their vocabulary and fan acumen.

RegattaCentral.com

Need to know how your rower more about the US Rowing-sponsored event your kid is participating in? Check out this useful website – with its listing of race times. The site is also a useful reference for other programs and camps.

Row2k.com

THE most important website in the rowing community. This is the best source of information for ‘happenings’ in the rowing world.

General Policies, Rules and Guidelines for PRC Junior Program

These policies, rules and guidelines apply to all students participating in the Pocock Rowing Center Junior Rowing Program during turnouts, competition, trips, and off-season times. In addition to these guidelines the student is to comply with scholastic regulations and any additional rules set forth by the student's respective school.

Specific Rules and Guidelines

- Show respect to coaches, teammates, competitors, and volunteers at practices, trips, and regattas, and all other activities sponsored by PRC.
- Adhere to safety guidelines of the PRC.
- Attend all practices unless excused by the coach/coaches.
- Be courteous to visiting teams.
- Show good sportsmanship during practices and at regattas.
- Take care of equipment as though you paid for it yourself.
- Language is an extension of your self-respect and integrity. Do not use poor choices in expression/exclamation – specifically name calling or using disrespectful words.
- Provide 100% effort at all times. In order to achieve the goals we have set, we need to exercise maximum effort physically and mentally.

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- Be a leader at all times. Encourage other rowers to add to the strength of the entire PRC crew. Our goal is to be the best, most respected team in the Northwest and nationally. Every rower is a part of achieving that goal, and we can only achieve it as a team.
- Help out! Don't be a passive participant. When you see something needs to be done, do it. "Discipline" is the key word to these expectations. PRC will maintain a high level of respect among our competitors and achieve a better climate for success by following these guidelines. Make a disciplined effort personally and as a team leader to follow these goals.

Acts leading to *discipline, suspension or expulsion* of a junior rower at any PRC sponsored activity are listed below.

- Commission of a felony
- Possession or use of any dangerous weapon or object.
- Assault, aggressive behavior or intimidation of another person
- Use, consumption, possession or trafficking in alcoholic beverages, drugs, or any controlled substance
- Use of tobacco
- Improper possession of athletic equipment belonging to the PRC or another team.
- Destruction or defacing of property.
- Disruptive conduct
- Disobedience of reasonable instructions of crew authorities
- Theft.

General misbehavior or disrespect shown to coaches or parent chaperones at a regatta or other sponsored event is also subject to sanction. First offense: warning. Second offense: non-participation and attendance at the next regatta. Third offense: removal from the team. If the rower is to return home, it will be at the expense of the parents.

Attendance

Students are expected to honor their commitment to the team by striving for perfect attendance. The following reasons will be accepted for missing either practice or competition: illness or injury, death in the family, academic related matters (this does not include absences for disciplinary reasons), and matters of extraordinary circumstances. Parents are requested to schedule appointments at times that will not conflict with turnouts and/or competition. If a student is going to miss a practice, they are expected to advise the coach prior to practice.

Tardiness

When a rower arrives late, it affects everyone in his or her boat. In the case of tardy behavior, first offense, warning; second offense, another verbal warning; third offense, possible removal from the boat and the same rules as unexcused absence apply.

Absences

Absences, excused or unexcused, may cause a rower to be removed from his/her seat in a boat. This will be the coach's decision.

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Use of the Pocock Rowing Center

Members of the Junior program are *Junior* Members of the PRC, meaning that they are below the age of 18 or have not yet graduated from High School, and are not eligible for Regular Member status. Limitations are placed on Junior Members' use of the PRC. Junior Members may:

- Use the boats, equipment, training rooms, locker rooms, and rest rooms of the PRC during the team's designated practice hours, and
- Be in the Center or on Center grounds or participating in a PRC Junior Program while under the supervision of a PRC Junior Coach, Other PRC Staff member, or another officer of the PRC.
- Junior members may request permission to train or use other equipment during non-team hours, and such permission may be granted in writing by the Director on an individual, case by case basis. Such permission is not transferable or to be assumed to apply to any other Junior athlete not specifically granted such permission by the Director. Junior use of the Center must still be conducted under the supervision of a PRC Junior Coach, Other PRC Staff member, or another officer of the PRC.
- Junior members rowing in PRC equipment or participating in team workouts must be under the direct supervision of a PRC coach when on the water.
- Junior members rowing in private equipment during non-team hours must have:
 - the written permission of the owner of the equipment,
 - the written permission of the Director noted above, and
 - a written liability waiver specifically releasing the PRC from any liability associated with the Junior's use or operation of the equipment.
- Juniors are subject to all safety, sign-out, and other operating rules of the PRC at all times.

