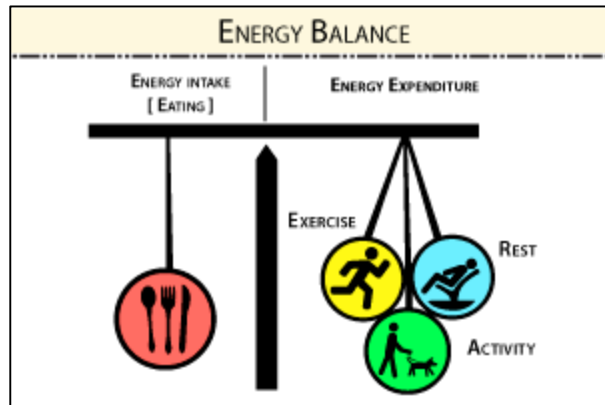


Nutritional Guidelines For Happy Rowers

As hard working rowers the food and fluid you consume on a daily basis will play a major role in how well you can train at rowing practice, concentrate during school and stay fit and healthy day to day!

This fact sheet will hopefully help you and your parents make sure you are fuelling yourself with plenty of energy and nutrients to stay in good health as well as enhancing your sports and school performance.

The most important thing to remember is that the energy and fluid you use up in training needs to be replaced as quickly as possible after training!



A Balanced Diet

It is important to aim to get a daily mixture of all the essential nutrients in your diet. As athletes we are particularly focusing on carbohydrate, protein, vegetable, fruit and fluid consumption. I don't want you to focus on what you shouldn't eat, but on all the good things that you SHOULD eat!

Carbohydrate

Carbohydrate is the most important fuel for our muscles and is therefore essential for any form of exercise. It is also the energy source for the brain and central nervous system, playing a vital role in our ability to concentrate.

Carbohydrate is stored in our muscles and liver as a substance called glycogen. Glycogen is only stored in small amounts, meaning that we need to maintain a regular intake of carbohydrate throughout the day to keep these stores topped up so there is a constant supply of energy ready to be used when needed!

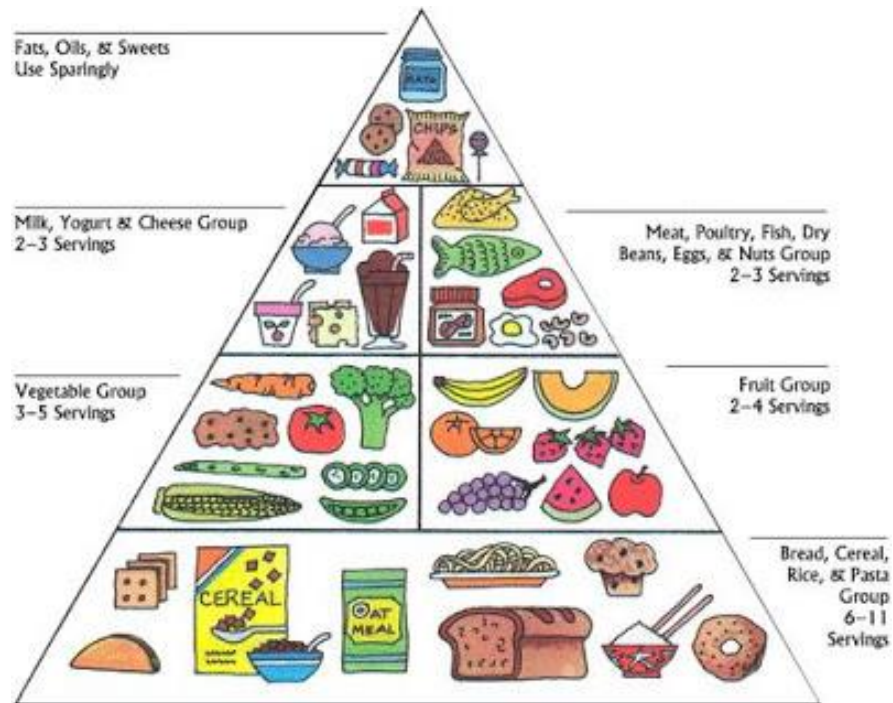
Research has shown that low carbohydrate diets can increase fatigue, reduce tolerance for training and reduce endurance capacity. It is therefore essential to pay attention to the amount of carbohydrate you consume each day in order to gain the full advantage from your training.

Good examples of carbohydrate to include regularly in your diet include:

- Breakfast Cereals- all types but try include wholegrain varieties such as porridge, Weetabix, raisin wheat's, muesli etc.
- Bread- wholegrain, granary, multigrain, pitta, muffins, crumpets, bagels.
- Rice
- Couscous, polenta, millet etc.
- Sweet Potatoes
- Crisp breads, rice cakes, crackers.
- Beans (baked, red kidney etc.), peas and lentils.
- Root vegetables such as carrots, parsnip, beetroot.
- Fruit and fruit juice.
- Milk and Yoghurt.

- Cereal bars and biscuits (be aware of high sugar contents!)

These sources of carbohydrate also provide a variety of other beneficial nutrients so are good choices. The energy and carbohydrate requirements of rowing are large and you need to eat some carbohydrate with each meal and snack.



Protein

Protein is primarily required for muscle growth, repair and development. This makes it very important to include in your diet, as we need it to keep our muscles strong and healthy to cope with all the hard training that we will be doing.

