

## FACT SHEET FUELLING & COOLING THE JUNIOR ATHLETE

**Maintaining adequate nutrition** in athletic children is of great importance to their overall health, growth, development, and consequently to their sporting performance. The well nourished junior athlete will be able to play better and for longer, stay mentally alert, and recover quicker from training and competition. The active child who is not getting enough total energy may become tired and lethargic, and even struggle to maintain their enjoyment in sport. Young athletes who eat too little risk mild under-nutrition and may suffer from poor growth and delayed maturation.

### HOW MUCH FOOD IS ENOUGH?

Although exact nutrition requirements vary between individuals, below is a general guide for children aged 4 – 13 years. The best indicators of adequate nutrition are the child's development, growth, wellbeing and performance. If a child is very active, extra food may need to be eaten. In this case, choose from the carbohydrate-rich food groups indicated with an \* as they will provide the extra 'go' these active children require.

Food Group	Daily Serves	Sample Serve Size
Vegetables & legumes*	4.5-5.5	1/2 cup cooked vegetables 1 cup salad vegetables 1/2 medium potato 1/2 cup cooked beans, lentils
Fruit*	1.5-2	1 medium apple, banana 2 small apricots, plums 1 cup diced fruit 1 cup canned fruit (no added sugar)
Grain foods*	4-6	1 slice bread, crumpet 1/2 cup cooked pasta, rice, noodle 1/2 cup cooked porridge 2/3 cup cereal flakes
Lean meats & poultry, fish, eggs, tofu, nuts & seeds, legumes	1.5-2.5	100g (raw) lean meat, chicken, fish 1 small can tuna 2 eggs 1 cup cooked legumes 170g tofu 30g nuts, seeds, nut butter/paste
Dairy foods (& non dairy alternatives)*	1.5-3.5	1 cup cows milk 1 cup soy milk (with calcium) 2 slices (40g) hard cheese 1/2 cup ricotta cheese 3/4 cup (200g) yoghurt

Adapted from Australian Dietary Guidelines, 2013. For more info: eatforhealth.

### EATING ON THE RUN

Children who are constantly 'on the go' need to eat regularly to keep topping up their energy levels. Nourishing carbohydrate foods should provide the bulk of extra energy required by active children. Eating enough can be difficult if they become too busy or too tired to eat regularly. This is often the case in the evening, so the afternoon tea snack becomes very important, especially after a hectic day of school and sport. The solution is to have a selection of healthy foods available fast!

Simple and quick snack ideas	
Fruit (fresh, canned, dried)	Breakfast cereal
Toast or crumpets	Sandwiches, rolls, wraps
Fruit buns or fruit loaf	Baked beans
English muffins	Crackers and cheese
Pikelets, homemade muffins	Wholegrain cereal bars
Yoghurt, custard	Dried fruit and nut mix
Milk, smoothies, milkshakes	Tuna and crackers

### COOLING ACTIVE KIDS

Children are not able to regulate their body temperature as well as adults. In addition, younger athletes don't stop for fluids as frequently as adults and often wait until they are thirsty before they start to look for a drink. By this time they will already be starting to dehydrate. For this reason special attention needs to be paid to keeping active children adequately hydrated.

### WHICH DRINK IS BEST?

Water is the best choice for children's 'every day' fluid, however, other fluids such as milk and sports drinks can also be useful. During and after exercise, junior athletes will drink more if the fluid is cool. Keeping fluids in a cooler bag or taking frozen drink bottles (which will melt during exercise) will help promote fluid intake. Encourage children to take sips of fluid during exercise to avoid dehydration. Water is the best choice before, during and after sport, especially during short and/or low intensity activity. During long training sessions or carnivals or on very hot days, sports drinks can provide carbohydrate for energy and the electrolytes (sodium) will help replace those lost through sweat. Dental hygiene is always important. To keep children's teeth healthy avoid excessive use of acidic fluids like soft drinks, sports drinks or cordial. Limit the use of these drinks to appropriate sporting situations as explained above.