Regatta Protocol

PRC team members are expected to adhere to the following when attending regattas.

- Team members are to remain in the general meeting areas during the entire regatta. Team members wishing to leave the area must receive permission first.
- Team members are expected to travel with the team. Late arrivals or early departures will be permitted only with coach permission.
- Team members who do not abide by these guidelines will be disciplined as outlined in the general misbehavior section.
- Team members are expected to stay until the trailer is loaded after the regatta and meet at the boathouse at a specified time to unload, or as directed by their coach.

Preparedness Policy For Athletes with Chronic Health Conditions

Some Pocock Center athletes may have chronic health conditions that could be affected by the strenuous physical and mental demands of competitive rowing. The following is intended as guidance to assist PRC, its coaches, and Safety Committee insofar as they may have interaction with parents and athletes concerning such conditions. It is the desire of all concerned to enhance the welfare of all athletes. PRC intends to make reasonable efforts to work with parents and athletes to accommodate

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athletes who participate with such conditions, while ensuring a safe experience for all. As used in this policy, the term "parents" refers to parents and legal guardians of PRC athletes.

Parents and athletes are expected to make reasoned and informed decisions whether, in view of an athlete's condition, commencing or continuing competitive rowing is in the athlete's best interest.

Among other considerations, parents and athletes should understand that competitive rowing is a strenuous physical activity and that athletes, isolated from shore while on the water for hours at a time, do not have immediate access to emergency services. Parents and athletes should explain these considerations to the athlete's treating physician when seeking professional advice. PRC, its coaches, and its Safety Committee cannot in any way take responsibility for the decision of parents and their athlete regarding participation in PRC activities.

Before an athlete participates in any activity, parents must inform PRC in writing of their athlete's chronic health conditions that could have sudden symptoms while participating in PRC activities. PRC coaches and the Safety Committee shall be informed of the names and conditions of athletes having such conditions.

Coaches may consult with the PRC Safety Committee and may request a conference among the athlete, the parents, and the coach to review the athlete's responsibilities and any treatment materials to be carried by the coach or athlete while on the water or at overnight events..

Refund Policy

After the first two weeks of the season, there will be no refunds of any kind. In the event of injury or sickness, the Director and PRC Management Committee can make certain exceptions.

Transportation Guidelines

PRC Junior Program prefers that all rowers, even if of legal driving age, be driven by an adult to all regattas farther away than Seattle. A participating rower, even if age 18 or older, is not considered a preferred, eligible driver of other rowers to long distance events.

Pocock Rowing Center Parent and Coach Relations

Both parenting and coaching are extremely difficult. By establishing an understanding of each position, we are better able to accept the actions of the other and provide greater benefit to the rowers. As parents, when your student-athlete becomes involved with PRC, you have a right to understand what expectations are placed on your student-athlete. This begins with good communication with your rower's coach.

What you can expect from your coaching staff

- Philosophy of the coach.
- Expectations the coach has for your athlete and others on the team.
- Practice times and schedules, also regatta dates and schedule.
- Team requirements, i.e. fees, special equipment, off-season conditioning.
- Procedure regarding injury to the student-athlete should they be injured during participation.
- Discipline that results in the denial of your student-athlete's participation.

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What coaches expect from parents

- Concerns expressed directly to the coach.
- Notification of any schedule conflicts well in advance.
- Specific concern in regard to a coach's expectations.

As your rower becomes involved with the team at the Pocock Rowing Center, he/she will experience some of the most rewarding moments of his/her life. It is important to understand that there will also be times when the experiences are difficult and challenging. At these times discussion with the coach may be appropriate.

Appropriate Concerns to Discuss With Coaches	Inappropriate Concerns to Discuss With Coaches
<ul style="list-style-type: none">• The treatment of your rower, mentally and physically.• Ways to help your rower improve both athletically and academically.• Concerns about your rower's behavior.	<ul style="list-style-type: none">• Seat assignments• Other rowers• Race strategy

PRC coaches are professionals and make decisions based on what they believe to be the best interests of the team. From the list above you can see which situations are appropriate to discuss with a coach and which are inappropriate. Coaches do exercise their judgment throughout the course of a rowing season and their discretion, expertise, and professionalism must be respected regarding rowing matters. Issues surrounding the well-being of your student-athlete are appropriate to raise with a coach. When you feel a conference with a coach is necessary, the following procedure should be followed.

