

Welcome to the World of Rowing at Whakatane Rowing Club...

Rowing is a sport in which athletes race against each other in boats, on rivers, on lakes or on the ocean, depending upon the type of race and the discipline. The boats are propelled by the reaction forces on the oar blades as they are pushed against the water. The sport can be both recreational, focusing on learning the techniques required and competitive where physical size and overall fitness plays a large role. It is also one of the oldest Olympic sports.

While rowing, the athlete sits in the boat facing toward the stern, and uses the oars which are held in place by the oarlocks to propel the boat forward (towards the bow). This may be done on a canal, river, lake, sea, or other large body of water. The sport requires strong core balance as well as physical strength and cardiovascular endurance. There are two forms of rowing:

- In sweep or sweep-oar rowing, each rower has one oar, held with both hands. This is
 generally done in pairs, fours, and eights. In some regions of the world, each rower in a
 sweep boat is referred to either as port or starboard, depending on which side of the boat
 the rower's oar extends to. In other regions, the port side is referred to as stroke side, and
 the starboard side as bow side; this applies even if the stroke oarsman is rowing on bow
 side and/or the bow oarsman on stroke side.
- In sculling each rower has two oars (or sculls), one in each hand. Sculling is usually done without a coxswain, in quads, doubles or singles. The oar in the sculler's right hand extends to port (stroke side), and the oar in the left hand extends to starboard (bow side).



What is expected of the Rower?

With rowing, satisfaction comes when you do it right - and to get it right you must commit and give it your best shot. Coaches know the work you need to do to get results. The harder you work on the water, the more you concentrate every session, the fitter you will get, the better you will get and the more success you will have.

Rules for rowers are strict and expectations are high. Each rower in a boat is essential for the functioning of that boat. Faithful attendance at all practices and competitions is extremely important. Although an occasional absence is inevitable due to illness or other crisis, a rower must learn to place the needs of the crew ahead of personal convenience. Being on time is also very important; if one crew member is late to practice the rest of the crew can do nothing.



Coaches' expectations of athletes are that rowers will:

- Question when unsure
- Work hard and play hard
- Act in a respectful manner when dealing with any coaches
- Be at training at least five minutes before the scheduled start time, with appropriate gear.
- Make a dedicated effort at training, for the benefit of oneself and one's crewmates.
- Make every effort to notify the coach of an absence from training.
- Remember that all members of a crew have a joint responsibility for the behaviour of others in that crew, and are asked to advise coaches immediately of matters that may cause concern.
- Know that success will depend on a sense of responsibility and commitment for oneself and others.
- At all times, the good of the whole team is paramount and there is no place for wilful, selfish or individualistic behaviour.
- Demonstrate appreciation of help given by parents and coaches.
- Behave with common sense, decency, good manners and consideration for others.



Coxswains

While rowing is a sport which favours those with a bigger physique, the most important member of the crew is the smallest; the coxswain. This is the person who controls the boat, how fast or slow it goes, what direction it goes in, and what the crew does and when. In short they are the "Captain" or "Assistant Coach" of the boat.

For coxswains, the lighter, the better. However a coxswain certainly doesn't need to be a lightweight in the voice, brains, or personality department. Off the water, the cox controls the launching and retrieval of the boat. The cox must have a very clear plan of what is to happen, and communicate the steps in that plan to the crew at the appropriate time, in a very loud, clear, no-nonsense voice. Crews MUST, and WILL listen to their Cox. Most importantly the coxswain must steer a straight course - a straight course is the shortest course!!



Coxswains Responsibilities



- Weigh in at the start of the regatta (55kg for Club regattas, 50kg for School regattas except U18 events where it is 55kg)
- Have your life jacket with you before getting in the boat!
- Have a cox box (megaphone system)
- Carry or assist with rowers socks and drink bottles while they carry boats
- Have spanners round your neck in the case of any technical difficulties i.e. loose rigger/ loose slides (10mm spanner and small adjustable spanner).
- Be entirely aware of your crews boat number, race time, heat, lane number and position
- Do not stress the crew but rather take them into your hands and guide them through the race. You and the crew will have been given a race plan and practiced it.
- It is essential that you remain focussed, positive, and aware and furthermore, drive the crew to the finishing line. There is nothing worse than a quiet coxswain.

A Coxswain is just as important as the Rowers



Crew Selection

The coaches seek to place rowers in boats, which give them the best chance of success. It is very important to remember that size is only one small factor in rowing, technique, attitude and a dedicated approach to training will do far more for creating successful crews.

