This evidence brief forms part of the Australian National Preventive Health Agency’s evidence brief series which aims to disseminate information and inform dialogue relating to high priority preventive health issues.

This evidence brief was prepared by The Boden Institute of Obesity, Nutrition, Exercise & Eating Disorders and the Menzies Centre for Health Policy, University of Sydney for the Australian National Preventive Health Agency.

This brief is written in plain English to appeal to a wide audience. A more detailed technical paper supports the evidence presented in this brief and is available upon request from ANPHA@anpha.gov.au
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SUMMARY

• The amount and variety of beverages consumed by Australians has increased dramatically in recent decades. Many of these drinks are defined as ‘discretionary’ beverages by the current Australian Dietary Guidelines as they do not contribute significantly to nutrition. Sugar sweetened beverages make up a considerable proportion of the calories coming from these beverages.

• Sugar-sweetened beverages are associated with a range of health problems, including obesity, tooth erosion and decay and problems with bone density, which could lead to osteoporosis.

• Many Australians drink high levels of sugar-sweetened beverages, especially soft drinks.

• Australia is in the top 10 global markets for sugar sweetened beverages based on per capita consumption.

• There is sufficient evidence of the potential health benefits of reducing sugar-sweetened beverage consumption to warrant action. Many health agencies and governments throughout Australia and the world have made specific recommendations around limiting the intake of such drinks. A range of strategies has been proposed to monitor the situation and assess interventions.

• Despite possible recent improvements, high consumption of sugar-sweetened beverages remains an issue across all ages, with consumption higher for males than females, and highest among adolescent and young adult males.

• National dietary data do not allow precise measures, but in general:
  - consumption of soft drinks rose rapidly in the three decades prior to 2000.
  - per capita consumption may be levelling out or decreasing in recent times.
  - recently some adults (but not children) have begun replacing sugar-sweetened drinks with artificially sweetened drinks.

• There are variations in consumption across the Australian population levels with low socioeconomic status groups and Aboriginal and Torres Strait Islander people having higher intakes.

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1 Refers to drinks sweetened with sugar substitutes, either artificial (synthetic) or natural. These have in common a sweetness many times that of sugar and are sometimes referred to as “intense sweeteners.”
TERMINOLOGY

The 2013 Australian Dietary Guidelines refer to the need to avoid or limit “Discretionary choices” – i.e. foods and beverages that are not an essential or necessary part of our dietary patterns. Discretionary foods and beverages are high in kilojoules, saturated fat, added sugars, added salt or alcohol. If chosen, they should be consumed only sometimes and in small amounts.

Within the data used to inform this report, the term ‘sugar-sweetened beverages’ is defined differently in different surveys and by different researchers. It usually encompasses sugar-sweetened soft drinks as well as cordials, sugar-sweetened fruit drinks, sports drinks, iced teas and energy drinks. It sometimes includes flavoured milks, milkshakes and smoothies and very occasionally 100% fruit juice. In Australia, the added sugar is predominantly sucrose.

Sugar-sweetened beverages do not include artificially sweetened (or sometimes termed “intense sweeteners”) versions of those drinks.

A number of newer beverages such as play and vitamin waters, iced frappes and iced lattes have not been captured in previous surveys but are sweetened with sugar and thus would be considered as sugar sweetened beverages.

Intake of sugar-sweetened beverages is expressed in millilitres wherever possible, although survey data often reports intake in terms of grams (1ml = 1g).

Consumption is expressed as either ‘per capita’, meaning the average intake per person on a whole population basis, or ‘per consumer’, referring to only those who consume the drink in question.

There is often confusion around terms used to describe frequency of consumption of foods and beverages’. Within this report the term ‘occasionally’ means consumption of once per week or less, ‘regularly’ means consumption of more than one but less than three times per week and frequently means consumption of three or more times per week.

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2 Sucrose or sugar has two components – glucose and fructose. Sucrose commonly known as table or granulated sugar and is produced from sugar beet or sugar cane for use in processed foods. Fructose occurs naturally in fruit, honey and some vegetables. But the main sources of fructose in the typical western diet are processed foods and beverages that contain added sugar. In some countries, notably the United States, a sweetener known as high-fructose corn syrup (HFCS) is used to sweeten many processed foods, but HFCS is not a common source of fructose in the Australian diet. The issues associated with fructose consumption are not explored in this brief.
BEVERAGES IN THE AUSTRALIAN DIET

Beverages supply around 80% of the water required by the body each day, and as such play a crucial role in maintaining hydration. However, an increasingly larger proportion of this water is coming from discretionary beverages, many of which contain very little nutrition but provide a significant amount of sugar and energy.