Process To Follow If You Have Concerns To Discuss With A Coach

- The first step is to ensure the coach and rower have talked about your concerns. Contact information for the coaches can be found on the website, in this book, or by contacting the PRC Director at 206-328-0778.
- The next step is to communicate directly with the coach. Please e-mail or phone the coach to set up an appointment.
- If the coach cannot be reached or does not respond, please schedule the appointment with the PRC Director by phoning the Center office.
- Please do not attempt to confront a coach before or after a regatta or practice. These can be emotional times for both the parent and the coach. Meetings of this nature do not promote resolution.

In the Event A Satisfactory Resolution Is Not Provided

- Call and set up an appointment with the PRC Director to discuss the situation.

In the Event A Satisfactory Resolution Is Still Not Provided

- Contact the PRC Management Committee. The Management Committee is comprised of parents, adult rowers, and community members that govern the Pocock Rowing Center. The Management Committee will address matters that have followed procedure and both the coach and Director have been contacted.

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U.S. Rowing Youth Invitational Policy

- PRC boat entries for the U.S. Rowing Youth Invitational are secured at the Northwest Regional Championships. Those entries are subject to the rules and regulations of U.S. Rowing regarding the composition of the qualifying boat. The U.S. Rowing rules and regulations can be found at www.usrowing.org.
- The final decision as to whether or not the qualifying crew will participate in the U.S. Rowing Youth Invitational will be made by the coaching staff and Director. The staff or Director will notify the Management Committee chair and/or vice chair about the decision to attend before public announcement.
- The Director will organize the trip in conjunction with the coaching staff. The director will create a budget for the event, and forward a copy to the Parent Advisory Committee treasurer. The budget will be made available to the parents of athletes attending the event, as well as a reconciliation of that budget within 6 weeks of the event.
- The funding for the trip and all expenses related to the trip are the responsibility of the athlete. In the event that no other methods are available, the costs associated with scholarship athlete(s) travel will be absorbed into the trip expenses. The cost to support scholarship athlete travel will not exceed \$50 per non-scholarship athlete. Spare rowers who travel with the team will be responsible for ½ of trip expenses paid by primary rower. In the event that expected expenses exceed actual expenses, a refund will be made available only if the total amount of the refund per athlete exceeds \$25. If the amount is less than \$25, the remaining funds from the trip will be placed in an encumbered account reserved for U.S. Rowing Youth Invitational expenses for the following year.
- PRC parents may raise money to offset the costs as long as there is no conflict with existing PRC fundraisers. Parents must have permission of the Director if they are going to use the PRC name in this effort. They may schedule the event in advance on the PRC calendar.

Glossary of Rowing Terms

Bow: The forward section of the boat. The first part of the boat to cross the finish line. The person in the seat closest to the bow, who crosses the finish line first.

Bow coxed boat: A shell in which the coxswain is near the bow instead of the stern. It's hard to see the coxswain in this type of boat, because only his head is visible. Having the coxswain virtually lying down in the bow reduces wind resistance, and the weight distribution is better.

Button: A wide collar on the oar that keeps it from slipping through the oarlock.

Coxswain: Person who steers the shell and is the on-the-water coach for the crew.

Deck: The part of the shell at the bow and stern that is covered with fiberglass cloth or a thin plastic.

Ergometer: Rowers call it an "erg." It's a rowing machine that closely approximates the actual rowing motion. The rowers' choice is the Concept II, which utilizes a flywheel and a digital readout so that the rower can measure his "strokes per minute" and the distance covered.

FISA: Short for Federation Internationale des Societes d'Aviron. The international governing body for the sport of rowing in the world, established in 1892.

Gate: The bar across the oarlock that keeps the oar in place.

German rigging: A different way of setting up which side of the boat the oars are on in a sweep boat. Instead of alternating from side to side all the way down, in a German rigged boat, two consecutive rowers have oars on the same side.

Lightweight: Refers to the rowers, not the boats; there is a maximum weight for each rower in a lightweight event as well as a boat average.

Oar: Used to drive the boat forward: rowers do not use paddles.

Port: Left side of the boat, while facing forward, in the direction of the movement.

Power 10: A call for rowers to do 10 of their best, most powerful strokes. It's a strategy used to pull ahead of a competitor.

Repechage: The second-chance race which ensures that everyone has two chances to advance from preliminary races since there is no seeding in the heats.

Rigger: The triangular shaped metal device that is bolted onto the side of the boat and holds the oars.

Run: The run is the distance the shell moves during one stroke. You can figure it by looking for the distance between the puddles made by the same oar.

Sculls: One of the two disciplines of rowing – the one where scullers use two oars or sculls.

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Shell: Can be used interchangeably with boat.

Slide: The set of runners for the wheels of each seat in the boat.

Starboard: Right side of the boat, while facing forward, in the direction of movement.