The coaches will pay as much attention to "off water" activity as they do to "on water" ability when selecting final crews. Selection of crews is never easy, but it is left to the coaches. They have the say about which boats you will row (both in training and at regattas). If you are not selected for a particular crew, please take a longer term view of the situation, realising that everyone grows and matures at a different age/rate, and that the emphasis should be on personal and crew improvement over the season looking ahead to the next.

"Seats" are not guaranteed and could change right up to just before any regatta. The coaches have the discretion to change line ups at any time if they feel someone has fallen off pace or improved and deserves a chance to change crews. Up until that time there will be much shuffling in order for the coaches to see and assess how far the rowers are progressing.

Training

Rowing races last about 8 minutes - a difficult time - not a sprint and not long distance. The energy for a race comes from the aerobic system (80%), and anaerobic system (20%). Aerobic capacity is the amount of work you can do without losing your breath and getting lactic acid build up in your muscles. For this reason 80 to 90 percent of our training is to improve aerobic capacity. We do this by way of long steady work sessions (30 minutes plus) at low ratings, as hard as possible while still keeping good breathing patterns. Over a period of months then years this continually improves blood supply to rowing muscles and the efficiency of the muscles themselves. As the season progresses the training will also include power and speed work.

The rowers will do circuit based weight-training which will increase their strength and endurance. The program is focused on the muscles used in rowing as well as some work for muscle balance. We place a high priority on correct technique. Training for senior boys in particular also have a focus on strength development, to help them maintain their body weight as well and increasing their overall body strength. All rowers will also focus on their core strength as well as core strengthening exercises during every land based workout.

Rowing Ergometer (Ergs)

The rowing machines are very useful for training because the rowing muscles are used and we can improve technique at the same time. The Ergs record work rate, distance and time, which allows progress to be measured. Rowers will do a mixture of workouts on the erg, as well as being tested on them.



Flexibility

A very important component of the rowing stroke, particularly in the hamstrings. The rower must be able to swing forward from the hips as far as possible while keeping a straight, powerful back. Good flexibility gives a longer stroke and a 100mm longer stroke, every stroke, over a 2000m race adds up to a large advantage.

Weather

If it is raining it does not mean there will be no rowing. If it is not windy, water rowing will proceed so bring warm clothes e.g. Merinos and polyprops. If it is windy and on water training is not possible, bring your running shoes and warm clothes as you may go for a run, do 'home exercises' or an erg. Never presume that practice or racing will be cancelled due to the weather.



Food and Water Intake

Water is an essential part of both training and regattas. Rowers must drink plenty of water during training and on race days.

Leading up to regattas eat plenty of carbohydrates and on race days plenty of carbohydrate snacks will help. There's no sense in training hard for months and blowing races because you are dehydrated or haven't eaten correctly. You would also be letting your crew down.

It is essential to eat before a training session as food is your body's fuel and without it you are unable to perform successfully.

Eating straight after training and racing is also very important. If you don't refuel your body within an hour of exercising it can take up to two days for your body to fully recover from a hard workout. You need to start replenishing your glycogen levels immediately.

- 0-5 Minutes after exercise: 30-60g of high GI carbohydrate
 - 15 (girls) 30 (boys) jelly beans OR 3 (girls) 6 (boys) snakes or jet planes
 - 20 minutes post exercise: recovery snack of carbohydrates plus protein
 - 150ml yoghurt, 300g creamed rice
 - 250ml low fat milk or flavoured milk (Primo or Up 'n Go)
 - 250-300ml fruit smoothie (1 cup milk + 1 cup fruit + 2 teaspoon yoghurt)
 - 1 large bowl of cereal with low fat milk
- Within 45 minutes after training
 - High carbohydrate (low GI), moderate protein, low fat meal
 - High GI Foods: jelly beans, jet planes, honey, sports drink
 - Low GI Foods: vegetables, fruit, bread, porridge, pasta, rice



Racing

Entries for regattas are usually sent in two weeks in advance. Coaches make crew selections and entries based on rowing and racing ability and fitness.

A schedule of each crew's races is usually kept at the boat trailer or central meeting place.

Rowers are required to meet with their coach and coxswain about an hour before their race to discuss a race plan and start their warm up routine.

Most races are contested over a 2000m course. Starters line boats up - roughly - unless at Karapiro, where boats back into pontoons and are held. There are currently only two venues where courses have all the lanes marked with buoys. This happens at Lake Karipiro (near Cambridge, North Island) and Lake Ruataniwha (near Twizel, South Island). On unmarked courses e.g. Blue Lakes, Rotorua, you attempt to follow a straight line and attempt to not interfere with other boats. Umpires follow the race in boats to judge this.





