Winning Foods for Adolescent Athletes

“The winners will, without doubt, be highly talented, highly trained and highly motivated. At one time that would have been enough. But these days it is highly likely that everyone in the race will have these qualities…….where everyone else is equal, it is diet that will make the vital difference.”

Ron Maughan, a Scottish sport nutrition scientist, at the start line of the World Cross Country running championships in 1995

Practical guide to preparing high performance foods and drinks for training and competition in adolescent athletes

Prepared by Sports Dietitian and high performance exercise team at RISE Health Group for students of Rowville Sports Academy, VIC Australia. February 2015
Nutrition for Growth and Performance

Adolescent athlete has higher nutritional needs due to their high level of participation in sports. They must meet their nutritional requirements for growth and development while training and competition. A high priority to nutritional intake is crucial to achieving their maximum potential in sports while ensuring healthy growth and development of the child.

This booklet is written especially for parents, coaches and students of Rowville Sports Academy to help you plan, prepare foods/drinks to support the needs of your adolescent athletes. The intention is to be brief and practical to give ideas to busy families on how to feed their active child. For adolescents with special dietary needs or those competing at elite level, an individualized advice from accredited sports dietitians is recommended. Contact our clinic to arrange an appointment with our sports dietitian.

The challenges for most families are having the right foods/drinks at the right time and planning eating around activities. The key is to PLAN AHEAD and DISCIPLINE your child to have a good daily routine. Easier said than done! But they are so important and critical in developing good eating habits.

Adequate nutrition will help your child to

- Reduce risks of injury, illness and fatigue;
- Achieve ideal weight and physique for their sport;
- Maximise gains from training program;
- Better and quicker recovery from training sessions;
- Provide appropriate mix of fuel to enhance performance, stamina and recovery.

Important nutrients to consider

Carbohydrates are the main FUEL source of the athlete, providing essential energy for muscle contractions and prevent early fatigue. It is important to note that it doesn’t mean that they can have lots of sugary foods, but getting nutrient dense sources of carbohydrate is the goal. Carbohydrate amount should be matched to their energy demands, that is, fewer amounts during off-season or less active period and higher intake during heavy physical load.

Protein is essential for growth and muscle repair. Young athletes have higher protein requirements due to their faster protein turnover and needs for muscle repair. Focus should be on getting a variety of high quality lean protein sources throughout the day.

Fats are important for the absorption of several vitamins to critical for brain and immune function, hormone production, menstruation, growth and maturation. Adolescents are encouraged to include small amounts of plant and fish based fats but to limit saturated fats (animal derived) such as fatty meat, fried foods and baked products.
Breakfast Ideas

Surprisingly many children come to school without breakfast. Some genuinely feel sick to eat early in the morning, but for most children it’s poor time management in rushing to get to school. Skipping breakfast often leads to poorer eating habits later on in the day, so help your child to set aside 15 minutes in the morning to have breakfast.

10 minutes school breakfast options:

• Toasted raisin bread with a thin scrape of margarine and a glass of low fat milk;
• Multigrain toast or English muffins with cheese and tomato or baked beans and a glass of low fat milk;
• High fibre, low sugar wholegrain cereal with fruit and low fat milk. Suitable cereals are: oats porridge, Uncle Tobys Plus varieties, Goodness Superfood cereal range, Weetbix, untoasted muesli, sultana bran, Vita Brits, or a mix of any of these cereals;
• Smoothies: blend 1-2 variety of fruit, low fat milk and low fat yoghurt;
• Egg cups – crack an egg in a microwave suitable cup and heat for 30 second

Grab n Go options:

• Peanut butter sandwich and water;
• Up n Go tetrapacks or other similar products;
• Low sugar cereal bars such as Be Natural trail bars or Fibreboost muesli bar;
• Banana and plain milk tetrapack;
• Small tub of low fat yoghurt and muesli in a container.

What to Drink?

Compared to adults, children are less efficient in regulating their body temperature and have lower exercise tolerance in the heat. Poor hydration practices are very common among adolescents and they can experience significant dehydration during training and competition.

Monitoring changes in body weight before and after exercise will provide a guide to how much fluid is lost during exercise session. Fluid needs vary greatly between individuals; using colour of the urine is an easy way to gauge their hydration status. See this link for a sample urine colour chart http://www.urinecolors.com/dehydration.php

Cool water and milk are still the best drink for adolescent athletes and should be made available around training sessions. In prolonged exercise sessions, such as whole day tournaments, sports drink may be valuable to provide extra electrolytes and glucose for fuel and hydration. Excess consumption of sports drinks may lead to excessive caloric consumption and increased risk of overweight and obesity and teeth cavities. Caffeinated energy drinks are discouraged.

