



Christ Church
Grammar School

Rowing manual



Welcome from the Director of Sport

Welcome to rowing

Rowing is a unique sport: Success demands individual mastery of a skill, then total application of this skill in a team environment. No individual has ever crossed the line first, without the help of his crew. Rowing is about the crew, your mates and not wanting to let the team down.

In the individual sports such as athletics, tennis or swimming, you are only responsible for yourself. That is both the beauty and the terror of those sports. You are all on your own, and this isolation suits some. Rowers must constantly think about others, rely on others and be responsible for others in every race, every effort and every stroke.

Rowing entails a very demanding journey, one that offers great reward and lifelong friendships to those who make the effort.

I wish you every success for the upcoming season and always remember that in rowing you are never alone.

Anthony Lynch
Director of Sport



Welcome from the Director of Rowing

Welcome to everyone

Christ Church Grammar School has a long and proud history in Western Australia schoolboy rowing. Being an Old Boy I am excited about the opportunity to contribute to the ongoing success of rowing at this fine school. I will be seeking to strike up the right balance between enjoyment, success and retention in rowing.

Rowing teaches the boys resilience, teamwork and commitment to a greater good. That strong sense of belonging is quite unique to rowing and is not limited to just the athletes but also parents and families. I encourage parents to engage with their boys rowing journey at Christ Church Grammar School.

"When you can no longer row with your legs, row with your heart."

Justin Forbes

Teacher in Charge of Rowing





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Don Fraser 1914 to 2006

The Don Fraser Club was established in 1986 to support Christ Church rowing. The club was formed by a group of old boys who were staunch supporters of the School and of the sport. The name honours Don Fraser, who is recognised as having put rowing on the map at Christ Church. The former State oarsman was appointed the School's rowing coach towards the end of 1956, shortly after Christ Church had been admitted to the Public Schools' Association (PSA). It was not until the following year that Christ Church entered crews in the Head of the River competition.



Don Fraser was an outstanding motivator and an outstanding coach. In his first year as coach and in the School's first year of PSA competition, the First VIII came third in the Head of the River race. After dropping back in the field the crew put in a hard finishing spurt to break the existing record. During Don Fraser's period as coach, 1967 to 1974, Christ Church Grammar School's First VIII recorded six wins, six seconds and six thirds in the Head of the River race. This is an outstanding achievement in anyone's terms.

Don Fraser Club (Rowing supporters)

The members of the Don Fraser Club are parents, old boys and members of the community who support the School's rowing program in various ways. They assist the Director of Rowing, Steve Saunders and his team at regattas and organise the annual camp, the Head of the River dinner and fundraising activities. The club is inclusive and open to anyone who wishes to be part of the Christ Church rowing community.

Challenge Cup – The Headmaster's Cup

This trophy predates the PSA, having been presented six times before by the headmasters of the four schools competing in 1899-Christian Brothers College, Perth High School, Scotch College and St Peter's College Fremantle.

Hamer Cup

This was introduced in 1982 and is awarded to the school scoring the most points for placings in each event at the Head of the River regatta. The Hamer Cup commemorates the headmastership of Mr Hamer at Wesley College from 1964 to 1983.

Directions to regattas

Christ Church Club Regatta

The Christ Church Club Regatta is held at the School's boat shed in Freshwater Bay. To find the shed make your way to the School Chapel, then follow the path that runs between Walters Boarding House and the Chapel until you reach the boat shed.

Guildford Regatta

The Guildford long distance regatta is held between Sandy Beach Reserve in Bassendean and the Guildford Grammar School boat shed. To find the regatta finish, follow the signs from the main entrance at Guildford Grammar School.

Aquinas College Regatta

This regatta is a time trial format from Canning Bridge to the Aquinas College boatshed.

Canning Bridge

The Canning Bridge course was laid out for the 1962 Empire Games. The course runs from Mount Henry Bridge to Canning Bridge. Spectators and crews congregate on the Mount Pleasant foreshore, opposite the Raffles Hotel on Canning Highway. Another good viewing point is Deep Water Point situated at about the 1000m mark or halfway through the course.

