

The Fundamentals of Rowing and How to Watch a Race

My two favorite descriptions of competitive rowing are: "Pulling on a stick to go backwards until you throw up", and "Rowing is the only sport that started out as a form of capital punishment." Now, if these are some of the sport's tongue-in-cheek slogans, why does it engender such passion? Or is it the passion that generates the slogans? If your child decides to stick with rowing, they will take pride in this type of humor, so it's worth it for you, as a parent, to understand what's going on when they row. As a parent, I have never seen so many kids so passionate about a sport and so happy to be part of a team.

The Fundamentals of Rowing

There are two types of rowing, sweeping and sculling. In sweep rowing, each rower has one oar and rows either on the left (port) or starboard (right). This is complicated by the fact that it's port or starboard from looking at the boat as it comes toward you. To the rower, a starboard side will have the oar on her left side. Confused? Just wait. In sculling, each rower has two oars.

The boats that are raced in junior (high school) racing are:

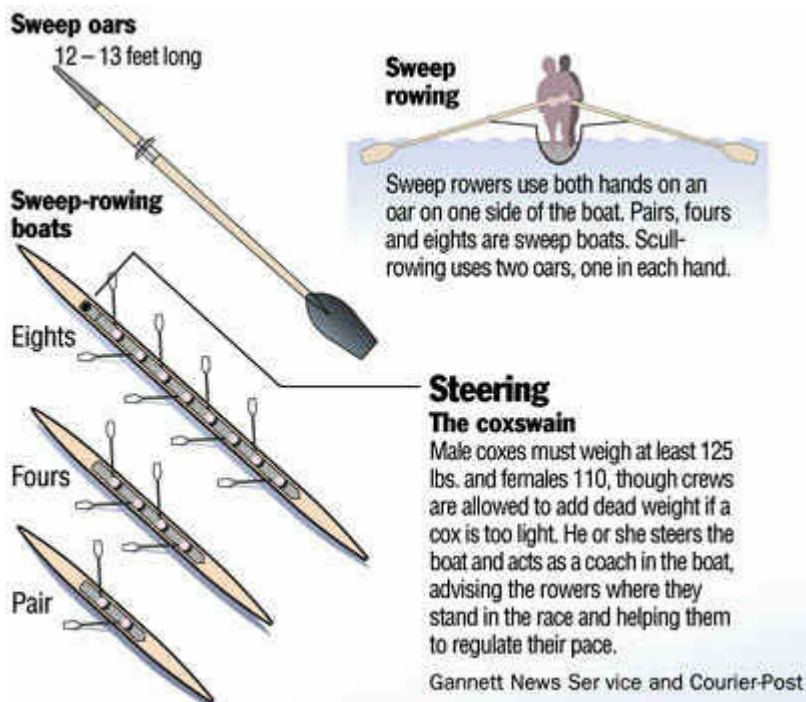
Sweep (one oar per rower)

- Pair, designated as 2- (we tend not to row these in the West). Two rowers, one rowing port, the other starboard. Difficult to row, especially for novices. Think of a "pair of oars."
- Straight four (no coxswain), designated as 4-. Four rowers; no coxswain, so considered a "blind boat". Not rowed much in the West.
- Coxed four, designated as 4+. Four rowers; two port, two starboard, with a coxswain.
- Eight (always has a coxswain), designated as 8+. Eight rowers, four port, four starboard, one coxswain.

Scull (two oars per rower)

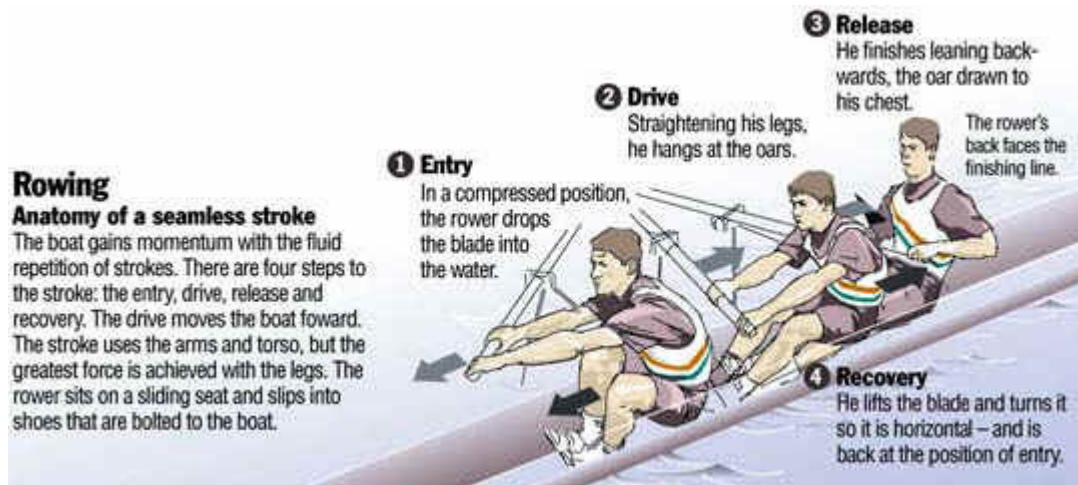
- Single, designated as 1x. One rower.
- Double, designated as 2x. Two rowers.
- Quadruple (Always referred to as quad) designated as 4x. Four rowers
- Think of the "X" as two oars.

