

Rowing

Eating for your sport

Understanding the nutritional requirements for adolescent rowers

Rowing is a high-intensity sport requiring high level aerobic and anaerobic capacity. The energy that is required for rowing as a sport is supplied by muscle-stored glycogens, which is derived from carbohydrates and stored in a rower's muscles and liver.

Glycogens is a basic fuel for your rower and helps prevent fatigue during competition and training, as well as plays a role in cognitive function and maintenance.

A recent study (Kim, 2020) has shown rowing athletes who skip their carbohydrate-rich breakfast showed delays in their time trial records and reported higher ratings of perceived exertion (RPE), which represents subjective training intensity.

Equally important is recovery nutrition to minimise the risk of injury. The immune system is suppressed by intensive training and may place athletes at risk of illness during the course of the rowing season. Consuming carbohydrate during/shortly after a high intensity workout has shown to reduce the disturbance to immune system markers. High intensity exercise also causes substantial breakdown of muscle protein. Early intake of good quality protein foods helps promote the increase in protein rebuilding.

Nutrition recovery strategies focus on

- Restoring the muscles and liver with glycogen
- Replacing the fluid and electrolytes lost in sweat
- Allowing the immune system to handle the challenges caused by intense training
- Manufacturing new muscle protein, red blood cells and cellular components as part of repair and adaptation processes

Therefore, a rower's nutrition relies on the Three Rs

- Refuelling (Carbohydrates)
- Rehydration (Fluid)
- Repair (Protein)

REFUELLING

Goal – Refuelling for glycogen replenishment through carbohydrate intake. This must take place ***immediately after competition/training*** or as soon as possible.

How – Carbohydrate intake in liquid form or as a snack/meal

REHYDRATION

Goal – Ensuring sufficient fluid intake ***immediately after competition/training***.

How – Sports drink or food with sodium (Na⁺) and water

REPAIR

Goal – To facilitate muscle protein synthesis

How – Protein intake every 3-5 hours as a snack/meal. If intake of protein through diet is difficult consider a whey protein (protein powder) that is easily absorbed and digested and is rich in essential amino acids.

Are high protein low carbohydrate diets appropriate for rowers?

A discussion that often surfaces is that of a high protein low carbohydrate diet and how appropriate a diet that is for an adolescent rower. According to the Australian Institute of Sport:

“In the short term high protein, low carbohydrate diets result in loss of water and glycogen. This might result in a decrease on the scales, but does nothing to reduce body fat. The effect is primarily due to the fact that these diets are low in kilojoules rather than any magical effect from the protein itself. The lack of carbohydrate reduces energy levels, impairs performance and causes lethargy and nausea. High protein, low carbohydrate diets restrict the intake of many nutrients in the diet. These diets will result in muscle mass decrease. High protein, low carbohydrate diets are not suitable for athletes.”

Adolescent rowers (especially the boys) often find it difficult to meet their energy requirements. To cope with the high energy demands of training and adolescent growth spurts it is important for young rowers to eat healthy snacks and meals throughout the day. ***The more frequent the training sessions, the more important the timing of meals and snacks become as recovery time is reduced.***

Supporting my rower's nutrition

As a parent of a rower you may wonder how you can support your rower's nutritional requirements. There is no shortcut to eating well and turning to supplements as a quick fix is certainly not the answer. Here is how you can help:

- Sit down and have a discussion with your rower about their nutritional requirements for their sport
- Students often skip meals such as breakfast. Help them understand what this translates into in terms of their performance
- Help your student make a list of pantry items and fridge/freezer items that every rower should have access to throughout the rowing season (refer to our list of suggestions). Make a shopping list and plan for the week
- Buy tupperware containers to make food portable and freezable. A good insulated lunch box and a quality thermos goes a long way.
- Help your students to organise their food in advance by discussing what they should pack to school/training/regatta days to meet their nutritional needs. They may also need assistance with when to eat what ie recess vs lunch etc.
- Cook in bulk and freeze
- Assist your rower to understand that routine will become habit
- Experiment with our suggested recipes and feel free to contribute to our recipe pages

Bibliography

Department of Sports Nutrition. Nutrition Strategies for Rowing. *Australian Sports Commission, 2006*

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