Wolfson College Boat Club

Coxes' Guide

2018-19

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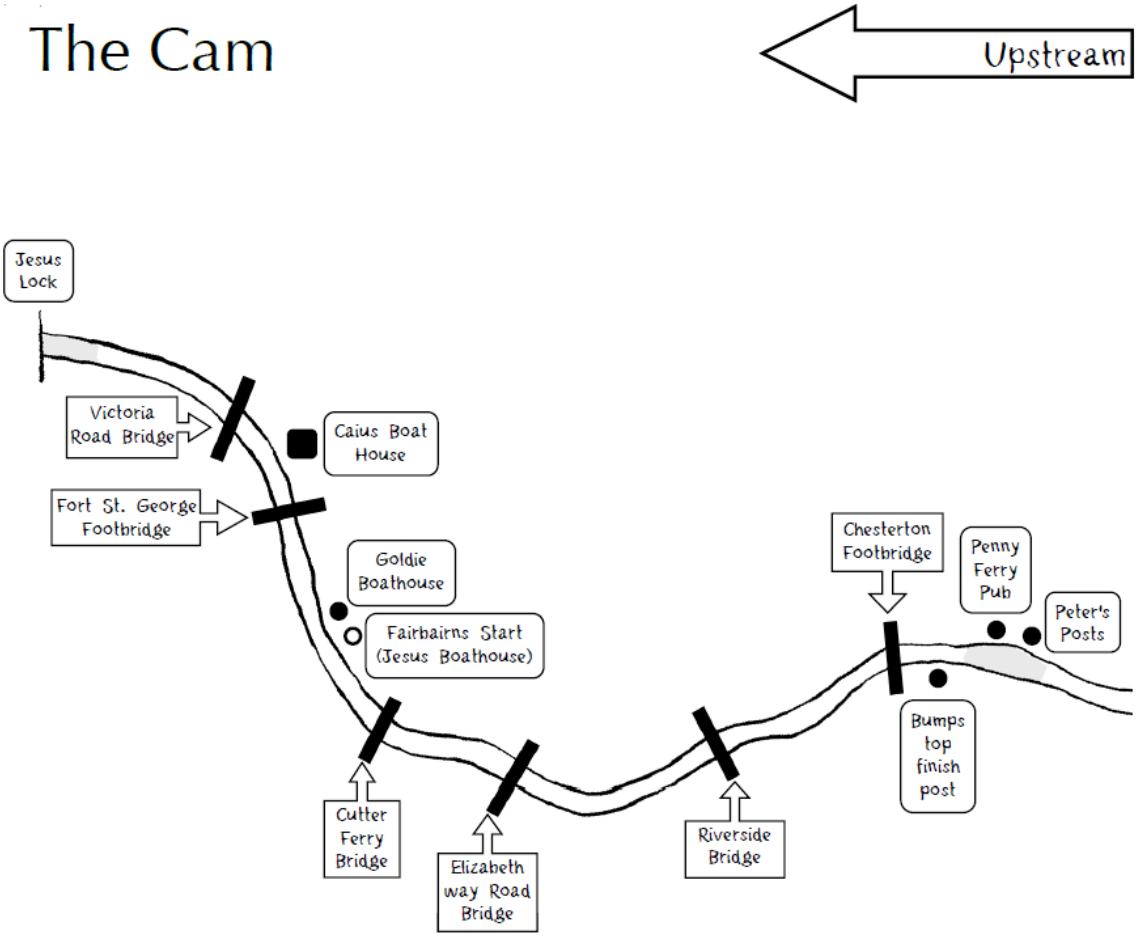
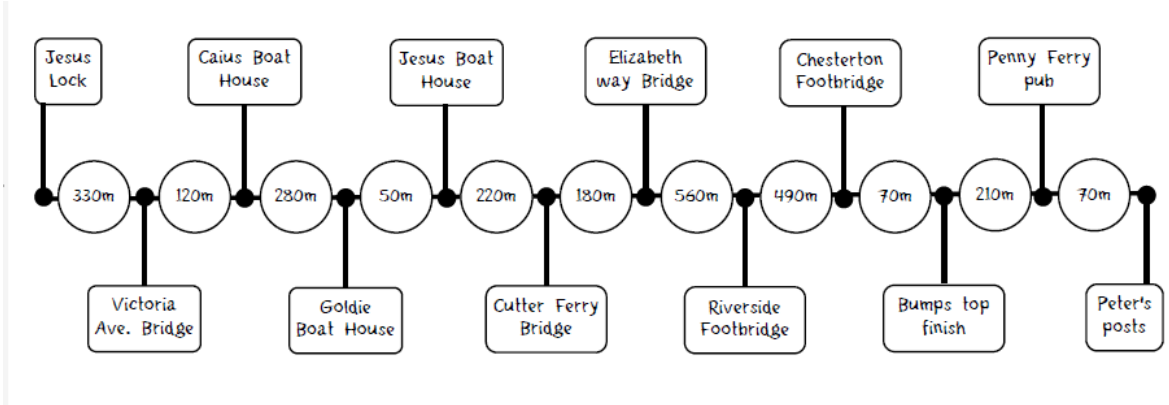
If you have any questions or concerns, please e-mail the relevant committee member as soon as they arise.

