



Australian Government
Australian Sports Commission

COACH'S WORKBOOK

Module 4

Active After-school
Communities program
Nutrition and wellbeing

**Active After-school
Communities**

Helping kids and communities get active

Community Coach Training Program Module 4

Module time: 45 minutes

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Nutrition and wellbeing

On completion of this module participants will be able to provide basic information to primary school-aged children on nutrition and wellbeing.

SPECIFIC LEARNING OUTCOMES

On completion of this module, course participants will be able to:

- identify the components of a well-balanced diet for structured physical activity for primary school-aged children
 - identify the benefits of regular physical activity within the development of primary school-aged children.
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4.1 Healthy body, healthy mind: the importance of a healthy lifestyle for primary school-aged children

'If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have the safest way to health' Hippocrates (400 BC).

Healthy eating and regular exercise have long been recognised as significant contributors to health and wellbeing. It seems, however, that today's society has forgotten the lessons of the past.

Large-scale changes in modern society mean that we are faced with a wide range of accessible food. Many of these foods are high in fat and energy but low in important nutrients. In addition, it is becoming harder for many people to be active. As we get older, dietary and activity patterns established in childhood can be more difficult to change. These factors are contributing to an increase in obesity.

There are approximately 1.5 million people under the age of 18 who are either overweight or obese. Between 1985 and 1995, the levels of obesity in children tripled. Once children are overweight, it is very difficult for them to get back to a healthy weight. Overweight children have a 50 per cent chance of being an overweight adult.

Good nutrition contributes to both good health and academic achievement. Healthy eating and physical activity are also essential for maintaining a healthy body weight for children and reducing the chances of developing heart disease and diabetes later in life.

By targeting the school community, parents as well as children can benefit from a range of activities that will help sustain healthier eating habits, and build confidence and enthusiasm for physical activity. These are important to establish early in life, as good nutrition and healthy eating throughout childhood and adolescence are vital for learning, development and long-term health.

The AASC program is a major component of the Australian Government's initiative to tackle the growing problem of declining physical activity and poor eating habits among Australian children.

This initiative — Building a Healthy, Active Australia — also includes:

- **Active School Curriculum** — as part of the new conditions of Australian Government schools funding, each state, territory and non-government education authority will be required to include in their curriculum at least two hours of physical activity each school week for primary and junior secondary school children.
- **Healthy School Communities** — grants to community organisations linked with schools, such as parents and citizens associations, to promote healthy eating.

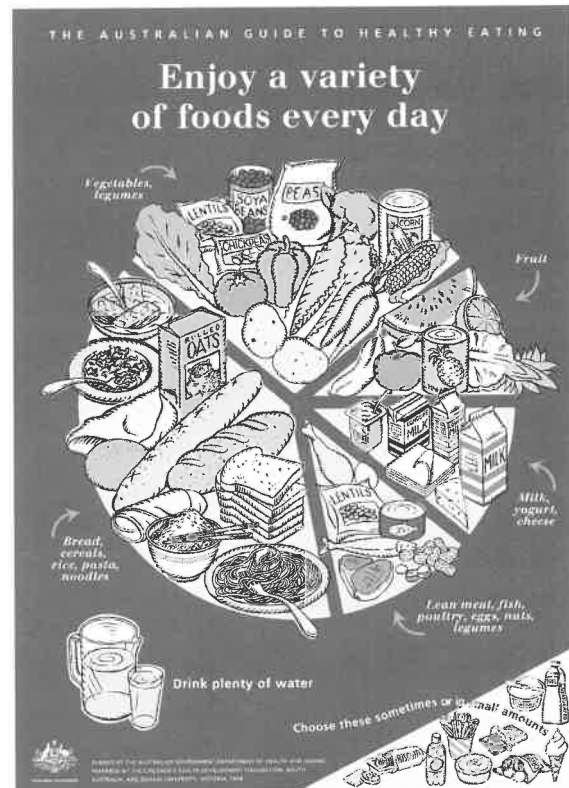
- **Healthy Eating and Regular Physical Activity** — practical help and information for Australian families about how to make healthy eating and physical activity part of their everyday lives.

This module highlights key messages regarding healthy eating and fluid intake, and discusses how children (and their parents) can be encouraged to adopt healthy eating habits.