Sugar-sweetened beverages and fruit drinks are the major discretionary beverages consumed in Australia and at a time of a high prevalence of chronic disease and weight problems throughout the community, the contribution of these products to the energy intake, diet quality and weight status of Australians needs to be explored. Many major national health agencies, including the US Centers for Disease Control and Prevention, the UK National Institute for Health and Clinical Excellence, the Australian National Health and Medical Research Council and Health Canada recommend that people limit their intake of sugar-sweetened beverages.

CURRENTLY THERE IS NO CLEAR GUIDANCE ON AN UPPER LIMIT FOR SUGAR SWEETENED BEVERAGES

Currently there is no clear guidance on an upper limit for sugar sweetened beverages. It is also not clear what proportion of total energy intake derived from sugar sweetened beverages is acceptable within a healthy diet. However, the 2013 Australian Dietary Guidelines make it clear that discretionary items can only be consumed sometimes and in small amounts, in physically active people.

The US expert Beverage Guidance Panel recommended that to meet the US Dietary Guidelines, adults should consume no or very limited amounts of sugar-sweetened beverages (0 – 240 ml per day). In March 2014, the World Health Organization released for consultation its draft guideline on sugar intake for adults and children. The guideline recommended that total free (added) sugar intake should not exceed 10% of dietary energy intake but also suggested it would be preferable that intake be reduced to 5% of energy intake to limit its contribution to dental caries. If the 5% level is adopted it would equate to a total intake of less than 25g of added sugar for the average adult which is less than the sugar found in a cup of soft drink.

The Communication on Obesity Action for Child Health (COACH) Reference Group – a collaboration of 13 key professional and NGO health groups in Australia – recommended that sugar-sweetened and carbonated beverages be consumed by children only once a week or less.
THE HEALTH EFFECTS OF SUGAR-SWEETENED BEVERAGES

There is substantial evidence that a high consumption of sugar-sweetened beverages is linked with weight gain and obesity, increased risk of diabetes and heart disease, and poor dental health.

**Obesity**

There is evidence that a high intake of sugar-sweetened beverages is associated with an increase in body weight and obesity in both adults and children.\(^{10,11}\) This is supported by research commissioned by the World Health Organization since the review of literature undertaken for the National Health and Medical Research Centre’s (NHMRC) Australian Dietary Guidelines in 2011.\(^{12-14}\) For example, one review concluded that people who increased the added sugars in their diet (in drinks and in other forms) tended to gain weight, while those who reduced the added sugars tended to lose weight.\(^{13}\) It has been estimated that sugar-sweetened beverages accounted for at least one-fifth of the weight gained between 1977 and 2007 in the US population.\(^{14}\)

Consideration of research on this issue needs to be mindful of both the quality and rigour of the evidence and the potential conflicts of interest arising from industry funding, as assessments have shown the conclusions of reviews may be influenced by the source of funding.\(^{15,16}\)

**Poor nutrition**

Most sugar-sweetened beverages are said to contain ‘empty calories’ – that is, they have little to no nutrient value. In some cases, it appears they replace healthier food choices and leave those who drink an excessive amount of sugar-sweetened beverages with a reduced intake of the nutrients they require. For example, a high intake of soft drinks is associated with lower intakes of vitamins, minerals and dietary fibre.\(^{17-19}\) In children, soft drinks can replace milk,\(^{20,21}\) and be associated with poor intake of protein, calcium, magnesium, phosphorus and Vitamin A which has potential to impact the health and development of children.\(^{22}\)
Dental caries and tooth erosion

Evidence has consistently shown that the high acidity of many sugar-sweetened drinks, particularly soft drinks and sports drinks, can be a factor in dental erosion, as well as the sugar itself contributing to tooth decay.\textsuperscript{23, 24} A recent study of 16,500 Australian school children found that higher consumption of sugar-sweetened beverages was associated with children having more dental disease in both the deciduous and permanent teeth.\textsuperscript{25}

The Australian Dental Association discourages the frequent consumption of soft drinks, diet soft drinks, sports drinks and fruit juices due to their high sugar content and/or acidity, while not defining frequent.\textsuperscript{26}

Other health conditions

People who drink sugar-sweetened beverages are more likely than others to have:

- a greater risk of developing diabetes\textsuperscript{27}
- chronic conditions such as cardiovascular disease, high blood pressure and metabolic syndrome\textsuperscript{28, 29}
- bone fractures, low bone density and osteoporosis\textsuperscript{30}

Some sugar-sweetened beverages contain caffeine. This creates additional but complementary health issues as caffeine intake is associated with kidney stones in adults, and with poor sleep, bedwetting and anxiety in younger children.\textsuperscript{31}
CONSUMPTION OF SUGAR-SWEETENED BEVERAGES

It is difficult to present a clear picture of the dietary patterns of Australians as dietary intake data have not been collected in a systematic or consistent manner within Australia.