This document is a compilation of material found online and in existing handbooks, and citations can be given on request. For ease of reading, they have not been included.

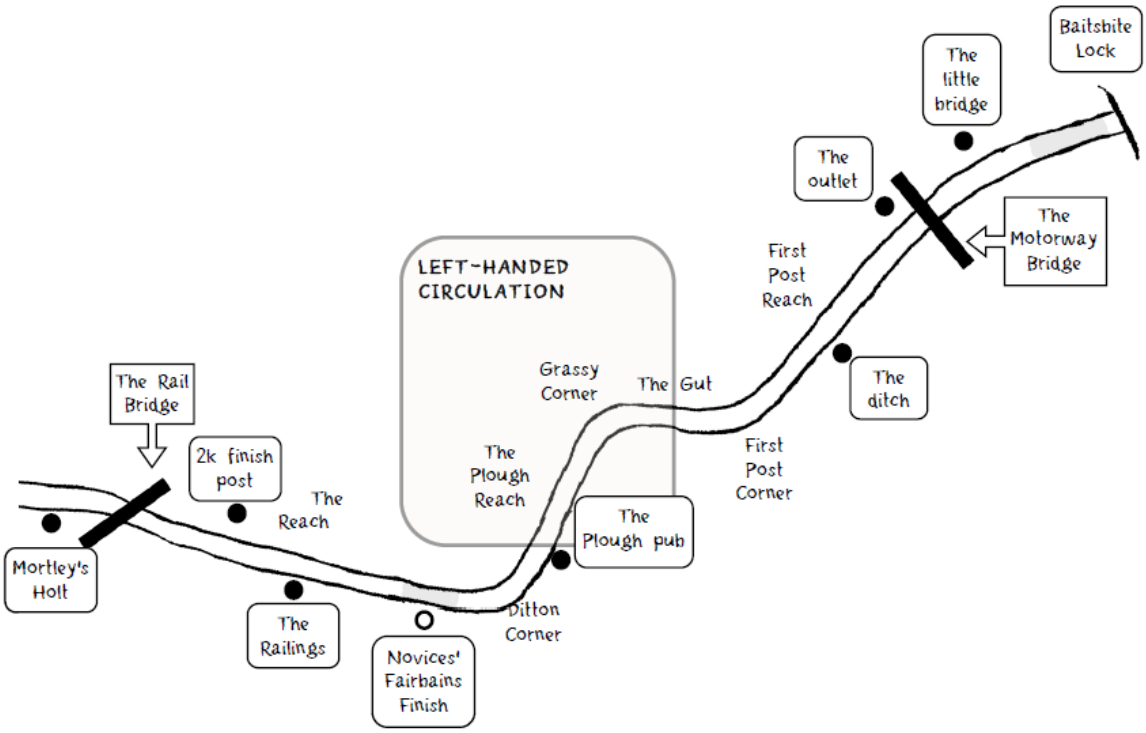
Map of the Cam

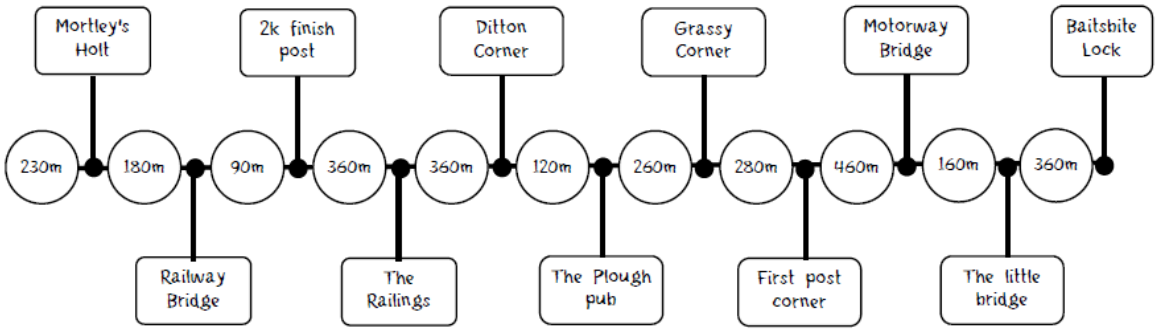
It is essential that you are familiar with the River Cam! If the rowers are a boat's engine, you are the driver, steering wheel, and mirrors combined. Knowing the route ahead, and being able to visualise your coaches' outing plans, will be a big help.





Downstream


Baitsbite Lock
The little bridge
The outlet
The Motorway Bridge
First Post Reach
LEFT-HANDED CIRCULATION
The ditch
Grassy Corner
The Gut
The Rail Bridge
2k finish post
The Plough Reach
First Post Corner
The Reach
The Plough pub
Mortley's Holt
The Railings
Ditton Corner
Novices' Fairbains Finish


Mortley's Holt
2k finish post
Ditton Corner
Grassy Corner
Motorway Bridge
Baitsbite Lock
230m
180m
90m
360m
360m
120m
260m
280m
460m
160m
360m
Railway Bridge
The Railings
The Plough pub
First post corner
The little bridge

Safety

Safety is the first priority of Wolfson College Boat Club. Collisions, capsizing, and taking risks can cause serious injury or even death to crew members, and can also damage our equipment.

Coxes must ensure that:

- They are familiar with the safety precautions of the boat club.
- They follow the CUCBC rules during term time, and take appropriate precautions out of term time, i.e. when the flag is not operational.
- They know the Cam's traffic patterns.
- They remain calm and demonstrate leadership in the event of trouble.
- They are properly dressed for the outing, and have their life-jacket properly fastened.