4.2 Healthy eating: basic guidelines

People who are active and eat a variety of nutritious food tend to be healthier, live longer and are at less risk of developing lifestyle illnesses such as heart disease or diabetes. Eating a variety of foods each day will provide the range of nutrients that children and their families need. For balanced, healthy eating a coach should encourage children and their families to:

- eat the recommended amounts of the five food groups each day: vegetables, fruit, breads and cereals, meats (and their alternatives) and dairy
- eat plenty of plant foods (vegetables, legumes, fruit, bread, cereal, rice and pasta), moderate amounts of animal foods (milk, yoghurt, cheese, meat, fish, poultry and eggs), and small amounts of the extra foods (including oils, butter and margarines) in appropriate portions for each family member
- choose varieties of foods from within each of the five food groups from day to day, week to week and throughout different seasons
- choose low-salt foods and use sparingly
- drink plenty of water.



Source: *The Australian Guide to Healthy Eating*, Australian Government Department of Health and Ageing, Canberra, 1998

The Australian Guide to Healthy Eating is a food selection guide providing information about the amounts and kinds of food that need to be eaten each day to get enough nutrients essential for good health and wellbeing. The guide aims to promote healthy eating habits throughout life, which will help to prevent health problems in later life such as heart disease, cancer, diabetes and obesity.

Other tips for healthy eating include:¹

- Encourage set times for meals and limit the number of snacks to three per day.
- Avoid eating in front of the television and do not use food as a reward or comfort.
- Remember that breakfast is important. A breakfast including cereal, toast, fruit and dairy is a great start to a child's day.
- Essential nutrients in vegetables and fruits vary according to their colour. Turn a healthy snack into a colourful treat by mixing fruit and vegetables from each group:
 - green beans, snow peas, capsicum, celery, lettuce, grapes and apples
 - red and yellow capsicum, corn, carrots, apples, bananas and apricots
 - purple grapes, plums and berries.

Children and families should aim to maintain a healthy body weight by balancing food intake and taking part in regular physical activity. Australia's Physical Activity Recommendations for Children and Young People, as well as physical activity guidelines from both the United Kingdom and the United States, suggest that primary school-aged children should accumulate at least 60 minutes of age-appropriate physical activity per day.

¹ This section has been adapted from 'Tips for parents: healthy Australian children', Building a Healthy, Active Australia, Healthy School Communities pamphlet, Australian Government Department of Health and Ageing, Canberra, 2004 (at Appendix 4.1); 'Dietary guidelines for Australians', www.foodwatch.com.au; Australian Sports Commission 2004, *Beginning Coaching: general principles*, 3rd edn, ASC, Canberra.

The Australian Government has developed a web site that provides links to practical advice on how children, young people and families can be more physically active and choose healthy foods. The Australian Dietary Guidelines, the Australian Guide to Healthy Eating, Australia's Physical Activity Recommendations for Children and Young People, and the National Physical Activity Guidelines for Adults can be accessed at www.healthyactive.gov.au or www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-strateg-food-recommend.htm.

4.3 What should children be drinking during exercise?

It is important to keep children hydrated, especially when being active. Drinking plenty of water is a basic requirement. Other drinks such as milk and fruit juice can also be a good source of fluids and some vitamins. Fruit smoothies or fruit ice blocks can be another way of encouraging fussy drinkers to consume fluids during summer.

Children should limit the amount of fruit juice, cordial and soft drinks they consume as they are high in sugar ('Tips for parents: healthy Australian children', Building a Healthy, Active Australia, Healthy School Communities pamphlet, Australian Government Department of Health and Ageing, Canberra, 2004).

Failure to drink enough fluids, especially when exercising, can lead to dehydration. The effects of dehydration include:

- increased body temperature
- fatigue and/or dizziness
- diminished strength and endurance
- headaches
- stomach upsets.

High levels of dehydration can be fatal, so children must be encouraged to drink fluids regularly during exercise. Thirst is not a good indicator of when and how much to drink — by the time a person is thirsty, they have already dehydrated.

The amount of fluid lost during exercise depends on many factors: the intensity and duration of exercise, size of the child, the temperature and humidity.

Encouraging children to drink small amounts regularly will help minimise the risk of dehydration. Drinking more may take some practice, however, most children can learn to tolerate more fluids during exercise. A coach can make this easier for the children by establishing a routine, encouraging them to bring healthy drinks along to sessions or having drinks available.