Champion Lakes

Champion Lakes Regatta Centre exists as the only international standard purpose-built rowing, dragon boating and kayaking facility in Western Australia and one of only two in Australia. Bounded by Tonkin Highway, Champion Drive and Lake Road, the main entrance to Champion Lakes is via Henley Drive off Lake Road opposite Camillo Drive, Westfield.



Champion Lakes

Directions from the city or Fremantle

- Travel south on Kwinana freeway
- Turn left down Armadale Rd
- Turn left into Tonkin Hwy
- Right into Champion Drive
- First turn left into top entrance then drive down to bottom car park
- Walk around bottom of course to island



Boatshed rules and philosophy

The following rules are designed to help our boat shed run as smoothly as possible.

Punctuality

Whether it is training, a regatta or a rowing function, boys should always arrive before or on time. We cannot function as a cohesive unit if crews have to be changed on a daily basis. Being late to training or not turning up at all damages the whole program. Not only is your crew disrupted but lower crews are also affected.

If you are sick, try to advise your coach or the Director of Rowing the night before. If you know you are going to be late, contact your coach or the Director of Rowing. If coaches are kept informed they can make the necessary changes.

Remember once you have signed on as a rower, attendance at training is compulsory.

Respect

All coaching staff are to be accorded the same respect as any other member of staff at Christ Church Grammar School. Rudeness, disrespect and disobedience will be disciplined accordingly.

Behaviour

At Christ Church we are restricted by the size of our boat shed, its position relative to the water and its openness to the weather (wind). To combat these factors the boys must behave in a well-disciplined manner when at the shed.

Guidelines for behaviour in and around the shed

- On arrival place your bags on the river side of the shed
- Seek out other crew members and organise your allocated dinghy and motor
- Once your dinghy is on the water organise your oars, coxswains and their cox-boxes
- Finally gather your crew in the wash down area at the front of the shed to await your coach's instructions
- Inside the shed is not a place for socialising
- Do not talk in the shed, unless you are the stroke, coxswain or there is a risk of damage to equipment
- No boy leaves the training until his crew's equipment has been put away

Do not go into the shed unless you are

- Bringing out or putting away equipment
- Seeking medical attention
- You have been directed to do so by your coach or a member of staff

Given that our boatshed is situated in close proximity to our boarding houses and a number of private residences, noise must be kept to a minimum. Be aware of how loudly you are talking on your way to and from the boat shed as well as around the boatshed.

- Please do not shout
- Do not run near or in the boatshed
- Do not run around the boats at regattas
- Horseplay will not be tolerated near or around equipment, at the shed or at regattas
- Treat your boats with great care
- Keep the boat shed tidy at all times

Tools

Tools are only available from your coach.

Breakages and damage

Breakages and damage must be reported to your coach or the Head Coach as soon as possible.

Dinghy use

No student is allowed to drive a dinghy unless fully qualified and instructed to by the Head Coach.

Megaphones

No student is to use a megaphone. They are reserved for the coaches.

Breakfast

In Terms 1 and 4 breakfast is offered to all boys participating in rowing. This ensures boys have a good start to their day and encourages team spirit. It is assumed that boys will have breakfast on their training days. Breakfast will be served in Sandover Dining Hall at 7.45am. Boarders will not be billed. Breakfast will be charged to the School card.

Uniform

Uniform is an essential part of a rowing club. Appropriate uniform for training and regattas is detailed below.

Training

For training, rowers may wear a Christ Church singlet, t-shirt or warm-up top. Boys may not wear their House singlet or warm-up tops unless they are gold. Shorts should be dark coloured and tight fitting (bike shorts). School hats are preferred.

Regattas

School uniform is compulsory at regattas. The wearing of non-uniform clothes will not be tolerated. Correct uniform includes the School tracksuit, warm-up top, PE shirt, shorts and hat. When racing boys must wear the School rowing zoot suit and the white School rowing hat.