Stern: The rear of the boat; the direction the rowers are facing.

Straight: Refers to a shell without a coxswain i.e. a straight four or straight pair.

Stretcher or Footstretcher: Where the rower's feet go. The stretcher consists of two inclined footrests that hold the rower's shoes. The rower's shoes are bolted into the footrests.

Stroke: The rower who sits closest to the stern. The stroke sets the rhythm for the boat; others behind him must follow his cadence.

StrokeCoach: A small electronic display that rowers attach in the boat to show the important race information like stroke rate and elapsed time.

Sweep: One of the two disciplines of rowing – the one where rowers use only one oar. Pairs (for two people), fours (for four people) and the eight are sweep boats. Pairs and fours may or may not have a coxswain. Eights always have a coxswain.

Swing: The hard-to-define feeling when near-perfect synchronization of motion occurs in the shell, enhancing the performance and speed.

Viewer's Guide

If you are new to the sport of rowing, this Viewer's Guide will give you the basics for your first regatta.

The Events

Events are divided into two disciplines: sweep rowing and sculling, and two categories within those: lightweight and open.

Sculling and Sweep Rowing

Athletes with two oars – one in each hand – are scullers. There are three sculling events: the single – 1x (one person), the double – 2x (two) and the quad – 4x (four).

Athletes with only one oar are sweep rowers. Sweep boats may or may not carry a coxswain (pronounced *cox-n*) to steer and be the on-the-water coach. In boats without coxswains, one of the rowers steers by moving the rudder with his or her foot. Sweep rowers come in pairs with a coxswain (2+) and pairs without (2-), fours with a coxswain (4+) and fours without (4-) and the eight (8+), which always carries a coxswain. The eight is the fastest boat on the water. A world-level men's eight is capable of moving almost 14 miles per hour.

The pairs and fours with coxswain are sometimes the hardest to recognize because of where the coxswain is sitting. Although the coxswain is almost always facing the rowers in an eight, in pairs and fours the coxswain may be facing the rowers in the stern or looking down the course, lying down in the bow, where he or she is difficult to see.

Athletes are identified by their seat in the boat. The athlete in bow is seat No. 1. That's the person who crosses the finish line first (which makes it easy to remember – first across the line is No. 1 seat). The person in front of the bow is No. 2, then No. 3, No. 4, No. 5, No. 6, No. 7 and No. 8, a.k.a. the stroke. The stroke of the boat must be a strong rower with excellent technique, since the stroke sets the rhythm and number of strokes per minute the rest of the crew must follow.

Lightweight and Open Weight

An athlete of any weight can enter the open categories, although the average woman in an open race will approach 6' in height and an average open weight man 6'6". Lightweight Men cannot weigh more than 160 pounds and the average weight in the entire boat cannot exceed 155 pounds. Lightweight Women cannot weigh more than 130 pounds and the average weight in the entire boat cannot exceed 125 pounds.

Lightweights row the same events as open weight athletes, except that other than the men's lightweight eight, they do not carry coxswains, so there is no lightweight 2+ or 4+.

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The Race

All events at the FISA World Championships and Olympic Games are 2,000 meters, or approximately 1.25 miles. The racecourse is divided into six lanes and each 500-meter section is marked with buoys.

The race begins with all boats aligned at the start in the lanes they've been assigned. Individuals in each lane hold the stern of each boat steady while an official, known as the aligner, ensures that each boat is even with the others and squarely facing the course.

Each crew is allowed one false start; two means disqualification. If within the first 100 meters there is legitimate equipment breakage (e.g., an oar snaps in two), the race will be stopped and restarted with repaired equipment.

The stroke rate (the number of rowing strokes per minute that a crew is taking) is high at the start – maybe 45 to even 50 for an eight; 38 to 42 for a single scull. Then, the crew will "settle" into the body of the race and drop the rating back – 38 to 40 for an eight; 32-36 for a single. The coach and the way the race is going determine when the crew will sprint but finishing stroke rates of 46+ in the last 200 meters aren't unheard of. However, higher stroke rates are not always indicative of speed. A strong, technically talented crew may be able to cover more water faster than a less-capable crew rowing a high stroke rate.

Unlike canoe/kayak competitions, rowers are allowed to leave their lanes without penalty, so long as they do not interfere with anyone else's opportunity to win. An official follows the crews to ensure safety and fairness.

Despite the exhaustion of the race, the crew will row for five to 10 minutes afterwards in order to cool down. In rowing, the medals ceremonies include the shells. The three medal-winning crews row to the awards dock, climb out of their shells and receive their medals before rowing away.