Be aware of children who drink all their fluid at one time — often, by the time they remember to drink, they are already substantially dehydrated and their body may not absorb the fluid well as a result.

To ensure effective fluid intake, the coach should encourage children to:

- drink one to two glasses of fluid within the hour before exercise
- drink small amounts regularly throughout physical activity sessions, and before and after sessions (make this easy by establishing a routine, encouraging children to bring healthy drinks along to sessions or by having them available before, during and after sessions)
- keep fluids at a cool temperature for better absorption by the body (10–15°C)
- choose a fluid that they enjoy the taste of while exercising. If children do not enjoy water, use a diluted cordial (Australian Sports Commission 2004, *Beginning Coaching: general principles*, 3rd edn, ASC, Canberra).

EXTENSION ACTIVITY 4.1: HEALTHY FOOD AND DRINKING FOR ACTIVE PRIMARY SCHOOL-AGED CHILDREN

- a** List appropriate reference groups and professionals that could assist children in your programs (and their parents) with nutritional information.

- b** As a coach, you may be asked for advice on nutrition. What foods should active primary school-aged children be encouraged to eat and what foods should be reduced or avoided in their diet?

Recommended	Choose sometimes or in small amounts

- c** What is the present thinking about sports drinks such as Gatorade (Some children will bring sports drinks to low intensity activity sessions)?

- d** What fluids should children drink and in what quantity before, during and after exercising?

Before

During

After

4.4 Communicating the healthy eating message

4.4.1 The coach as a role model in healthy eating and an active lifestyle

If a coach is to successfully convey the healthy eating and healthy lifestyle messages to children in AASC programs, they must not only 'talk the talk', they must also 'walk the walk'. In other words, how they look and what they do in front of the children are just as, if not more, important than what they say to the children. Coaches must be good role models for healthy eating and a healthy lifestyle for the children.

ACTIVITY 4.2: THE COACH AS A ROLE MODEL

- a** What message does the coach give if the children see them chewing gum, eating junk food, drinking a can of soft drink, or smoking either during their break or outside the program?

- b** What are five things that you can do to ensure that you are a good role model (that is, lead a healthy active lifestyle) for children?

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- e One of the responsibilities of schools/OSHCSs in the AASC program is to provide a nutritious afternoon tea for all children. What food could be provided for the children that would meet the healthy nutrition guidelines?

4.5 Opportunities for structured physical activity and sport within the local community

If children and their families are to make structured physical activity a habit for life, it is important that there are clear pathways or links from the AASC program to a variety of different local community sporting and physical activity organisations.

Note: if you completed this activity in Module 1 there is no need to complete Activity 4.4.

ACTIVITY 4.4: PATHWAYS WITHIN THE LOCAL COMMUNITY

What opportunities or pathways are available in your local community for encouraging children and their parents to 'play for life'? Complete the tables on pages 98–9.

Pathways available in the local community to encourage children and their parents to 'play for life'

TYPE OF PHYSICAL ACTIVITY/SPORT	POSSIBLE PATHWAYS IN THE LOCAL COMMUNITY	CONTACT PERSON/DETAILS	COMMENTS

TYPE OF PHYSICAL ACTIVITY/SPORT	POSSIBLE PATHWAYS IN THE LOCAL COMMUNITY	CONTACT PERSON/DETAILS	COMMENTS

Appendix 4.1

Tips for parents: healthy Australian children

Obesity is now seen as an epidemic. It is common in all parts of Australia and across all ages, including children.

It is estimated that there are 1.5 million children under 18 years (between 20 to 25 per cent of children and youth) who are either overweight or obese. In Australia between 1985 and 1995, the levels of obesity in children tripled.

Children that are overweight or obese have an increased risk of developing high blood pressure and high cholesterol leading onto heart disease. Of great concern is the appearance of type 2 diabetes in our youth. Type 2 diabetes can lead to complications such as heart disease, stroke, limb amputation, kidney failure and blindness.

Once a child is obese it is likely to persist into adulthood. Overweight young people have a 50 per cent chance of being overweight adults.

This is why children should be active every day in as many ways as they can, through play, transport and recreation. Evidence shows that children want you to be active with them, to support and encourage them and to focus on fun!

Be a role model and be active with your children

- Build physical activity into family outings — take the dog for a walk or go for a bike ride together.
- Walk and talk — practice spelling, multiplication tables or other homework with your child while walking.
- Be prepared — have a box in the car and at home with balls, a frisbee, etc. and you will always be ready for action.