While there are coxed pairs, doubles and quads, you won't see them in our regattas.



In many newer boats the cox is placed in the bow – good for forward visibility and weight balance, but have to “feel” the rowers. Traditionally the cox is in the stern (back of the boat). They can see the rowers but have less forward vision and different balance. They communicate via a speaker system (the “cox box”) or if not working, yell a lot.

The rowers in a boat have a designated seat. In an eight, the numbering system starts from the bow, which is the first rower to cross the finish line (backwards, remember?). So the seat designations are bow, 2 seat, 3 seat, 4 seat, 5 seat, 6 seat, 7 seat, stroke, coxswain. In a four or quad, the seats are numbered similarly, starting with bow, 2 seat, 3 seat, stroke (and coxswain in a coxed four). The stroke sets the pace, the middle of the boat is usually considered the power seats and the bow provides balance.



The Erg

You will hear a lot about the erg, so you should become familiar with it. The erg is the ergometer or indoor rowing machine. The Concept2 ergometer has become the standard and Concept2 sponsors the World Indoor Rowing Championships in Boston every year.



Concept2 Model D Indoor Rower

The erg is used for two purposes. One is to provide a way for rowers to stay in shape when weather or other issues preclude rowing on the water. The second is to provide a standard to compare rowers against others and for rowers to benchmark their individual fitness progress.

The standard test on the erg is to row 2,000 meters (a 2K), in the best possible time. It is literally one of the most exhausting and formidable tests done in any sport, but has its own perverse appeal. When one is doing a 2K, there is a little screen on the erg that shows your progress; meters rowed, time elapsed, etc., but it also includes your average time for 500 meters. This number becomes important, because maintaining a 500 “split” becomes the psychological goal that helps keep you going when your body says “stop”. In a 2K race, a 2:00 split indicates a 2K time of 8:00 minutes. Depending on the size and physical condition of the rower, you will see boys do a 2K time anywhere from the 6:20’s to the 7:20’s. (a split from 1:35 to 1:55). Girls will be a minute or so slower, with splits from 1:50 to 2:05.

Take my word for it; that last 500 meters of a 2K are a real test of both physical and psychological endurance. Your muscles are filled with lactic acid and are screaming to stop. But your mind keeps you going. Making it through and reaching a new goal is both exhilarating and agonizing, but 10 minutes later, you’re planning your next one.

There are indoor rowing competitions all over the country. The San Diego Rowing Club sponsors one every February and all our rowers will row in it. Some rowers take it to another level and also enter the World Indoor Rowing Championships in Boston, which take place in March. Concept2 will pay the travel expenses for up to four rowers in various age/weight classes if they meet a certain minimum time standard. This past year we sent four rowers to Boston, and came away with two medals, gold and a bronze.

One more item of note: there is a formula used to compensate for the difference in rower's weights. It's a sophisticated machine, but basically, the bigger you are, the harder you can pull and the better erg time you will have. But on the water, the heavier you are, the more water you displace, so the harder you have to pull. Consequently, the erg formula allows rowers of different weights to be directly compared, so that, by way of example, a 200 lb. rower that pulls a 6:30 is equivalent to a 175 lb. rower who pulls a 6:41.5. (This will mean more to you later).

Regattas

There are basically two types of racing, head races and sprints. A head race, which is normally raced in the fall, is a race anywhere from 3,000 to 6,000 meters in length. There are no designated lanes; rather, the rowers are started in staggered starts, usually 10 seconds apart, and row for time. When we row the Fall Classic, the Row for the Cure and the Head of the American, these are head races. The head races on Mission Bay run almost 6,000 meters and run a pretty convoluted course.