Published national data on consumption of sugar sweetened beverages for Australian adults is almost 20 years old, although data from the 2011-12 Australian National Nutrition and Physical Activity Survey is to be released in Mid 2014. The most recent published data come from the 2007 Australian National Children’s Nutrition and Physical Activity Survey32, a small number of state-based surveys, a survey by Food Standards Australia New Zealand in 200333, local research studies, and by extrapolating from selected industry and market research data.

Even when all the data are combined, the level of confidence around the measure of sugar-sweetened beverage consumption remains low and our understanding of recent trends in consumption is limited, particularly among adults.

Market research data

We do know that in international terms, Australia is a substantial market for sugar-sweetened beverages. Australia is in the top 10 nations for per capita sales of soft drinks34 and in the top five nations for per capita purchase of Coca Cola products.35

Annual sales of soft drinks have increased substantially over the past five decades, with apparent consumption increasing from 45 litres per capita in 1969 to 120 litres per capita in 1999.36 Market research finds that total sugar sweetened beverages sales continue to increase, although at a slower rate, and the types of drinks being consumed is changing.

It appears that the sales of diet soft drinks have increased, from 23% of the soft drink market in 1997 to 33% in 2011. At the same time sales of sugar sweetened soft drinks are increasing less quickly suggesting per capita consumption of sugar sweetened versions may be stable or declining slightly.37-40 However, sugar sweetened beverages sales remain at very high levels.

Projected data from supermarket sales provided by the beverage industry suggest that 1,627,701,086 litres of sugar sweetened beverages were sold in Australia in 2011 and this excludes cordials, fruit drinks and sweetened milk.40 This equates to around 75 litres sold each year for every adult and child in Australia which would contribute 7.6 kg sugar per year or 2,485 kJ per week to their diet.
Adults’ consumption of sugar-sweetened beverages

National survey data from 1995 indicate that sugar sweetened beverage consumption by adults varies significantly with age.41 The highest consumers of soft drinks were males aged 19–24, with 58% consuming an average of 800 ml per day on the day of the survey. The next highest consumers were males aged 25–44, with 34% consuming an average of 642 ml, and females aged 19–24, with 36% consuming an average of 562 ml. The ‘percentage consuming’ and ‘amounts consumed’ decreased with increasing age among adult males and females (Figure 1).

Similar patterns emerge from the 2009-2010 Victorian Health Monitor Survey. Forty-three percent of adults reported consuming soft drinks regularly, 47% fruit juices and fruit drinks regularly, 12% cordial regularly, and 4% reported consuming sports or energy drinks regularly. Similarly, males drank more sugar-sweetened beverages than females, and consumption among adults declined with age.42

Recent data from NSW indicate that 30% of adults report consuming more than 6 cups per week (with 15% consuming 11 or more cups a week) of sugar sweetened beverages. About half of adults never or rarely consume soft drinks, cordials or sports drinks.43

FIGURE 1: SUGAR-SWEETENED SOFT DRINK (ML/DAY) CONSUMPTION BY ADULTS, BY AGE AND SEX

Source: Data from the 1995 National Nutrition Survey (39); analysis Public Health Nutrition Group, Boden Institute, University of Sydney.
Children’s consumption of sugar-sweetened beverages

More information is available on the food and beverage intake of Australian children than for adults as there have been more recent national and state surveys of children’s diets. The 2007 Australian National Children’s Nutrition and Physical Activity Survey found that sugar-sweetened beverages make a sizeable contribution to the overall beverage intake of children. In addition, almost half of all children reported drinking fruit juice on the day they were surveyed.

As they grow older, children become more likely to drink soft drinks and sports drinks, while the proportion of children drinking other drinks remains fairly stable with age. About a third of children over 9 years reported drinking soft drinks on the day they were surveyed (Figure 2). Few children regularly drink energy drinks (0.5% of 16-18 year olds) and sports drinks (3.5% of 14-16 year olds) (Figure 2).