Water bottles

All rowers must have a water bottle.



Rowing policy and selection criteria

Rowing policy

Rowing has long been a successful sport at Christ Church and it is the intention of all involved at the shed that it remains so. It is indeed our intention to build upon our wonderful tradition and at the same time we must not forget the fundamental requirements of any rowing program. Hence the following policy statement detailing how decisions are made in the School's rowing program.

Coaches

The Head Coach selects the coaches, in consultation with the Teacher in Charge. They are selected on the basis of experience, qualifications and availability. Personality is another vital component when dealing with younger crews who need nurturing.

The following are the expectations of the School:

- All coaches will ensure safety is a priority in any activity associated with rowing. Injury prevention is paramount
- Coaches have a duty of care for their students
- Every coach is intent on allowing each student the opportunity to row at his best and to reach his full potential, whatever level they may be

All School crews

All oarsmen at Christ Church should fulfill the following selection criteria over and above those set out for each age group:

- Display team commitment
- Show a commitment to achieving potential in every area of School life

If a boy is deemed by the Director of Sport in consultation with coaches, parents and the Head Coach to be having a detrimental effect on crew and shed morale, and is failing to fulfill the criteria above, he may be asked to leave. All boys and families must be aware that the focus is on the best performance by each crew on the day of the Head of the River. Therefore, a boy returning from sickness or injury will be subject to assessment of his fitness when returning to his crew. If it is found that the boy's state of health is detrimental to his crew's performance he may be placed in another crew.

Crews eligible for the Head of the River

Year 9: Five Quad Sculls | Year 10: Two VIII's, One Quad Scull | Open: Fourth VIII, Third VIII, Second VIII, First VIII



Selection of crews

The following is the basis from which all crews will be selected. To make this clearer, a brief explanation of some terms may be helpful.

Seat racing

A series of races usually conducted over two to three days in various boats including single and double sculls, pairs, fours and eights. The boys who are vying for selection are raced in various combinations and the results are recorded. From this assessment a pattern is established as to the boys' abilities to make various boats 'go fast'.

Skills assessment

This part of the criteria is a continuous assessment by the coach in consultation with the Head Coach and Teacher in Charge. Technique, as explained in very general terms in this manual, is an indicator to the coach of the ability of the oarsman to transfer his physical attributes to the boat speed. A smaller boy with better skills may be chosen over a larger boy.

Ergometer testing

All boys in all crews will be subject to some form of testing on the rowing ergometer. Testing is usually carried out over the distance the boys will race at the Head of the River. The exception being that all Year 10 boys may be required to test over 2000 metres. Ergometers are a test of strength and endurance. They are not a test of skill. Ergo scores indicate strength and fitness, not the ability to make a boat go fast. This is why ergometer testing is ranked third in the criteria.

Physical makeup

This term is only referred to in the Year 9 selection criteria. Height, build, posture and athleticism are important factors in this year group. Rowing is a physically demanding sport and it is important that we choose the right boys for the right boat type. Sweep rowing (one oar) is more physically demanding than sculling (two oars to each oarsman), therefore the physical makeup is more of an influence in the selection process of this year group than older ones.

Crew selection

Each crew's coach will select the various squads based on the selection criteria listed below, together with those listed for each age group. The Head Coach and Teacher in Charge will oversee all selections. In all squads, a boy must show a commitment to rowing and a willingness to co-operate with the coach, the Teacher in Charge and his teammates. Trust and team spirit, which help bring about success, develop from such a basis.

Open Crews - First, Second, Third and Fourth Vllls

Four Vllls will be selected for the Head of the River. Boys will be monitored from September to March. Selection trials will be held in January before the rowing camp and, if deemed necessary, during the mid term break in Term 1.