Hydration tips:

• Aim to finish at least 2x750ml water bottle during school and exercise sessions. Have more if you do heavy training sessions.
• Chill water overnight and put in insulated bottles to keep cool during the summer months.
• Sports drinks may be consumed during really hot days and or very heavy training load.
• Caffeinated energy drinks should NOT be consumed.
Snacks

Snacks do not mean packaged or junk foods. It is simply a smaller meal to help sustain children until the next meal. Children need snacks and particularly adolescent athletes whose appetite seems to be insatiable! Morning and afternoon snacks are essential and another one before bed if they are still hungry. Snacks should be low in fat, sugar and salt. Fruit, nuts and dairy products are convenient and nutritious choices.

Light snacks (if not that hungry)

- Raw vegetable sticks, crackers and dips (hummus, tzatziki, salsa, relish);
- A piece of fruit or a handful of dried fruits and nuts;
- Pikelets, scones or fruit bread;
- A carton of reduced fat fruit yoghurt;
- Rice cakes with sliced banana and peanut butter.

Eat on the run

- Low fat flavoured milk and cereal bars;
- Fruit muffin and low fat yoghurt;
- Liquid meal supplements (e.g. Sustagen Sport)

Substantial snacks (good as an early dinner if training into dinner time)

- Toasted sandwiches or jaffles with 200ml fruit juice;
- Fruit salad and frozen yoghurt topping
- Baked beans or canned spaghetti on toast
- Large bowl of high fibre cereal and low fat milk and fresh or canned fruit;
- Sandwiches with chunky fillings such as turkey, cheese, and salad (see lunch ideas for more filling options);
- Oats porridge and fruit.

Foods and drinks suggested in this booklet are available at the RSA cafe
Lunch & Dinner
Lunch and dinner should be aimed at increasing intake of vegetables or salad, which is important for digestive health and immune system, moderate protein (100-200g per meal) and wholegrain starchy foods such as brown rice, pasta, legumes, noodles, bread and others. Keep meals low fat, avoid deep frying and always use lean meat. Provide a variety of protein sources including red meat, poultry, fish, eggs and vegetarian protein sources.

SCHOOL LUNCH IDEAS
Sandwiches/Wraps/Rolls
Filling ideas:

• Avocado, roast chicken (no skin), sprouts, tomato
• Vegemite, reduced fat cheese, celery, lettuce.
• Egg, low fat mayo, celery, lettuce
• Canned tuna, capsicum, avocado, cucumber
• Roast meat, rocket salad, cucumber, sprouts, tomato chutney
• Ham, reduced fat cheese, tomato
• Pesto chicken, cucumber, lettuce
• Turkey, grated carrot, spinach, onion cucumber, tomato and sprouts.
• Bean burritos wrap

Salads

• Lamb / beef / chicken and spinach salad, multigrain bread roll
• Pasta salad with small amount of low fat creamy dressing or mayo with tuna and capsicum, lettuce, celery, corn, cucumber
• Greek salad with feta and mixed beans
• Chicken caesar salad on light dressing and use small amounts
• Chickpea salad (chickpea, basil, capsicum, feta, onion, cucumber, peas, lemon and olive oil dressing.

Hot options

• Tuna or chicken macaroni and cheese (light cheese, light evaporated milk not cream) and grated vegetables
• Spaghetti Bolognese (lean mince) and side salad
• Baked potato with
  - Roasted vegetables in tomato pasta sauce
  - Lean mince, low fat cheese, guacamole
  - Chicken and corn, cabbage, carrot, onion, light coleslaw dressing
• Curried beef, zucchini, tomato paste
• Chicken curry and brown rice and vegetables
• Zucchini slice
• Fritata or quiche

Meal Preparation Tips
To make it easier to plan, try the following tips:

• Pre wash and cut your salad vegetables on the weekend and put them in airtight containers for quick assembly during the week.
• Cook extra meat serves at dinner to throw in with salads for next day lunch or for suitable dishes they can be stored in the freezer for those days when you don’t have time to cook.
• Keep some frozen vegetables in the freezer in case you’ve run out of fresh ones.
• One pot dish such as casseroles and stir fries are simple, quick and nutritious to prepare.
• Plan your lunch and dinner menu at least one day ahead so that you don’t rely on take away foods too often.
• Thermos are very useful to keep food warm especially when going from one place to another and having to eat in the car.
Competition Eating

Before

High Carbs
Low fat
Low fibre

The aim is to provide them with a fuel source for the game, namely, carbohydrate. However it shouldn’t sit too long in the stomach that it will become uncomfortable, so choose low fat and low fibre options.

During

Fluids
Easy carbs for longer games

For games lasting 90 minutes or less, ONLY WATER is needed.

For games lasting longer than 90 minutes, energy boosters are needed. Some examples are:

Recovery

Fluids
Mix of carbohydrate and protein

The goal of recovery meal is to replenish fuel and fluids that was used and provide building blocks for muscle repair. How fast this meal should be depends on how quick the next game is. If there is at least a day to recover then recovery can be done during the next meal. However, if the next game is only several hours later then it needs to be eaten within 30 minutes of exercise. Both fluids and food is important.