- They always watch for changing weather conditions and return to the boathouse or dock at the bank in the event of excessively threatening weather (lightning, high winds, sudden change in wind or water conditions.).
- They exercise good seamanship (i.e. turning in windy or rough water, rowing into the wind at not less than a 45 degree angle [quartering] etc.).
- They ensure the equipment under their control is in safe condition (i.e. ensure oarlocks properly fastened, bow-balls are attached, there are no holes in the decking that may allow water in, that shoes are tied loosely with the heel tied down to allow for quick release, cox box and microphone are functioning, etc.).
- They are comfortable pushing off in the given conditions and executing any drills prescribed during the outing.

When in doubt, stop.

This rule applies both on and off the water – when lifting boats off the rack, lowering the boat into the water, steering, training and racing.

A good general tip is to use your:

- **Eyes**: check ahead for obstacles and potential hazards
- **Ears**: listen for hazards such as barges and motorised boats, thunder, or crews shouting 'hold it up!'
- **Hands**: check the boat and the fun physically to make sure they work
- **Voice**: guide your crew in a firm, confident manner, and communicate with your bank party

Before you hit the water:

- **Check the weather** using cambump, other weather sites/apps, or the radio.
- **Inspect the boat:** is the bow ball firmly attached? Do you have lights? Are the watertight joints sealed? Does your cox box work?
- **Check the crew:** can hear you, are *listening* to you, have checked their equipment (gates, rigging, shoes,) has water and a post-outing snack.