The overall consumption of soft drinks rises steeply with age, in terms of both absolute volume and contribution to energy intake. It also rises for fruit juice and sports drinks, while remaining fairly stable for other drinks, such as cordial, fruit drinks and energy drinks (Figure 3).

**FIGURE 2: PROPORTION OF CHILDREN CONSUMING SUGAR-SWEETENED BEVERAGES (%) BY AGE GROUP**

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Source: Australian National Children’s Nutrition and Physical Activity Survey 2007 – analysed by Public Health Nutrition Group, Boden Institute, University of Sydney
FIGURE 3: AVERAGE AMOUNT OF SUGAR-SWEETENED BEVERAGES (ML/DAY) CONSUMED PER CAPITA, BY AGE GROUP ON DAY OF SURVEY

Source: Australian National Children’s Nutrition and Physical Activity Survey 2007 – analysed by Public Health Nutrition Group, Boden Institute, University of Sydney

1/3 OF CHILDREN OVER AGE 9 HAD A SOFT DRINK ON DAY OF SURVEY

* Regularly = on day of survey
How much sugar-sweetened beverages do children drink?

Most state and national surveys show that half of all children report consuming sugar-sweetened beverages regularly. An examination of the pattern of consumption among those children who report consuming sugar-sweetened beverages (rather than by all children within the 2007 Australian National Children’s Nutrition and Physical Activity Survey\textsuperscript{32} reveals interesting patterns.

Sports drinks are consumed by only 2% of all children, but those who do consume them, have a large amount each day – more than 600 ml among children older than 9 (Figure 4).

Also of concern is the consumption of sugar-sweetened beverages by 2-3 year olds. On the day of the Australian National Children’s Nutrition and Physical Activity Survey in 2007, soft drinks were consumed by about 10% of 2–3 year olds, 20% of 4–8 year olds and 33% of those aged 9 and older.\textsuperscript{32} While few pre-school children consume sports drinks and energy drinks, those who do so, consume between 200 and 250 ml/day.

Also of concern is the disproportionate intake of sugar-sweetened beverages by those aged 14-16. The average daily consumption, for those who consumed them, was 620 ml of sports drink, 570 ml of soft drink and 560 ml of cordial (Figure 4). This compares with 390 ml of milk and 913 ml of water.\textsuperscript{32} The average daily intake among those who consumed soft drinks increased with age, ranging from 204 ml (about two thirds of a can) for 2–3 year olds to 571 ml (about one and a half cans) for 14–16 year olds.\textsuperscript{32}

**FIGURE 4: AVERAGE AMOUNT CONSUMED (ML/DAY) PER CONSUMER, BY AGE GROUP**

![Graph showing average amount consumed (ml/day) per consumer by age group](image)

Source: Australian National Children’s Nutrition and Physical Activity Survey 2007 – analysed by Public Health Nutrition Group, Boden Institute, University of Sydney
Most surveys find that in young children, boys and girls consume similar amounts of soft drinks. From the age of 12, consumption increases significantly and males consume more soft drinks than females.

**Contribution to energy intake**

In the 2007 Australian National Children’s Nutrition and Physical Activity Survey, total sugar-sweetened drinks (which include soft drinks, cordials, fruit drinks, flavoured milks, made up beverages, sports and energy drinks together with fruit juices) contributed, on average, 4.8% of the overall energy intake of 2-3 year olds and 8.9% for 14-16 year old children. Among the younger children fruit juice made the largest contribution to energy intake from beverages, while soft drinks made the greatest contribution to energy intake in older children.\(^{32}\)

However, sugar-sweetened beverages make an even greater contribution to the energy intake of those who consume them. Flavoured milk, fruit juices and fruit drinks each contribute 10-15% of the energy intake of those who drink them. Soft drinks, energy drinks and sports drinks each contribute 5-10% of the energy intake of those who drink them (Figure 5). That is a substantial contribution to energy intake at a time when childhood obesity is a pressing issue.