Trials

First and Second Vllls

- Seat racing and time trials in Vllls, IVs and pairs in January and March
- Skills assessment
- Ergometer test over 2000m

Third and Fourth Vllls

- As above

Year 10A and B Vllls

Trials will be conducted during the rowing camp in January and will be on-going until the cut off date. The trials will comprise:

- Seat races in Vllls over 1000m to 1500m
- Skills assessment
- Ergometer trial over 2000m

Further trials may take place during the mid term break in Term 1.

Year 10 Quad Scull

Trials will take place during the rowing camp in January. The trials will comprise, if deemed necessary:

- Time trial over 1000m
- Skills assessment
- Ergometer trial over 2000m

Further trials may take place during the mid term break in Term 1.

Year 9 Quads

Year 9 is difficult to assess for several reasons:

- A significant variation in skill with some boys developing a lot more quickly during the season
- Huge differences in size and strength
- A big difference in the application of boys
- Sculling trials



What is a good supporter/parent role?

How you can support your son

Christ Church rowing values the tremendous support given by parents. For those parents who are unfamiliar with the sport, refer to the tips below on how you can support your son at regattas.

Do

- Make sure your son is always on time to regattas
- Trust the coach
- Make sure your son is always in correct uniform
- Cheer as loudly as you can for all Christ Church crews
- Offer to assist the rowing supporters committee in any way you can with events and fundraising
- Talk positively to your son about achieving his potential. A positive approach is essential in rowing and makes a difference
- Talk positively to other parents at regattas and functions to create a Christ Church spirit that will be envied
- Give support to hard-working coaches who give up a tremendous amount of their time to help the boys. If things are not going as well as hoped, a little support goes a long way
- Encourage your son to show good sportsmanship in every situation, but especially after winning
- Get to know your son's coach. Parents are welcome to attend training and go out in the dinghy for a training session
- Keep up to date with what is going on in the Don Fraser Club by reading the Oarsome Weekly Newsletter which is published on the School website at <http://www.ccs.wa.edu.au/school-community/parent-groups/don-fraser-club-rowing>
- Support fundraising events to ensure boys have up to date equipment



Managing the rowing/study balance

This booklet has been designed to make the rowing season as stress-free as possible. With careful time management it should be possible for all boys to maintain or improve their academic results whilst participating in a full rowing program.

Efficient use of your time is the key to success. These points may help:

- Shower immediately on arriving home after training
- Hydrate. When you are studying, have a water bottle with you
- Have a snack such as a sandwich, muesli bar or protein drink, but not too much
- Hit the books. Always attempt your more difficult subjects first
- Do not eat your main meal until you have completed most of your study or assignments. Nibble on nuts or dried and fresh fruit to keep the hunger pangs at bay. Schedule your main meal for 7.00pm to 7.30pm
- Read after dinner and try to be in bed by 9.00pm
- Be smart. Use school study periods wisely. They are not a social event
- Wednesday, Friday and Sunday are training-free, so study hard those days
- Optimise study time. At lunchtime, snatch 30 minutes in the library. Waiting for a lift home? Ten minutes reading is time well spent while you wait
- Support each other. It is in the whole crew's interest that everyone is coping academically. Offer to help if you can
- Finally, listen to your parents. I know this might go against the adolescent grain, but you will not cope as well without their support. Your parents care for you and are very aware of the challenges you may be facing. Listen to them and if any issues need the personal attention of the Teacher in Charge, please alert him as soon as possible



Getting the most out of class

Get to class on time

If you are late, you may miss the 'pearls of wisdom' often given by your teachers in the first few minutes of a period. You may also miss the important foundations of a lesson and may be behind the eight ball for the whole lesson or leave without the whole picture. You also distract other students and this is not fair.

Go to all your classes

You may be tired or a little run down and tempted to take a 'sickie'. If you are not really sick then this is very foolish. You never know when the class will cover an absolutely crucial topic. You will just get behind and have to catch up later, therefore adding to your workload and stress.

Where you sit counts

Avoid sitting next to disinterested students who talk or waste time. Sitting closer at the front has the advantage of you getting a clear view and hearing better. You will generally be away from distractions and be able to get the teachers attention for questions more readily. It will also make tuning out harder to do.