What to do in an on-water emergency

Rower injured
Immediately command 'hold it up!'
Signal to your bank party if first aid or a flotation device is required
Drop the injured rower's pair out, and return the crew to the boathouse.
The rower's pair can then provide assistance e.g. holding the other blade, passing water to the rower, if needed.

Minor kit problem
(E.g. footplate or seat becomes dislodged)
Drop out the rower's pair and hold it up.
Assess what the problem is – can you fix it or live with it? Check with your bank party. If it is fixable, pass the tools required to the rower, and have the boat set while they carry out repairs. Dock to do this if possible.
If the problem is beyond repair and cannot be tolerated, drop out the rower's pair and return to the boathouse. Leave the boat on trestles for repair.

Shell damaged but afloat, and *not* taking on water
Immediately command 'hold it up!'
Signal to your bank party and dock at the bank if needed.
Make adjustments (e.g. dropping out a pair, carrying out minor repairs) and attempt to return to the boathouse in a way you and your bank party deems safe.

Shell taking on water (i.e. sinking!)
Immediately command 'hold it up!'
Assess the extent of the problem, and whether you can safely row home or dock. Whenever possible, dock at the bank.
If the boat is suddenly swamped and on the verge of going under, the rowers should carefully, but quickly, slip out of the boat in pairs, starting from the middle of the boat. Once in the water, rowers should 'buddy' with their pair to ensure each rower reaches the bank. The cox should buddy with stern pair, and inflate their life jacket before entering the water. It may be advisable for the cox to remove shoes or clothing if there is time to do so.

Rower overboard

Occasionally, rowers can be pushed from the boat as a result of their oar 'catching a crab', hitting the rower in the ribs. The force of the oar can be enough to throw the rower from the boat, and can sometimes result in injury. In this event, rowers need to execute extreme caution and work together as a team to ensure that their fellow rower returns to the water's edge or the boat safely.

- If a rower is thrown from the boat, hold it up and ensure that blades on the rower's side are not a danger to them.
- Locate the position of the rower, and ask if the rower is hurt.
- If the rower is hurt and needs assistance, the coach will help the rower from the water using a flotation device, or the rower may be able to swim to the bank.
- The coach should provide initial first aid and call for help if required.
- The cox should ensure that the remaining rowers are in seat positions able to return to the bank.

If the rower is uninjured and is able to return to the boat, the crew will stabilise the boat at the bank, allowing the rower to re-enter the boat.

The Rowing Stroke

The rowing stroke can be divided roughly into four actions, which use every large muscle group in the body, and the illustrations below show the primary muscles used during each movement of the stroke. The Biomechanics of Rowing gives a more detailed analysis of this.

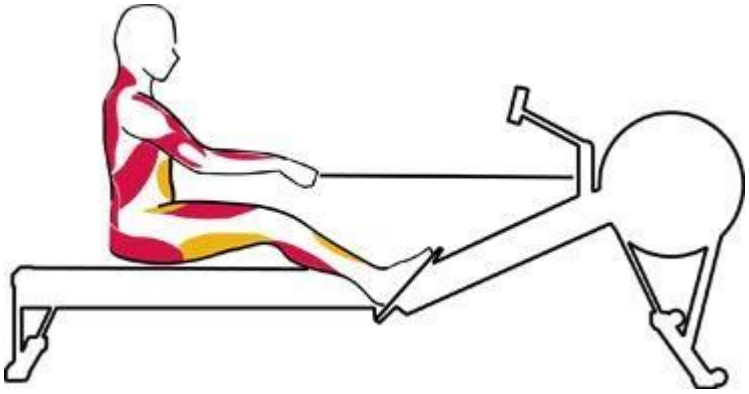
The Catch

- Arms are straight; head is neutral; shoulders are level and not hunched.
- Upper body is leaning forward from the hips with the shoulders in front of the hips.
- Shins are vertical, or as close to vertical as is comfortable for you. Shins should not move beyond perpendicular.
- Heels may lift as needed.