Pre-game meal ideas (2 hours prior)

- Pasta with tomato based sauce, small amount of mince;
- Nutrigrain cereal, low fat milk, 1-2 pieces of fruit;
- White sandwich with banana and peanut butter or honey and fruit juice;
- Pancakes with honey and a glass of milk;
- Baked beans with light cheese on white toast, fruit and a glass of milk.
- Low fat flavoured milk and banana.

- Flavoured milk or liquid meal tetrapak
- 600ml sports drink
- Jam or honey sandwich with a juice popper
- Low fat cereal bar with a juice popper or flavoured milk

Recovery meals (within 30 minutes or at the next meal)

- Creamed rice and smoothie
- Egg and salad sandwich with banana (white bread)
- Fruit smoothie
- Jam or honey sandwich and flavoured milk
- Low fat yoghurt and muesli
- Egg and salad sandwich and fruit juice
These foods contain little nutrients but high in sugar, salt and fats. They do not give adequate nutrients for recovery or for training and if eaten frequently will increase risk of body fat gain. **SOMETIMES** (once or twice a week) and in **SMALL AMOUNTS** is the goal!

* "I wasn't feeling well in the first half, I felt down, man. I had three slices of pizza before the game and the food took me down." - Leroy Loggins, basketballer with the Brisbane Bullets after 1986 semi-final

### Cuisine Instead Of...... Choose These Healthier Options

<table>
<thead>
<tr>
<th>Italian</th>
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<tbody>
<tr>
<td>Garlic bread</td>
<td>✗</td>
<td>Bruschetta (tomato/basil - no cheese)</td>
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<tr>
<td>Creamy soups</td>
<td>✗</td>
<td>Minestrone/vegetable soup</td>
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<tr>
<td>Cured meat platters</td>
<td>✗</td>
<td>Cured fish or seafood</td>
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<tr>
<td>Deep fried or crumbed fish or seafood</td>
<td>✗</td>
<td>Grilled or baked fish or seafood</td>
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<tr>
<td>Parmigiana</td>
<td>✗</td>
<td>Chicken Cacciatore</td>
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<tr>
<td>Dishes with salami, chorizo, pastrami, fatty cuts of meat or poultry with skin</td>
<td>✗</td>
<td>Grilled or roast beef, veal, lamb, rabbit or skinless chicken</td>
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<tr>
<td>Pasta with cream sauces e.g. alfredo, carbonara or oily pesto</td>
<td>✗</td>
<td>Pasta/Paella (entree size) with tomato, seafood or vegetable-based sauces e.g. marinara, napolitana</td>
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<tr>
<td>Lasagna with heavy cheese/cream sauce</td>
<td>✗</td>
<td>Small vegetarian or marinara pizza with a thin crust</td>
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<tr>
<td>Pizza with a thick crust, meat and cheese toppings</td>
<td>✗</td>
<td>Risotto with vegetables and tomato</td>
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<tr>
<td>Creamy risotto</td>
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<table>
<thead>
<tr>
<th>Spanish</th>
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<tbody>
<tr>
<td>Deep fried or battered items: spring rolls, dim sims, wontons, fried tofu etc</td>
<td>✗</td>
<td>Clear soups: miso, tom yum, &amp; broth based soups</td>
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<tr>
<td>Tempura</td>
<td>✗</td>
<td>Steamed vegetable dumplings or rice paper rolls</td>
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<tr>
<td>Prawn crackers</td>
<td>✗</td>
<td>Soy, oyster, chilli sauces or vinegar</td>
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<tr>
<td>Dishes containing coconut milk/cream</td>
<td>✗</td>
<td>Dishes with many vegetables</td>
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<tr>
<td>Red/green curry or laksa soup curry</td>
<td>✗</td>
<td>Steamed rice</td>
<td></td>
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<tr>
<td>Fried rice or noodles</td>
<td>✗</td>
<td>Steamed, braised, stir fried, bbq seafood/lean meat/skinless chicken</td>
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<tr>
<td>Crispy battered chicken &amp; sauce</td>
<td>✗</td>
<td>Stir-fry dishes with lean meat/chicken/seafood/tofu and plenty of vegetables, herbs/spices</td>
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<tr>
<td>Deep fried/crispy noodles</td>
<td>✗</td>
<td>Sushi and sashimi</td>
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<tr>
<td>Chicken wings</td>
<td>✗</td>
<td>Lean meat/skinless chicken from Teppanyaki grill</td>
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<tr>
<td>Peking duck with skin</td>
<td>✗</td>
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<tr>
<td>Satay sauces</td>
<td>✗</td>
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<tr>
<td>Malaysian roti bread</td>
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**Asian: Chinese, Japanese, Thai, Malaysian, Vietnamese**
Useful Websites

For more information on sports nutrition and general healthy eating, the following websites contain in-depth and credible information.

4. American Dietitian Association public information - [http://www.eatright.org](http://www.eatright.org)

Cookbooks and recipe sites for meal ideas


Blogs