How you sit

Act alert then you will probably be alert. Sit comfortably upright. If you lounge around you are more likely to fall asleep or goof around.

Be prepared

Bring all texts and equipment needed. It is also a good idea to pre-read. This will give you some hooks for new information to be hung on and it will impress your teachers.

Engage your mind

Actively engage in the lesson. Discuss and question as required. Adopt a curious attitude. Listen carefully.

Review afterwards

Follow up what happens in class. Don't let a lack of understanding hinder future progress. Take action. Follow up. Ask questions such as:

- What were the main ideas covered in that lesson?
- Where does it fit into what we have been doing?
- Are there any bits that are not clear to me?

Don't leave empty handed

Never trust your memory. Take notes at all lessons. Handouts and other people's notes are generally not as good.

Medical notes

Basic hygiene

Common skin infections: boils, tinea, thrush, blisters, grazes and cuts. Cleanliness is essential. Use a germicidal soap and clean clothing. When rowing, change clothes every day. Rowers need to wear clean clothes and adopt clean body habits.

Colds, flu and glandular fever

A competitor must not row if he is running a temperature. This is most important. Any athlete with an infectious disease should be isolated from others in the group.

Heat stress and dehydration

The effect of heat on a rower during competition can be lethal. The rower must be prevented from over-heating and becoming dehydrated. This depends firstly on fitness, and secondly on adequate fluid intake. The first indicator of even mild dehydration is thirst, followed by a rise in body temperature, nausea and even coma. Adequate hydration with water or dilute electrolyte solutions are suitable.

Stress and over-training

This is unlikely to occur in lower levels of rowing unless the workloads are not gradually increased or the initial fitness is particularly low.

Prevention of injury

This depends on a graduated work loading.

Signs and symptoms of over-training

Basically, this is shown by a progressive deterioration in performance, lowered morale, fatigue and increased apathy towards training. However, it is much more complex than this. An increased resting pulse rate is an excellent sign of over-training or other illness. Report all injuries as continued training may make injury worse.

The dangers of continued training

A sports medicine practitioner should assess any persistent pain. Training with stress fractures, ruptures of tendons, strained ligaments or chronic muscle strains can lead to permanent injury.

Running

All rowers should run in appropriate running shoes. Often a sports podiatrist's opinion is required to prevent foot, heel and shin injury. Any forms of cross training may have associated risks. Always be aware of the risks that can occur.

Sleep

Sleep is the body's way of recovering and rowers should aim for a minimum of eight hours.

Prevention of boils

Boils are caused by bacteria, most often staphylococcus aureus (golden staph) and occasionally streptococcus species (strep). Both these bacteria are commonly found on normal skin and are kept in control by normal skin defense mechanisms and other microbes (good bacteria).

Because of the nature and habits of humans, these and other bacteria accumulate under the fingernails and thrive in the nose where they are not normal residents.

When the skin is dry and intact, it acts best as a defensive barrier. Penetration of the skin by abrasion, puncture or a scratch allows these and other bacteria (e.g. wart virus and tinea /ringworm) access to moist, nutritious tissue and body fluids.

Normal behaviour of scratching at an insect bite or minor abrasion may worsen the healing of this injury by both introducing more bacteria and further disrupting the mechanical defense system. Normal healing of any sore should only take a week. If you don't notice any healing over this time, possible causes include repeated damage to the area or infection.

Protection of an injury can be achieved by a bandage, Band-Aid or clothing, e.g. socks. Spread of infection from person to person can be minimised by treating boils and sores promptly and covering with a Band-Aid or dressing.

Rowing and Staphylococcal infections

Staph is a problem for rowers. It occurs mainly on the back of the calf, back of the knees and top of the thighs. The reason it develops is that the boys are rubbing their skin across equipment (slides, foot stretches and oar handles) on a daily basis, each time leaving skin behind and this can lead to a build up of bacteria. The staph will usually take the form of oversized pimples and will quite often appear in small clusters. These clusters will normally not manifest into anything worse if treated correctly, however, with lack of attention and poor hygiene they can develop into something quite dangerous such as boils and hospitalisation.