Support activity by encouraging fun active play and recreation and sport

- Give a present that encourages activity — a kite that you can make and fly together.
- Encourage and support walking and cycling to school.
- Work with the school to increase physical activity opportunities — lobby for playground facilities or coach a team!
- Work with local government to support walking, cycling and physical activity in your neighbourhood and community.
- It is important to keep hydrated while being active, so make sure your family drinks plenty of water — it's the best drink. Other drinks such as milk and fruit juice can also be a good source of fluids and some vitamins. Try making fruit smoothies or fruit ice blocks for great summer snacks.
- Remember that breakfast is important. We need breakfast for energy so a breakfast including cereal, toast, fruit and dairy is a great start to your child's day.
- If food is not stored safely, it is easy for germs such as bacteria and viruses to form. Warm environments are perfect conditions for bacteria to grow and multiply. Store raw and left-over cooked food in sealed containers in the fridge, and always wash your hands before preparing and serving food.

Restrict electronic media time to less than two hours each day

Television, video/DVD and computer games are popular recreational activities with children, but these activities usually involve sitting still. Encourage children to be more active during their leisure time.

Nutrition: what should the family be eating?

Studies show that people who are active and eat a wide variety of nutritious foods tend to be healthier, live longer and have less risk of developing a lifestyle illness. Eating a variety of foods each day **will** provide the range of nutrients that you and your family needs.

- For a balanced, healthy diet:
 - Eat the recommended amounts of each of the five food groups each day: vegetables, fruit, breads and cereals, meats (and their alternatives) and dairy.
 - Eat plenty of plant foods (vegetables, legumes, fruit, bread, cereal, rice and pasta), moderate amounts of animal foods (milk, yoghurt, cheese, meat, fish, poultry and eggs), and small amounts of the extra foods (including oils, butter and margarines) in appropriate portions for your family members.
 - Choose varieties of foods from within each of the five food groups from day to day, week to week and throughout different seasons.
 - Drink plenty of water.
- Encourage set times for meals and limit the number of snacks to three per day.
- Avoid eating in front of the television and do not use food as a reward or comfort.

Food for health: tips

- Did you know that the essential nutrients in vegetables and fruits vary according to their colour? Turn a healthy snack into a colourful treat by mixing fruit and vegetables from each group:
 - green beans, snow peas, capsicum, celery, lettuce, grapes and apples
 - red and yellow capsicum, corn, carrots, apples, bananas and apricots
 - purple grapes, plums and berries.
- The Australian Government has developed a web site that provides links to practical advice on how children, young people and families can be more physically active and choose healthy foods. You can access the Australian Dietary Guidelines, the Australian Guide to Healthy Eating, Australia's Physical Activity Recommendations for Children and Young People and the National Physical Activity Guidelines for Adults at www.healthyschools.gov.au.

If you are concerned about your child's health, make an appointment to talk with your local health care professional.

Source: Building a Healthy, Active Australia, Healthy School Communities pamphlet, Australian Department of Health and Ageing, Canberra, 2004.

Appendix 4.2

Taming fussy eaters: ten ways to keep your sanity

Parents, you are not alone! A 1994 survey of 622 Australian parents revealed that three out of four parents felt worried, guilty or frustrated that their children were not eating balanced meals.

Kids aged between three and nine were found to be the fussiest eaters. Guess what was rated the most unpopular? Yes, it was vegetables ... followed by fish, milk, meat and fruit. Here's how to entice fussy eaters to eat.

- 1 Set the example.** Eat well yourself (and enjoy it!).
- 2 Serve small.** Small meals with snacks in-between goes down better than three big meals a day.
- 3 Routine.** Keep mealtimes regular and familiar.
- 4 Do not bribe.** Bribes — 'Eat your broccoli if you want ice-cream' — tend to backfire over time. Children will swallow an unappetising food (or medicine) in order to get the reward, but that does not make them like it. Usually they end up disliking it intensely!
- 5 Full tummies.** Do not fill them up on fluid (juice, milk, cordial, even water) just before a meal.
- 6 Let them help.** Kids eat up if they can serve themselves or help make it.
- 7 Find a substitute.** If they hate vegetables, offer them fruit. If they will not drink milk, buy yoghurt or cheese. If they dislike chewing meat, try mince dishes, chicken, fish or baked beans.
- 8 Check it out.** Do not ignore problems that interfere with eating such as teething, sore throat, blocked nose or upset tummy.
- 9 Try again.** Keep offering new foods even if kids reject them at first. They need to see them at least five times before they look 'familiar'.
- 10 Why hurry them?** Fussy eaters are often slow eaters who dawdle over their plate.