After the race rowers should carry on rowing to warm down, decreasing their rating (number of rowing strokes per minute) and pressure. Once the boat has been taken off the water and stowed on the "dumps" it is important that rowers stretch and then have a crew debriefing. It is also important to refuel tired bodies with water and food.

Race Day for Parents and Supporters

For most parents rowing will be new to them as well as to their child! Therefore we hope the following information will help make your regatta experience a little less confusing and more enjoyable!

After their first regatta we usually see quite a change in attitude as the rowers begin to see what the training is for. In rowing the biggest and most important regattas come at the end of the season, so what the coaches are hoping for is a gradual improvement in performance at each regatta.

Because the first few regattas are known as "Club" regattas, don't be alarmed when you see your son or daughter in events alongside adult rowers. This is usually the case in "Novice" events but all competitors in this event will be in their first season of rowing.

For novice rowers there is usually quite a shock when they see how many schools take part and find out, for the first time, the "demands" of this sport. There are a number of regattas every year that have more than two thousand athletes participating!

In the days leading up to a regatta, your son/daughter



will be informed of what events they will be rowing in. The times of their races will not always be available until the morning of the regatta, so they will be given a rough time of when to be there. Most of the Whakatane Rowing Club crews usually arrive at the race venue the day before the regatta starts.

When you arrive at Lake Karapiro (where most of our regattas are) you will probably stay at the campsite. This is where we base our teams for sleeping, eating, briefing and socialising.

Pre-race crew meetings, getting boats on the water, rigging and checking correct racing gear is handled by the coaches and the athletes themselves.

You can purchase a race day program from the office at the bottom of the Control Tower (right on the finish line). Day sheets list the event name and race number, heat number, lane number and race time. The regattas do not always run to time! So make sure you listen to the race commentators for the latest updates on the racing schedule. At club regattas we race in Whakatane Rowing suits (white with a broad black horizontal stripe). At the three school regattas we race in the school rowing colours.

The course is marked, using brightly coloured buoys, with up to eight racing lanes. Lanes are numbered sequentially with lane 1 closest to the spectator bank through to Lane 8.

Your child's crew will look like a dot in the distance until they get to about the 500m from the finish line. Time, experience and a good pair of binoculars will enable you to recognise your crew of interest as they approach. On many occasions, but not always, your crew of interest will be at the front of the pack!



Your main job at a regatta (should you want to call it a job) is to feed and cheer the crews, enjoy yourself and get to know other parents!



The Boats

The boats (or shells) are basically of two types and reflect the two forms of rowing, sweep rowing and sculling. They are 597 to 622 mm wide, and from 8.2 metres to 19.9 metres long. A small fin is fitted at the bottom for stability. A rudder is attached to the fin or the stem to help steer the boats (except on sculling boats). A white ball is attached to the bow (safety measure, photo-finish). A washboard prevents waves from splashing water aboard.

In sweep rowing each rower handles a single oar. In sculling a rower uses two oars, or sculls.

The word shell is often used in reference to the boats because the hull is only about 1/2cm thick to make it as light as possible. These shells are also rather long and racing shells are as narrow as possible while recreational ones can be rather wide. Most shells today are



made of composite materials such as carbon fibre, fibreglass, or Kevlar. The rower sits on a sliding seat with wheels on a track called the slide. Each oar is held in a U shaped swivel (oarlock) mounted on a metal pin at the end of a rigger. The rigger is an assembly of tubes that is tightly bolted to the body of the shell.

Boat Classes

There are nine classes of boat, of which five are for sweep-oared rowing in which the rower uses one oar with both hands, and four are for sculling in which two sculls are used, one in each hand. Some classes carry a coxswain (indicated by the +) who either sits in the stern or lies in the bow to steer the boat.

The boat classes are:

Type / Class		Abbreviation	Approximate Length	Minimum Weight	Cost +GST
•	Single scull	1X	8,2 m (27 ft.)	14 kg (30.8 lbs)	\$10,750
•	Double scull	2X	10 m (34 ft.)	27 kg (59 lbs)	\$16,000
•	Quadruple scull	4X	1,3 m (44 ft.)	52 kg (114 lbs)	\$26,000
•	Coxed Quadruple scull	4X+	13,7 m (45 ft.)	53 kg (114 lbs)	\$26,000
•	Coxless pair	2-	10 m (34 ft.)	27 kg (59 lbs)	\$15,000
•	Coxed pair	2+	10 m (34 ft.)	32 kg (70 lbs)	\$15,000
•	Coxless four	4-	1,3 m (44 ft.)	50 kg (110 lbs)	\$24,000
•	Coxed four	4+	13,7 m (45 ft.)	51 kg (112 lbs)	\$24,000
•	Eight	8+	19,9 m (62 ft.)	96 kg (211 lbs)	\$36,000

The Oars

The oars or blades are hollow to reduce weight and are attached to the boat by adjustable outriggers. The size and shape of oars is unrestricted, the average length of a sweep oar being 3.73m (\$650 +GST each) and of a scull being 2.89m (\$850 +GST for a pair). The blade shape has evolved from a 'spoon' or 'macon' shape to a 'hatchet' shape, which was introduced in 1991.