Please take note of the following:

- Boys should wash with anti-bacterial soap all the time
- Boys should wear long football socks every time they row
- If they do not like to wear socks then cut the top off a sock and cover the affected area
- If the area of infection starts to spread or the pimples start to take a more boil like appearance, you should see a doctor as quickly as possible
- Good hygiene is the key to good health

Tinea

Thorough drying after bathing/showering as well as using a clean, dry towel and wearing dry clothes can best prevent tinea (any part of the body, or 'athlete's foot' or 'jock itch'). Skin treatment creams (Canesten) or lotions (Tinaderm) can be bought without prescription. You should see the clinical nurse manager if you have any questions about your health.

The boat shed is advised of these hygiene matters and is taking steps to reduce any reservoir of these germs within the shed or on equipment.



How to tape hands

Step 1.



Always cover blisters with gauze or fold some tape onto itself, so tape does not stick to blisters.

Step 2.



Wrap tape around the hand one and a half times.

Step 3.



Cut strips of tape and place them between the fingers. Ensure they reach the tape on both sides of the hand. These will prevent tape rolling off that side of the hand.

Step 4.



Wrap tape around the hand again ensuring the tape covers the tape ends between the fingers. Move tape down over the palm, around the back of the thumb, back up to the little finger and onto the palm. This stops the tape rolling up the other direction

Diet

In order for you to be a successful rower you must give serious consideration to diet and supplementation. You will need to develop good dietary habits, as ultimately you are responsible for what you eat.

Carbohydrates

Carbohydrates are one of several nutrients we need in our diet. Their role is essentially as a source of energy. Carbohydrates include sugar and starches. These are divided into complex carbohydrates (which include the starches) and simple carbohydrates (the sugars).

Main food sources of carbohydrates

Eat most (unrefined - complex)

- Breads, rice, sugar-free cereals, pasta, crackers
- Vegetables (potatoes, corn, carrots, peas, beans)
- Milk and yoghurt

Eat least (refined - simple)

- Sugar, jam, confectionery (chocolate bars, cakes, sweet biscuits, soft drinks, cordials), other foods with a lot of added sugar. Ingredients are labelled on packets from most to least, so if sugar is near the first ingredient you know the content is high

Question: How do the carbohydrates I eat provide energy for rowing?

Answer: Carbohydrates pass through the digestive system and are broken down. Production of glucose is the most important result of the digestive process and in this form is absorbed into the bloodstream. The glucose in your blood can be used immediately for energy or if it is not required it is stored as glycogen or fat.

Example: You eat a meal made up of largely unrefined carbohydrates, i.e. pasta, fruit and vegetables. In your digestive system the carbohydrates are converted to glucose, which is absorbed into your bloodstream. Two hours after this meal you go for a light warm up prior to rowing.

The glucose in your blood provides the fuel for this. Afterwards you begin a hard training session on the water. The remaining glucose from your meal is used up and your body now draws on its next preferred energy source - the glycogen stored in your liver and muscles. At the end of the session your coach gives you some heavy sprint work at 90% effort. After this your glycogen stores are now reduced and your body becomes more dependent on fat for energy.



Caption: Christ Church old boy and World Champion Todd Skipworth

Note: The liver glycogen is used mainly to maintain the blood glucose levels needed to supply the vital organs, including the nervous system. Each of us has a capacity to store glycogen. Once the storage sites have been filled any extra carbohydrate that is eaten will be converted by the body to fat and stored in fat cells.

There is a proven relationship between the beginning of fatigue and the level of muscle glycogen. The higher your level of muscle glycogen when you begin to exercise the longer it will be before fatigue sets in. Glycogen comes almost exclusively from carbohydrates. Carbohydrate is therefore important in every rower's diet.

Question: Is sugar good for quick energy? Should I have a soft drink or chocolate bar before I row?