At the catch, your legs are compressed and your shins are vertical. Your triceps work to extend your arms, and the flexor muscles of your fingers and thumbs grip the handle. Your back muscles are relaxed, and your abdominals are flexing your torso forward.

The Drive

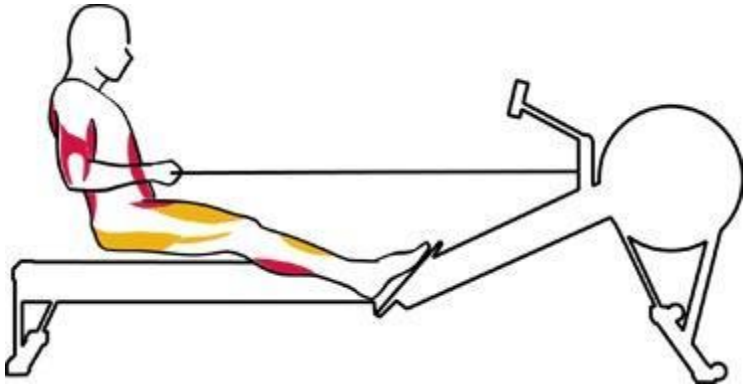
- Start the drive by pressing with your legs, and then swing the back through the vertical position before finally adding the arm pull.
- Hands move in a straight line to and from the flywheel.
- Shoulders remain low and relaxed.



You initiate the drive with the powerful muscles of your legs, and all of the shoulder muscles are contracting. As you work through the drive sequence, your biceps engage to pull the handle toward your abdomen, your back muscles work more as you swing your torso open, and your glutes and hamstrings contract to extend the hip. As the drive finishes with the arm pull-through, nearly all the muscles of your upper body engage.

The Finish

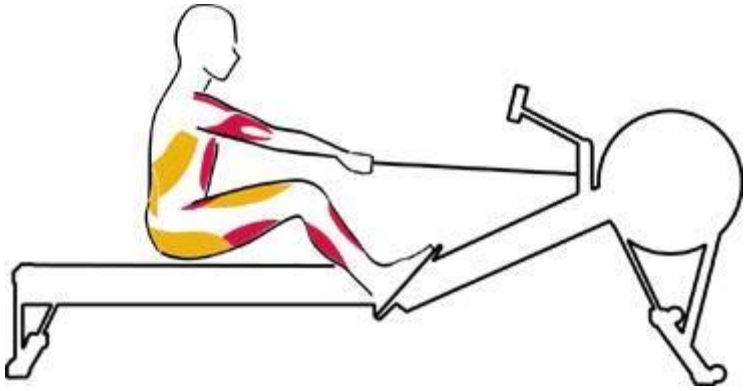
- Upper body is leaning back slightly, using good support from the core muscles.
- Legs are extended and handle is held lightly below your ribs.
- Shoulders should be low with wrists and grip relaxed. Wrists should be flat.



At the finish, the abdominals stabilize the body, and the glutes and quads are contracting. The biceps and many of the back muscles are also contracting to help keep the torso in the finish position and to internally rotate the upper arms.

The Recovery

- Extend your arms until they straighten before leaning from the hips towards the flywheel.
- Once your hands have cleared your knees, allow your knees to bend and gradually slide the seat forward on the monorail.
- For your next stroke, return to the catch position with shoulders relaxed and shins vertical.



The triceps engage to push the arms forward and away from the body. The abdominals flex the torso forward, and the hamstrings and calves contract as you slide up to the catch.

Coaching from the Cox's Seat

This is just a rough guide of things that you can help fix from the cox's seat and the calls to make to fix them, hope it's useful. This is not exhaustive and you will also notice an overlap of problems and how they can be fixed. And most importantly, just remember to have fun!

Timing

Call the catch and finish timing from the stroke man/woman's as they catch.
Call: Catch (sharp and quick tone to emphasis a quick catch); tell the rowers if they are early or late and which part of the stroke to focus on if you can tell what the reason is for them being out of time; Watch and follow; Follow the body movement of the person in front of you; Rock over in time; Watch the outside elbow of the person in front to see when they catch.