After activity, include water and discourage intake soft drinks. Milk drinks (plain, flavoured, smoothies or milkshakes) are great recovery drinks as they contain carbohydrate, protein and electrolytes as well as a source of fluid to help children recovery quickly. Fluids containing caffeine such as energy drinks are not suitable for children.

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### SOME HYDRATION TIPS

- Ensure children start exercise hydrated by encouraging them to drink fluids prior to exercise
- Send children to school with a water bottle to remind them to drink during the day, especially if they have training after school
- When children are well hydrated they should produce a good volume of pale yellow urine regularly over the day
- During exercise, make sure children take advantage of breaks in play to sip on fluids (remembering that fluid needs are higher on hotter days and lower on cooler days)
- After exercise, children should be encouraged to drink fluids to help with rehydration

### COPING WITH CARNIVALS

Junior athletes participating in sports carnivals are often very excited and can be busy with multiple events which leaves little time to think about eating and drinking. Parents and coaches should monitor and encourage sensible intake of food and fluids at these times. Here are some tips for sports carnivals:

- Don't rely on the canteen for supplies as the food can often be of poor nutrition quality
- Take a cooler bag or esky of food and fluids to give the junior athlete their best chance to eat and drink well
- Encourage children to drink regularly from their drink bottle (you might need to pack 2-3 drink bottles depending on the weather conditions and facilities available at the carnival)
- If it is hot, include frozen juice poppers as well as foods that don't require refrigeration, such as food bars and packaged foods. Plastic tubs are easiest to manage
- If there is less than one hour before or between events, carbohydrate-rich fluids (e.g. sports drink, flavoured milk tetras, juice poppers) can help boost energy levels
- If there are one to two hours between events, children should have fluids and a light snack. Some good snack options include cereal bars, fruit, light sandwiches and/or fruit buns or homemade muffins.
- If there is longer than two hours between events, more substantial snack or light meal options can be offered. For example, sandwiches or rolls, baked beans, noodles, pasta salad, cereal with milk, creamed rice with fruit.
- Nervous children may find liquid meals (e.g. smoothies, tetra packs flavoured milk, Sustagen Sport™) easy to manage than solid foods
- Always remember to keep up the fluids during longer breaks in activity as children often continue to sweat even when their not being active especially in hot, humid environments.

### EATING FOR RECOVERY

Planning a quick and easy meal, preparing before you leave home or using leftovers from the freezer will make it easier for refueling tired and hungry children at the end of a hectic day. Ideally, meals should be based around good quality carbohydrates, lean protein and vegetables (fresh, frozen, salad) plus water or milk to drink. Some ideas are listed below.

Easy and quick meals	Freezer friendly meals
Stir-fry meat/veg + noodles	Bolognese sauce
Burritos (lean mince or bean)	Lasagne
Homemade pizzas	Casseroles or stews
Omlette on wholegrain toast	Chunky meat/veg soups
Homemade burgers	Low fat curries
Hot roast chicken + salad wraps	Shepherds pie

At the end of a hectic day you might be tempted to stop at a fast food outlet for dinner. If you do stop to pick up something, try one of the healthier fast food options available. Always encourage intake of foods rich in carbohydrate and protein and lower in fat (avoid deep fried options) along with a generous fluid intake.

### SUMMARY POINTS

- To ensure an adequate intake of all the essential nutrients, encourage active children to eat a wide variety of nutritious foods from each of the different food groups
- Carbohydrate and protein based, low fat snacks are important between meals for active children to keep up their energy levels
- Encourage children to eat according to their activity needs (remembering that children need to eat more on very active days)
- Make nutritious food to sporting events. Self-catering is wiser than relying on local canteens.
- Quick and/or pre-prepared meals can help junior athletes recovery quickly at the end of an active day
- Children can overheat and dehydrate quickly. Offer plenty of fluids before, during and after sport
- If parents or coaches are concerned about their child's nutrition, seek professional advice from an Accredited Sports Dietitian [www.sportsdietitians.com.au](http://www.sportsdietitians.com.au).