Answer: No! No! No! There are no quick foods. Sugar cannot be relied upon to increase energy levels prior to a race. In fact, taken in large quantities sugar can produce several detrimental effects. For example, excessive amounts of sugar drain fluid from other parts of the body including the gastro intestinal tracts. Drinking a concentrated sugar solution while exercising may cause cramps, nausea and diarrhoea.

Question: Why do I feel tired before the race starts?

Answer: When you eat concentrated sugars (i.e. sweets) the amount of sugar in your blood soars. This may cause an over secretion of insulin into the bloodstream which results in turn in a rapid drop in the blood sugar and hence impaired performance. This condition is generally referred to as hypoglycaemia, which means low blood sugar. Carbohydrates are broken down to glucose and are absorbed into the bloodstream. The level of sugar in your blood is in a continual state of flux. After a meal the level of glucose in your blood rises and glucose passes into the tissues where it is stored as glycogen and fat. As it is utilised, the level in your bloodstream falls. The blood sugar level is regulated by the hormone insulin and glycogen. If your blood sugar falls below normal levels you may experience fatigue, mood changes, depression and headaches.

Hence, rowers who eat foods high in sugars or highly refined starches prior to rowing, suffer a drop in blood sugar. This type of intake accompanied by exercise could lead to a further drop in sugar levels, which would result in poor rowing performance.

The message is simple.

Regulate your blood sugar levels prior to racing (the night before and that morning) with unrefined carbohydrates, rice, pasta and bananas. Eat your refined carbohydrates, chocolate bars, soft drinks or fast food after the final race at the end of the rowing season.

Diet training

Energy and endurance are prime factors in peak performance. Ideally a rower should consume a diet high in complex carbohydrates and low in fat, with adequate protein and fibre as well as enough fluid.

Unrefined carbohydrates

Bread, rice, pasta, crackers, bananas, fruit and dried fruit (sun dried, not sulphur-dried).

Protein

Protein is essential in the training diet to provide all the amino acids. Consume lean red meat, fish (tuna, mackerel, salmon), chicken, turkey, low fat dairy products, beans, nuts, lentils and legumes. No pork as pork takes 52 hours to digest.

Fat

Fat requires more oxygen than carbohydrates and therefore as a fuel is far less efficient than carbohydrates. Avoid food high in fat such as fried foods, cream cakes, chocolates and pastries.

Stay well hydrated

Dehydration affects performance and what you get out of each training session. For each litre of sweat you lose without replacing, your performance drops roughly 5 per cent. Fluid requirements vary between rowers according to sweat rates. Sweat rates during exercise on average are 0.5 to 1 litre per hour in moderate conditions. This can increase to up to two litres per hour in hot and/or humid conditions.

You should know the symptoms of even mild dehydration, monitor yourself for these and aim to prevent them from occurring. Signs of dehydration include concentrated urine, thirst, blurred vision, dizzy or light headedness, fainting, headache, feeling hot and clammy, bloating, cramps, nausea, vomiting and/or fatigue.

Drinking strategy

- Drink from a water bottle during the day so you can monitor fluid intake
- Have a large glass of water as soon as you get up
- Get into the habit of drinking water with meals
- Replenish fluids during training by aiming to drink 150 mls every 15 to 20 minutes. This can be water or a sports drink.
- Weigh yourself before and after training sessions. This will tell you how much sweat you have lost. A one kilogram deficit = a one litre fluid loss. Aim to keep fluid loss to less than one kilogram

Exercise

Less than one hour - **water**

Greater than one hour - **sports drink** - be careful of contents as not all sports drinks are good for you.

Post exercise

Drink at least 100 to 150 per cent of fluid lost within 6 hours following exercise (i.e. 1 kilogram = 1000 ml fluid). Fluids should be cooler than ambient (15 –to 22° C), preferably flavoured to enhance palatability and promote fluid intake.

Carbohydrate requirements Competition

Consume at least 600 grams of carbohydrates the day prior to competition. A high carbohydrate, low fat meal is recommended within three to six hours before the competition (75 to 100 grams).