Many carbohydrate foods provide small amounts of protein and so as you increase your carbohydrate intake you will automatically gain extra protein from these foods.

Good quality protein rich foods should also be consumed 2-3 times a day. Some examples include:

- Chicken and turkey
- Lean red meat
- Fish
- Beans
- Lentils
- Dairy foods

Fruit and Vegetables

Full of vitamins and minerals, vegetables and fruit are important to keep you in top health and capable of fighting off any germs and sickness that doing lots of exercise can make you susceptible to. Aim for at least 7 portions of both fruit and veg a day!



Water and Hydration

Fluids play a vital role in maintaining body functions as it makes up 66% of our body weight. Fluid is required for the transport of vital nutrients around the body, removal of waste products, digestion and absorption of food and the maintenance of body temperature.

Dehydration can have serious negative effects on performance and so it is important to keep hydrated at all time by frequently drinking before, during and after exercise.

You should aim to start training in a fully hydrated state. Then for every hour of exercise that you do, anticipate to loose between 500-2000ml per depending on the temperature and exercise intensity- that means for every training session you need to drink at least 1.5 litres of water to rehydrate!

During the day hydration should be maintained by continuing to drink water or low sugar cordial.

The effects of dehydration:

- Exercise performance can be impaired by 10-20% if dehydrated by as little as 2% of body weight
- Fluid losses in excess of 3% increases the risk of heat cramps, heat exhaustion or heat stroke
- Dehydration can affect mental function, slowing reaction-response times and decision-making skills.

Signs and symptoms of dehydration include:

- Thirst
- Irritability
- Headaches
- Weakness
- Dizziness

- Cramps
- Chills
- Vomiting and Nausea
- Poor performance.

The 'Pee' Test

When fully hydrated you will wee a lot of light colored urine. Dark yellow urine is an indication of dehydration.

AM I HYDRATED?

Urine Color Chart

1		
2		If your urine matches the colors 1, 2, or 3, you are properly hydrated.
3		Continue to consume fluids at the recommended amounts.
4		
4		If your urine color is below the RED line, you are
5		DEHYDRATED and at risk for cramping and/or a heat illness!!
6		YOU NEED TO DRINK MORE WATER!
7		
8		

NOTE: You should find yourself drinking between at least 2-4 litres on a training day in order to stay fully hydrated. Don't be surprised if you need to wee a lot more, and even get up the night!

The Essentials of Good Fuelling for Performance

Not fueling yourself properly can cause problems such as fatigue, irritability, poor concentration, lethargy and reduced power. It is important to start each training session properly fuelled to train at your best! Refueling effectively after your previous training session is a very effective way to ensure this

Before training: Make sure that body glycogen levels are high with a small carbohydrate snack. Drink clear liquids to keep body fluids high. Allow time for food to be digested before training:

- 3-4 hours (large meal)
- 1-3 hours (small meal)
- <1 hour (snack)

After Training: The first 30 minutes after finishing exercise is the optimum time to refuel. You need to always make sure you have a carbohydrate rich snack in your bag for a post-training snack.

Examples of nutritious snacks

- Bananas – contain carbohydrate, vitamins and minerals.
- Other fruits – stone fruits like plums, kiwis, apricots, berries and peaches have high amounts of antioxidants
- Hand full of nuts – are high in protein and contain healthy and essential fats.
- Homemade muesli bars- carbohydrate and protein source.
- 1-2 boiled eggs- high in protein.
- Yoghurt and berries with museli or bircher museli- source of carbohydrate and protein.

- Cereal bars- check sugar content isn't too high!

Example Food Diary for a Morning Training Day

05.15am: Wake Up!

05.30am: Have a *light breakfast*. E.g. a banana and yoghurt with some toasted museli/ 2 pieces of wholegrain toast or crumpets with peanut butter or marmite/ a bowl of wholegrain cereal on the way to training. Have a glass of fruit juice and some water to hydrate.

06.00am: Rowing Training- *Aim to drink at least 1l of water throughout the session!*

7.30am: Finish Training, quickly get changed and catch the bus to school.

8.15am: By this point you should have eaten your *2nd breakfast!* Good choices would include Bircher muesli with Greek yoghurt/ a toasted bagel with cream cheese/ 2 hard boiled eggs and a banana/ chia seed pudding with berries/ a breakfast smoothie containing oats, banana and milk.... There are lots of good and easily transportable choices!

8.30am: Arrive at school and be on time for lessons. *Make sure you have your water bottle with you!*

10.30am: Mid morning break snack including at least one piece of fruit. A handful of nuts and seeds or Up and Go would provide a good source of protein.

12.30pm: *Lunch*, make sure you have both carbohydrate and protein sources as well as some vegetables and fruit. E.g. Sandwiches or pasta containing a source of protein such as chicken or tuna with salad, carrot

and pepper slices with hummus, a pot of yoghurt, another piece of fruit, piece of fruit and nut slice etc.

3.30pm: Finish School. If you have more sport after school have another snack e.g. banana, cereal bar.

6- 7.00 pm: *Dinner* Time! Make sure your plate has a balance of protein, carbohydrate and lots of vegetables. Make sure you have some pudding as well!

Bedtime: Its important that you get lots of sleep in order to let your body and mind recover from a busy day! A hot milky drink before bed can be a good way to help you sleep and also a source of calcium for strong bones.