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Source: Foodwatch Fact Sheet for parents of young children, especially three to nine year olds (www.foodwatch.com.au)

Appendix 4.3

Hey 'cool kid', where's your drink bottle?

How often have you heard a coach or parent ask this question? Having my own kids rushing in and out to training and sporting events, a commonly asked question in our house at night is, 'Have you got your drink bottles organised for tomorrow?' Being prepared and organised about fluids is very important and I have often suggested to my husband, who coaches junior sport, that perhaps he shouldn't let kids play or train unless they have their drink bottle at the ready. Sounds tough I know, but keeping junior athletes hydrated is **that** important and I firmly believe they need to learn to look after their bodies from an early age.

Sports Medicine Australia guidelines for fluid replacement (water) for children and adolescents

Age (years)	Time (minutes)	Volume (mL)
~10 years	45 (before exercise)	150–200
	20 (during exercise)	75–100
	As soon as possible after exercise	Liberal until urination
~ 15 years old	45 (before exercise)	300–400
	20 (during exercise)	150–200
	As soon as possible after exercise	Liberal until urination

Fluid intake may need to be increased in hot environments — increase frequency of intake and opportunities to take in fluids.

Source: Sports Medicine Australia 1997

What are the warning signs of dehydration or heat stress?

Know the warning signs for dehydration to avert the development of heat stress. If a child shows any of the following signs it is important to allow them some time out to rest, cool down and consume fluids:

- dizziness and light-headedness
- muscle cramps
- nausea, vomiting and/or headache
- dry mouth and throat
- a feeling of extreme heat that continues after a 'cool down' period
- dark urine
- infrequent urination.

Hot tips to keep kids cool

- 1 Remind children and adults to take a drink bottle with them to work, school, training or sport. It may be necessary to have two bottles for long sessions — one with flavoured fluid and one with water.
- 2 If you are the coach take an extra supply of drink bottles and a large container of water for refilling bottles on carnival days. Encourage each kid to bring their own bottle as sharing is not hygienic.
- 3 Keep fluids cool in summer and not frozen in winter! Cool fluids are more palatable and refreshing and more likely to be drunk in adequate amounts.
- 4 Be prepared to rest players if they show signs of heat stress or dehydration. It may even be necessary to postpone or delay activity until the weather conditions improve on very hot days.
- 5 Plan activity time to avoid the hottest part of the day to optimise player safety.

- 6 Use time off from activity to 'top up' on fluids and cool down in very hot weather.
- 7 Actively remind kids to drink as they often become 'too busy' to think about drinking, and will wait until they are thirsty to take in fluid. This may be getting too late.
- 8 Be prepared to vary fluid intake depending on the environmental conditions.
- 9 Run some checks on fluid losses during activity by weighing the kids before and after training. Teach them how to estimate fluid needs on different days by calculating loss against intake. One litre of fluid roughly equates to one kilogram of weight loss.
- 10 Remind them to check the colour of their 'pee' to assess their level of hydration during the day and after activity.
- 11 Practice hydration at training — this will develop good habits and an increased awareness of their needs.
- 12 Aim to get kids drinking enough to satisfy their thirst plus another one to two mouthfuls in the re-hydration phase.

By Ruth Logan, Sports Dietitian, Clifford Chambers Sports Medicine, Toowoomba, Queensland
Source: *Coaching Australia*, Vol 6 No. 2, 2003

Appendix 4.4

Sports and energy drinks for children: sorting fact from fiction

Keeping young athletes hydrated during exercise is a very real concern for coaches and parents alike. Children are not able to regulate their body temperature as well as adults and are, therefore, at greater risk of overheating. If the event or training lasts longer than 20 minutes, drinks should be available to ensure dehydration is minimised.

But what drink should be provided, and when? With all the recent media attention concerning childhood obesity, sports drinks have come under some attack and one could be forgiven for being confused about their role with young athletes. This article considers some of the myths surrounding sports drinks and children, and outlines the different options available for hydrating young athletes.

Myth: Sports drinks cause weight gain because they are too high in sugar.