Continuous exercise (greater than 90 minutes)

Consume 240 ml of carbohydrate electrolyte solution five per cent concentration every 30 minutes to help maintain sporting performance.

Successive days of competition

Consume 100g carbohydrates every two to four hours thereafter.

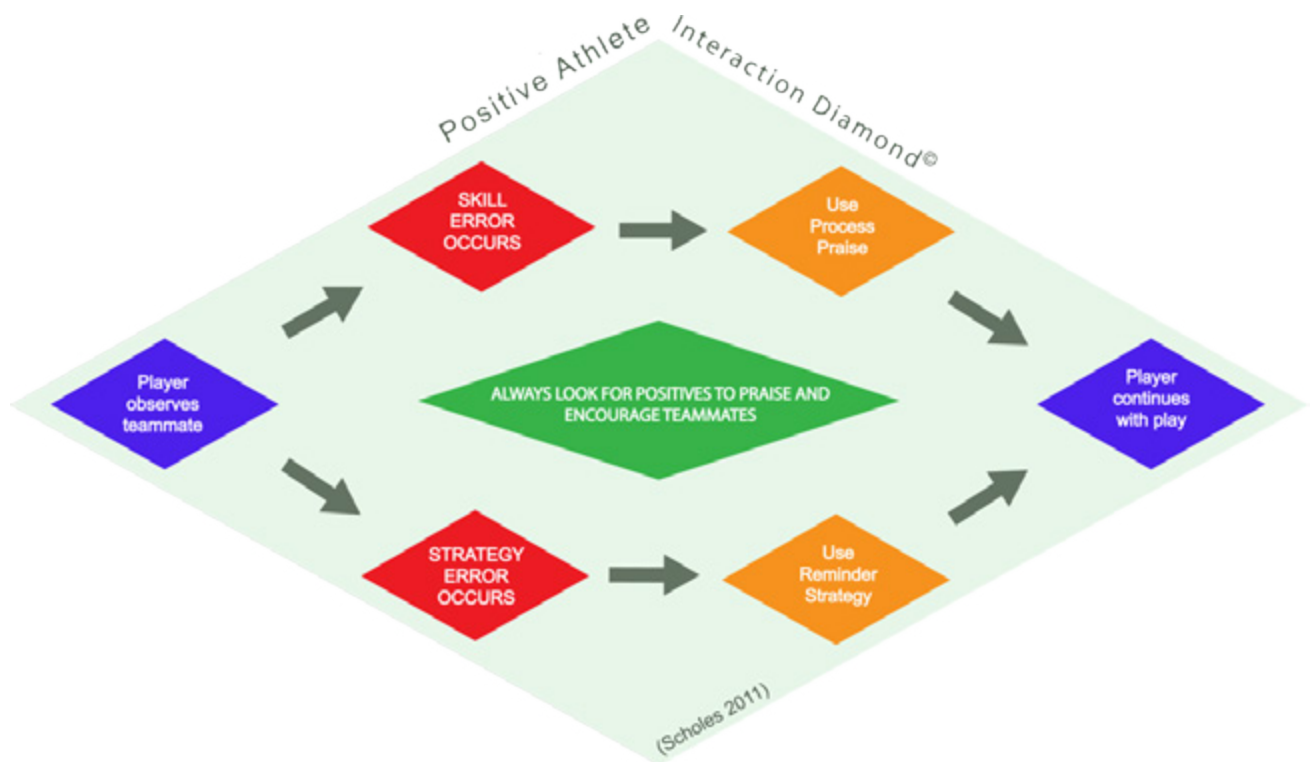


Positive athlete interaction

In team sports the way the players interact with each other is important. Positive coaching needs to be backed up by positive athlete interaction.

Team mates need to:

- Look for positives to praise and encourage team mates
- Approach skill errors in a constructive manner
- Use reminders for strategy errors
- At no time should a player criticise a team mate





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