Another thing to look out for is **square timing**. If the rowers square too late, this will affect their catch and sometimes means that their blade will go in at the wrong angle.
Call: Remind them to square as their hands go over their knees and that they should be squaring with their inside hand. If stroke is squaring nice and early, then call out the square timing with stroke's timing.

Balance

Down on one side of the other
- Quite easy to see which side it's down on if either stroke or bow side is constantly dragging their blades on the water.
Calls: Tell the side that's down to raise their hands and make sure they aren't drawing into their laps and tell the other side to lower them and make sure they tap down.
Calls: Also remind the rowers to put pressure on their oars against their gates, this helps with the balance and also gives them better control of the blade.

Wobble on the slide
Calls: Keep your body weight central; when you rock over, transfer your weight to your feet and use your feet to balance; keep your hand heights level.

Wobble or crashing down on either side at the catch
Calls: Hold the core strong, don't collapse at the front; drop the blade in, don't chop it in; keep the catches quick but light.

The recovery

Rushing

- If there is rushing, you should feel the check on the boat every time they rush into the catch. It sort of feels like a jab in the back when it's a high rate and gets really bad.
- If you look at the blades, you can see if stroke is being rushed by seeing whether he is a full slide and catching or forced to catch early as a result of the others rushing.
- By looking at the angle of the blades, you should be able to spot the culprits of slide rush as their blade will at an offset angle relative to the others.

Repeat calls: Slooooooooow (say this as they are coming forward on the slide, emphasising it slowly), Catch (say this as stroke catches; this in contrast should be said with a sharper tone with a slight uplift in pitch)

Calls: Relax on the way forward; don't drag yourself up the slide using your shoes; glide up the slide; watch and follow; control up the slide; make sure you're not going up the slide faster than the person in front of you; make sure the rock over and arms away happen before you move up the slide; keep your knees soft on the way forward to stop yourself rushing.

Ratio

- If the ratio of the stroke is wrong e.g. 1:1 ratio of recovery:drive then you can help by calling it

Repeat calls: 1,2,3 (during the recovery), 4 (during the drive) so that they are rowing in time with your counting and therefore spending 3 times as long on the recovery to 1 on the drive.

The catch

You want the rowers to be catching on the way forward as part of the recovery and not at the start of the drive phase going back. Look out for even V-splash around the blade and a build-up of pressure (looks like a bubble surrounding the spoon of the blade) for a good catch.

You can see **hesitation at the catch** if the blade reaches front stops and pauses before they catch, this usually means that they've rushed to front stops and are waiting for the others to get there before catching. The result is that they will be late in catching and catching on the way back instead of as part of the recovery.

Calls: Let the rower(s) know if they are hesitating and encourage them to catch on the way forward. Remind the rower(s) to use their outside arm to drop the blade in at the catch.
Call: Catch (quick and sharp tone to emphasis the quickness of the catch)

Skying blades before the catch

- Another common problem is that the rowers will sky the blades before they catch. What you see is their blade goes up in the air before they lower the blades towards the water. What they're doing is dropping their handle height as they come forward before raising their hands to catch. This will almost always result in a late catch as the blade has a lot more space to travel to get to the water.

Call: Remind them to keep their hands level on the recovery and that they should raise the outside arm as they get towards front stops to get the blade in.

The finish

Washing out

- If you see blades popping out early, they could be "washing out", this is usually the result of the rower drawing the blade in towards their lap, which reduces their stroke length and causes the blade to come out early.

Calls: Draw in level towards your chest; keep the blade level from catch to finish; don't draw in towards your lap

- Another reason could be that they're not drawing in all the way close to their body and are finishing their strokes early.

Calls: Hold the finishes in; try to keep your blade in the water for longer; draw the blade closer to your chest

Yanking

- If the rowers are yanking the blades at the finish you might feel a jerk in the boat at the end of each stroke.

Calls: Stay loose, let your legs do the work, the arms are just to guide the blade at the end of the stroke; keep the shoulders level throughout the stroke

The drive

If the rowers are putting power on at the same time, you should feel the surge in power at the same time during the drive phase.