Fact: Most sports drinks have about half the amount of sugar and total kilojoules of a similar serving of fruit juice or regular soft drink. Research shows that if you consume a sports drink rather than water during exercise, you will actually ingest fewer kilojoules during the rest of the day. As with all foods and fluids, sports drinks only become problematic when used inappropriately. Sports drinks are best consumed just before and during sporting activity lasting longer than an hour. Water is the preferred option for meeting fluid needs across the rest of the day.

Myth: Sports drinks are unsuitable because they are too high in salt.

Fact: The sodium content of sports drinks is similar to that found in a glass of milk or a slice of bread. Sodium stimulates our thirst and helps to encourage fluid intake ... good news, given that children typically have a poor voluntary fluid intake during exercise. Children's voluntary fluid intake during exercise has been shown to improve with use of sports drinks.

Myth: Sports drinks cause stomach upsets.

Fact: Sports drinks are formulated to improve the rate at which carbohydrate and fluid empties from the stomach and hence avoids stomach upset, provided one does not drink a lot in a short period of time.

Myth: Sports drinks cause dental cavities.

Fact: Sports drinks are acidic but they do not contain any more acid than a wide variety of drinks including fruit juices and soft drinks. There is no research to link sports drinks alone with dental erosion. Even so, as a safeguard, young athletes should be encouraged to drink through a straw, if possible, in order to direct the fluid to the back of the mouth and avoid swishing round the mouth.

Myth: Energy drinks are safe for children to consume.

Fact: Most of these drinks contain caffeine and are definitely not suitable for children. One can of energy drink may provide about the same amount of caffeine as an average-strength cup of coffee, and at this level children could have disturbed sleeping patterns, suffer bedwetting and show symptoms of anxiety. The carbohydrate concentration of energy drinks is also generally too high — 10–12 per cent, which is almost double that in sports drinks. At these levels water absorption is slowed, making these drinks unsuitable for rehydration during prolonged and vigorous physical activity. Energy drinks do not have the same role to play in sport as sports drinks. Caffeine is a stimulant, providing a short, sharp boost to performance. Sports drinks, on the other hand, do not contain stimulants — only carbohydrates and salts (to replace those lost during perspiration). Sports drinks are the most appropriate hydration fluid for use during vigorous activity (especially if it is conducted in the heat).

Myth: Water is the best hydrator.

Fact: Water is more a thirst quencher than a hydrator, signaling your brain to switch off your thirst mechanism prior to meeting your body's fluid needs. Plain water does not provide the fuel and electrolytes needed for optimum performance, so is really only suitable for sole use with exercise periods of low intensity and/or short duration (less than 45 minutes). Water, however, can be used in addition to sports drinks when young athletes will be exercising for longer than this. Sports waters are a relatively new product to the market and may, with more research, prove to be a more suitable option than water for exercise over less than an hour. They are designed for those who prefer to drink water during exercise. There are some differences among the common sports waters available in Australia, but essentially they

are lightly flavoured, purified water that may or may not have additional vitamins, minerals or electrolytes. Some sports waters are artificially flavoured and therefore are kilojoule free, while others have 50 per cent less kilojoules than common sports drinks.

Myth: **Juice and cordial are just as good as sports drinks, only cheaper.**

Fact: Generally, juice and cordial drinks are all too high in carbohydrates and too low in electrolytes to be considered ideal fluid replacement during exercise. Their high sugar content can slow fluid absorption, increasing the chance of stomach upsets. While they are not the best choice when rehydrating children before or during activity, they are typically fine for use after the playing is over and to keep energy levels up on busy carnival days.

Like adults, children often do not drink adequate amounts while exercising. It is, therefore, important to encourage and remind them to drink, and to also always have fluids readily accessible. The amount of fluid children lose will vary depending on size, intensity of exercise and environmental conditions. Generally, children lose 350–700ml during each hour of exercise. A rule of thumb is that young athletes ideally should consume 150–300ml of fluid in the hour before exercise, 75–200ml every 20 minutes during exercise and 500–1000ml after they have stopped exercising. As outlined, the fluid of choice will depend on exercise duration and intensity, but water and sports drinks are still the best options just before and during sport.

By Sharon Allsopp, Sports Dietitian, Step Bite Step, Shellharbour, NSW
Source: *Sports Coach*, Vol. 28, No. 1, 2005