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 early 1900s, copper and aluminium 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.



Modern day rowing shells days are formed in moulds and baked in large ovens at high temperatures to cure the epoxy resins - making the shell more rigid and stiff. Most shells include materials like carbon fibre, kevlar and fibreglass. There is very little if any wood left in a modern rowing shell.

The Whakatane Rowing club is fortunate to have a number of members who rate as some of the leading boat builders and repair technicians in New Zealand.

Boats are very fragile and need to be handled with care. It only needs a small bump to crack the shell or break something that is critical to the boats' performance.



Rowing Shells

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. COXED QUAD = plus a coxswain

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.

Eight

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

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Glossary of Rowing Terms

Blades: flattened or spoon-shaped end of oar or scull; often used as term for oar. **Bow**: front end of the boat, there should be a bow ball on the bow.

Bow (person): the rower or sculler in the seat nearest the bow

Bow Ball: rubber safety ball fitted to the sharp end of a boat

Bow side (Starboard): all the rowers whose oars are in the water on the right hand side of the boat when viewed from the stern.

Button: plastic sheath on oar or scull to prevent it from slipping through the oarlock

Canvas: the canvas on fore and aft decks of a boat; in race verdicts the distance between the bow ball and the front end of the deck

Catch: the part of the stroke when the blade is put in the water

Coxswain (cox): the person who steers the boat and gives the commands to the crew **Crab**: occurs when a rower fails to get the out of the water at the end of the stroke **Crew**: rowers who man a boat

Deck: covered over areas at the bow and stern of the boat where no on sits **Drive**: the part of the stroke between the catch and the finish

Ergometer (Erg): Indoor rowing machine which measures rowers speed and power **Fin**: small flat plate perpendicular to the bottom of the boat to aid steering a straight course **Finish (release)**: the part of the stroke just before and as the blade is taken out of the water **Footboards**: where the rower places their feet when sitting in the boat. These are adjustable to permit taller and shorter people to sit in the same position relative to the arc of the oar **FISA**: "Federation Internationale des Societies d'Aviron" - the International Rowing Federation.

FISA: "Federation Internationale des Societies d'Aviron" - the International Rowing Federation **Bow-coxed**: a boat in which the coxswain lies in the bow

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

Gunwales: horizontal plank at the top of the hull running the length of the boats cockpit **Inboard**: the distance between the far end of the handle of an oar or scull and the face of the button. The remainder is called the outboard.

Layback: the amount of backward lean of the rower's body towards the bow at the finish **Oar**: a lever approximately 370cm long by which the rower pulls against the oarlock to move the boat through the water

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

Puddles: whirls left in the water caused by the blade as the rower pulls

Rating: the rate of striking, or the number of strokes per minute that a crew is rowing.

Recovery: the part of the stroke cycle between the finish and the catch in which the oar is feathered and the seat is returned to the aft end of the slide

Pegatta a competitive event reced in bests

Regatta: a competitive event raced in boats

Release: the finish of the stroke, removing the oar from the water.

Repecharge: a second heat to afford another chance of qualifying to those running second best in preliminary heats

Rigger: a metal framework or a carbon-fibre reinforced arm to support the oarlock

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

Run: the distance a boat travels in one stroke

Sculls: a short oar used in each hand for single, double, and quad sculling boats

Sculling: the rower rows with one oar in each hand

Shaft: the long 'stick' part of the oar

Shell: smooth-bottomed racing boat

Slide: parallel rails on which the seat which moves on wheels

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

Stern: the rear or aft of the boat

Stretcher (dumps): the slings the crew may put a boat on to make adjustments or clean the boat

Stroke side (port): all the rowers whose oars are in the water on the left hand side of the boat when viewed from the stern

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

Sweep: the rower 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 or not getting the blade in on the square.		
Feathering	During the recovery, the blade is rotated so the spoon is carried parallel to the water		
Check it! Or Hold water	The command used to stop the boat quickly. The blades are held slightly squared in the water		
Easy oar / Oars!	The command to stop rowing		
Inside hand	In sweep, it is the closest hand to the oarlock		
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		

Interested?

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