This is harder to cox as you can't really call the timing on this. You should let the coach know so the crew can work on putting the pressure on at the same time.

If the boat suddenly feels heavy and isn't moving as fast, this means that not everyone is pushing hard as before.

Calls: Remind them to keep the pressure on in a positive way. Or ask for a push or build for 10 to get the boat going and then ask them to keep the pressure on/there.

When to use the rudder

- It's best to put the rudder as the blades go in the water as this disrupts the balance and boat speed the least. Of course, this might not always be possible, but this is something to work towards.

Digging

- This is when more than the spoon is immersed in water and will actually slow the boat down as well as affect steering.

Calls: Draw in level; keep the blade level from catch to finish; keep the shoulders level.

Crabs

- If you notice a rower catch a crab, try to guide them out of it but getting them to lie flat and twist the oar and tap it down and out of the water.

Call the catch timing to get the others to stay rowing in time as crabs usually cause an upset in rhythm as well. It is important that the rowers continue rowing if this happens during a race.

- If the rower(s) recover from the crab, help call them back into the stroke sequence so they don't disrupt the rhythm.

Blade clash

- If during training, ask the rowers to stop rowing and try to move away from the other boat as quick as possible by using the outside pairs.
- In the event of blade clash during a race, keep rowing unless the marshals tell both crews to stop or in the event of an emergency as this can make the difference between winning and losing a race. Try to steer the boat away from the other crew and keep your crew calm, and reinforce the rhythm by calling the catch and finish timing.

Calls: Eyes forward; eyes in the boat; focus on our race.

Racing Calls

As a rower, I personally quite like it when the cox asks which calls we would like for a race. And as a cox, it's good to know what makes the crew respond so this is where I would start.

Always, keep it positive. E.g. instead of saying the catches are late, say let's sharpen up the catches or let's bring those catches forward.

Give the rowers feedback of where we are in the race and motivate them accordingly.

Here are some useful ones:

General

- Push for 10 (Power 10, power 9, etc; count down or up depending on preference)
- Long and strong
- On the legs
- Legs, send
- Send, away
- Hook, send
- Push away (from the bridge)
- Lock, lever
- Legs, press
- Squeeze through
- Focus on catches for the next 10 (Catches 1, catches 2, etc)
- Final strokes of the race, line in 10, line in 9, etc
- Last 100 m, ready, GO
- Sharp in, sharp out
- Build 1, build 2, etc

Windy conditions:

- Sit up tall into the wind
- Stay relaxed, shoulders level
- Keep control of your blade, don't let the wind play with it
- Get the catches in
- Sharpen up the catches

Personal favourites:

- Let's crush their dreams right NOW (when we are neck and neck and we want to break free and gain on the other crew)
- Push for clear water (when we are ahead in a regatta and you want to push for a full length ahead)
- I'm on their stern, give me their X seat (use this when you're close to the other crew and you want to gain length; this is really useful as you give the rowers something to work towards in terms of incremental lengths which is achievable and motivational when they deliver). You can then continue to ask for another seat and so forth.

- Let's grow stronger as we get closer to the line

Warming Up and Cooling Down

Pre-race warmups are probably one of a coxswain's most variable tasks. There are often constraints that may force your crew to modify the warmup. The body of water may not be large enough — or be too crowded with boats — to allow room for all the drills, tens, or practice starts you would like to do. The warmup itself will depend on how much on-land warmup you do (runs, erging), as well as the air temperature.

The mental part of the warmup is every bit as important as the physical part.

Purpose of the warmup: to get the heartrate up, increase the blood flow so that the blood can carry more oxygen to the muscles, and to get the muscles warm and flexible (break a sweat.) It is also to get your rowers mentally focused, tuned into listening to your voice, and feeling themselves part of the boat. The warm-up should be rooted in a down-to-business attitude from the moment the crew gets hands on the shell.

Crews usually warm up by rowing in fours or sixes, rolling the changes through the boat to build a sense of rhythm without affecting boat balance too much. Warm-ups can be done in all eight, however it's not usually worth it with all the traffic that builds up around the boathouses as everyone scrambles to get onto the reach.