The sprints are 2,000 meter races (about 1.25 miles for the metrically challenged). The courses are sometimes laned (in the larger races, like the Crew Classic and SW Regionals) and have a start line and finish line. In a typical race there are 3-6 boats per heat, depending how many entrants in the race. You will sometimes see only 2 boats in a sprint race but you may see as many as 7.

A typical junior sprint race will take about 6 ½ minutes for the eights and as long as 10 minutes for a single. By comparison, world records for the eight are 5:18 and, for the single, 6:45.

How to Watch a Race

If your child was ever a swimmer and you went to swim meets, you have some idea of what a regatta is like. But instead of 50 meters, the race is 2000 meters long, so the first advice is to bring binoculars.

Here's what happens in the race; the official (the Starter) calls the boats for each race to the start line. In most races, there are either stake boats or fixed docks that the rowers back into and a stakeboat holder holds their stern. There is another official, the Aligner, who is usually on the shore or on a dock by the shore, who is guiding the rowers (and stakeboat holders) to align the boats. He/she aligns the bowballs on a visual line defined by a fixed wire on the Aligner's side and a point of reference on the opposite shore. In good systems, the boats are lined up perfectly and parallel with the finish line. In some of our events the start will be a "floating start", meaning there are no stakeboat holders. The Aligner guides the boats to the start and visually does his/her best to ensure all boats are about even at the start.

Once aligned, the Starter gives the commands, "Attention", (pause), then "Go!" and drops a red flag as he/she says go. This is the signal for the rowers (who are all facing the starter) to begin rowing. If any boat starts before the flag is dropped, the race is halted and they start over. Each boat gets only one warning. A second warning results in exclusion from the event.

The first 100 meters of the course is the "breakage zone", meaning if any part of the boat breaks, the race is stopped and restarted. Once out of the breakage zone, however, the race goes on.

The rowers start the race at a very high stroke rate, 40 strokes per minute or higher, then quickly settle into the race pace, usually around 26-34 strokes per minute. With anywhere from 250 – 500 meters to go, the boats will begin their sprint to the finish, depending on how competitive the race is. What you should know is that in a competitive, hard race, your rower is probably in an

anaerobic state by now. This means they've basically used up the oxygen in their muscles and are starting to really build up the lactic acid. So they are rowing in ever increasing pain. And they're doing this, if they're doing it right, with perfectly even strokes, so that it almost looks effortless. But watch them when they finish. This is where, in some extreme cases, they have "pulled on a stick to go backwards until they throw up". Truthfully, I have never seen anyone throw up after a race, but I have seen kids totally spent. (Wait until they do the Indoor Classic to see real pain close up.)

As they come down the course, there are one or two officials (Referees) in launches, making sure that boats don't interfere with one another and that the race is run fairly. Of course, their primary function is to ensure the safety of the rowers. Boats, especially singles, have been known to flip on the course.

So how do you watch this race? First, make sure you know what your rower's uniform looks like, what seat they row in, and what lane their boat is in. SDRC rowers wear red and white tops. The oar blades are white with red stripes. Your rower can usually tell you what color their boat will be for that particular race and what seat they are rowing.

If you are at the finish, you will be able to see them about 750 meters from the finish line. In close races, the angle will be deceiving, so you may not necessarily be able to tell what place your rower's boat is in. Things get exciting at the 250 meter mark. As you get to understand rowing, you will be able to watch the boat and tell whether they are rowing well – are they dropping the oars evenly at the catch? Is their stroke fluid and long? What's their stroke rate? (Here it helps to have a rowing watch which actually calculates stroke rates – only they cost about \$60).

In some of our races, you might want to spend time at the start, just to see how they begin the race and see how they row the first 200 or so meters. Other venues, such as Sacramento, give you the opportunity to get up high on a bluff and watch virtually the whole race. At the Crew Classic, most of the race is shown on a Jumbotron screen. Of course, the ultimate way to see a race is from the seat of a referee's launch. San Diego is looking for more referees, so if you want to volunteer, they'd love to have you. You can help at the start, at the finish (as a timer) and on the water. In any event, whether you're watching at the finish or anywhere along the course, don't forget to cheer your brains out. They may just hear you and that little extra encouragement helps get them through the race.

Sometimes the order of finish is not what your rower will remember. What's important to them is *how* they rowed. As they gain experience, they will tell you the good (probably just to say it was "a good row" – rowers are humble) or the bad ("I was late to the catch", or "we weren't together", "we couldn't get the rate up", etc.).

Rowing is the ultimate team sport. As your rower gets better and more competitive, you will be amazed at how graceful and fluid they look on the water. Just realize that what they're doing was originally a form of capital punishment.