The Stroke

The whole body is involved in moving a shell through the water. Although rowing tends to look like an upper body sport, the strength of the rowing stroke comes from the legs.

The stroke is made up of four parts: Catch, Drive, Finish and Recovery. As the stroke begins, the rower is coiled forward on the sliding seat, with knees bent and arms outstretched. At the catch, the athlete drops the oarblade vertically into the water.

At the beginning of the drive, the body position doesn't change – all the work is done by the legs. As the upper body begins to uncoil, the arms begin their work, drawing the oarblades through the water. Continuing the drive, the rowers move their hands quickly into the body, which by this time is in a slight "layback" position, requiring strong abdominal muscles.

During the finish, the oar handle is moved down, drawing the oarblade out of the water. At the same time, the rower "feathers" the oar – turning the oar handle – so that the oarblade changes from a vertical position to a horizontal one. The oar remains out of the water as the rower begins recovery,

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moving the hands away from the body and past the knees. The body follows the hands and the sliding seat moves forward, until, knees bent, the rower is ready for the next catch.

The Equipment

Oars

Oars move the boat through the water and act as balancers. Sweep oars are longer than sculler's oars and have wooden handles instead of rubber grips. The shaft of the oar is made of extremely lightweight carbon fiber instead of the heavier wood used years ago.

The popular "hatchet" blade – named because of its cleaver-like shape – is about 20 percent larger than previous blades. Its larger surface area has made it the almost-universal choice among world-level rowers.

The Boats – Sculls and Shells

All rowing boats can be called shells. Rowing boats with scullers in them (each person having two oars) are called sculls, e.g., single scull, double scull, quadruple scull. So, all sculls are shells but not vice versa! Originally made of wood (and many beautifully crafted wooden boats are made today), newer boats – especially those used in competition – are made of honeycombed carbon fiber. They are light and appear fragile but are crafted to be strong and stiff in the water.

The smallest boat – the single scull – is approximately 27 feet long and as narrow as 10 inches across. At 58 feet, the eight is the longest boat on the water.

The oars are attached to the boat with riggers, which provide a fulcrum for the levering action of rowing. Generally, sweep rowers sit in configurations that have the oars alternating from side to side along the boat. But sometimes, most typically in the 4- or 4+, the coach will rig the boat so that two consecutive rowers have their oars on the same side in order to equalize individual athlete power.

Race Watching

The crew that's making it look easy is most likely the one doing the best job. While you're watching, look for –

- Continuous, fluid motion of the rowers. The rowing motion shouldn't have a discernible end or beginning.
- Synchronization. Rowers strive for perfect synchronization in the boat.
- Clean catches of the oarblade. If you see a lot of splash, the oarblades aren't entering the water correctly. The catch should happen at the end of the recovery, when the hands are as far ahead of the rower as possible. Rowers who uncoil before they drop the oarblades are sacrificing speed and not getting a complete drive.
- Even oarblade feathering. When the blades are brought out of the water, they should all move horizontally close to the water and at the same height. It's not easy, especially if the water is rough.

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- The most consistent speed. Shells don't move like a car – they're slowest at the catch, quickest at the release. The good crews time the catch at just the right moment to maintain the speed of the shell.
- Rowing looks graceful, elegant and sometimes effortless when it's done well. Don't be fooled. Rowers haven't been called the world's most physically-fit athletes for nothing. A 2,000-meter rowing race demands virtually everything a human being can physically bring to an athletic competition – aerobic ability, technical talent, exceptional mental discipline, ability to utilize oxygen efficiently and in huge amounts, balance, pain tolerance, and the ability to continue to work when the body is demanding that you stop.
- Race times can vary considerably depending upon the course and weather conditions. Tailwinds will improve times, while headwinds and crosswinds will hamper them.
- If a crew "catches a crab," it means the oarblade has entered the water at an angle instead of perpendicularly. The oarblade gets caught under the surface and will slow or even stop a shell.
- A "Power 10" is a call by the coxswain for 10 of the crew's best, most powerful strokes. Good coxswains read the course to know how many strokes remain for their crew to count down to the finish.
- Crews are identified by their oarblade design. The USA blades are red on top and blue on the bottom, with a white triangle at the tip. Pocock blades are green with a gold chevron ('v' shape).
- It doesn't matter whether you win an Olympic medal or don't make the finals – each crew still carries their boat back to the rack.
- Coxswains from first-place boats worldwide are thrown into the water by their crews.
- Coxswains don't now and probably never did yell "stroke! stroke!" Similar to a jockey, their job is to implement the coach's strategy during the race, in addition to steering and letting the rowers know where they stand in the race and what they need to do to win.