Always ask your rowers how they feel to check that they are properly warmed up – phrases like, "we have room for another ten, do you want it?" (assuming of course that there is space on the river/ in our outing plan) are a good way to check physical and mental energy levels in both warm-up and cool down.

Allow time for light paddling between the warmup and the start in order to **purge the CO2**; remind your rowers to stretch. Once your rowers are warmed up, keep them warm. You may have to paddle in place by pairs or do something creative to keep them moving in cold weather or while waiting for a race – the YMCA is often seen when marshalling!

A common warm-up exercise used in most outings, particularly at the start of terms is a **slide build** (also known as a pick drill). This involves rowers slowly lengthening their slide over several strokes, usually by progressing through six stages in succession, which helps them focus on separation and the individual importance of each part of the stroke.

Calling the exercise

Rowers should spend 10-20 strokes on each stage of the exercise. 20 strokes at the first stage will be over much faster than 20 strokes at the last, so have more strokes at the first stages. 20-20-15-15-10-10 is a good distribution.

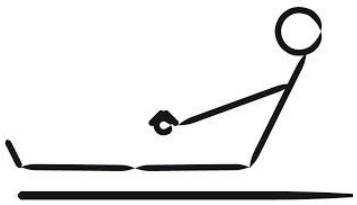
To start the exercise call: "*bow four* [or stern four], *from backstops, arms only, ready, go*!"

Once the set number of strokes has elapsed (and the crew have started to get a good rhythm) call: "*Switching to arms and bodies, ready, go*!" [or the next stage of the exercise]

Stages of a slide build

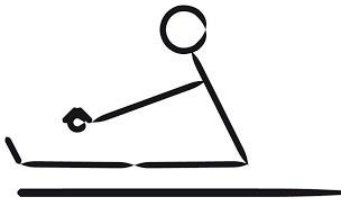
1: Arms only

Rowers sit at backstops and row using just their arms. They usually have to do this quite quickly as the arm stroke is very short. It may take them a while to actually start doing it in time with the boat balanced.



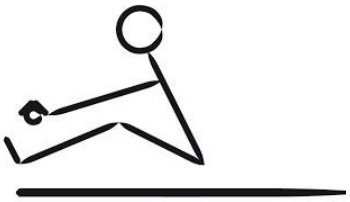
2: Arms and bodies

Rowers sit at backstops and row using just the 'arms away' and 'bodies over' motions.



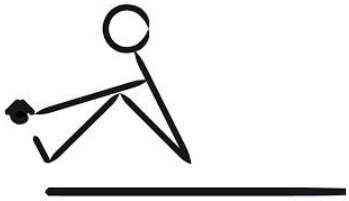
3: Quarter slide

Rowers move ¼ of the way down the slide, only slightly bending the knees. Alongside the ¾ slide stage, this is sometimes missed out of the slide build, though less frequently.

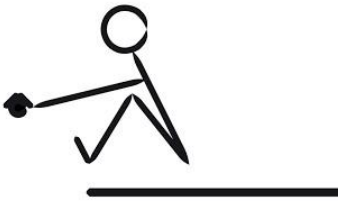


4: Half slide

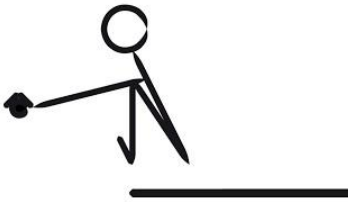
Rowers move to ½ the distance across the slide, and the blades are usually approximately perpendicular to the hull of the boat at the catch. Knees should be bent but not fully, approximately to right angles.



The rowers move around ¾ of the distance across the slide, and do not fully compress their legs. Most rowers either overestimate or underestimate the amount of compression required for ¾ slide. Ideally the calves should be touching the thighs, but the shins should not yet be vertical. This stage is sometimes skipped in a slide build drill.



6: Full slide



The rowers move the full distance across the slide and drive phases with maximum compression of the legs at the catch. The shins should be vertical at the catch.