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**FIGURE 5: CONTRIBUTION TO ENERGY INTAKE (%) IN CHILDREN BY CONSUMER, BY AGE GROUPS**

![Graph showing contribution to energy intake by type of drink and age group.](image)

Source: Australian National Children’s Nutrition and Physical Activity Survey 2007 – analysed by Public Health Nutrition Group, Boden Institute, University of Sydney
Trends in consumption of sugar-sweetened beverages

Because of the lack of regular national surveys, data to measure changes over time for sugar sweetened beverage consumption in adults is not available and is limited in children. However, available data suggests there may have been a small reduction in consumption of sugar-sweetened beverages in recent years by women but not by men, at least in NSW. This is implied by an increase in the proportion of women meeting a target of drinking less than 2 cups per week of soft drink, cordial and sports drink per week.43 There has been no change in men (Figure 6).

**FIGURE 6: PROPORTION OF ADULTS (%) CONSUMING 2 OR FEWER CUPS OF SOFT DRINK, CORDIAL AND SPORTS DRINK PER WEEK IN NSW, 2006-2010**

The consumption of sugar-sweetened beverages by children appears to have declined between the 1995 and 2007 national surveys, although the decline is likely to be overstated for a number of reasons, including that the 2007 survey was carried out in autumn and winter, when soft drink consumption is lower, while the 1995 survey was carried out throughout the year.41 This apparent decline is most pronounced in younger children, although it occurs across all ages (Figure 7).

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Source: Data from NSW Population Health Surveys – NSW Health. Analysed by Public Health Nutrition Group, Boden Institute, University of Sydney
Between 1995 and 2007 consumption of fruit juice remained fairly stable while that of fruit drink and cordial appears to have declined. Reported consumption of soft drinks declined, especially in younger age groups. Consumption of sports and energy drinks increased from a low base, especially in children over 9 years.\(^{32,41}\)

However among those who consumed sugar-sweetened beverages, the individual intake consumed remained stable.\(^{32,41}\) This suggests that fewer children are consuming sugar-sweetened beverages each day, but may also reflect a change in the way parents report the intake of their children in response to growing health warnings about sugar-sweetened beverages.

A reduction in the frequency of consumption of soft drink was also recorded in the WA Child and Adolescent Physical Activity and Nutrition Survey between 2003 and 2008.\(^{44}\) However, in an ACT survey of year 6 schoolchildren, the number of times that children reported usually consuming Coca-Cola and other sugar drinks was unchanged between 2006 and 2009.\(^{45}\)

### FIGURE 7: CHILDREN’S CONSUMPTION (ML/DAY) OF SUGAR-SWEETENED BEVERAGES IN 1995 AND 2007

<table>
<thead>
<tr>
<th>AGE GROUP (YEARS)</th>
<th>2-3</th>
<th>4-8</th>
<th>9-13</th>
<th>14-16</th>
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</thead>
<tbody>
<tr>
<td>1995</td>
<td>300</td>
<td>350</td>
<td>350</td>
<td>450</td>
</tr>
<tr>
<td>2007</td>
<td>250</td>
<td>300</td>
<td>300</td>
<td>450</td>
</tr>
</tbody>
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Source: 1995 National Nutrition Survey and 2007 Children’s Survey – analysed by Public Health Nutrition Group, Boden Institute, University of Sydney
FACTORS AFFECTING CONSUMPTION

Socioeconomic status

Evidence from a number of different surveys shows a clear socioeconomic gradient in the consumption of sugar-sweetened beverages, particularly soft drinks, with the most disadvantaged groups drinking more.\textsuperscript{32,46,47}

For example, one survey of women in Western Sydney found that those with less formal education were far more likely to drink soft drinks than those with university degrees (56% v 13%) Figure 8.\textsuperscript{48}

\textbf{FIGURE 8: PROPORTION (%) OF WOMEN DRINKING SOFT DRINKS, BY EDUCATION}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure8.png}
\caption{Proportion (%) of women drinking soft drinks, by education.}
\end{figure}

Source: Wen et al. 2010

There was also a strong social gradient in reported soft drink consumption within the 2010 National Secondary Students’ Diet and Physical Activity survey.\textsuperscript{49}

Another survey of adolescents found that the availability of sugar-sweetened beverages at home varied among socioeconomic groups, with children of mothers with less educational qualifications having easier access to sugar-sweetened beverages than children of better educated mothers.\textsuperscript{50}
**Cultural background**

There is some variation in sugar-sweetened beverage consumption according to cultural background. According to one phone survey, adolescents and young adults of Aboriginal and Torres Strait Islander backgrounds drink more sugar-sweetened beverages than their non-Indigenous peers. The proportion consuming sugar-sweetened beverages was higher (72% v 50%) and the volume per consumer per day was 249 ml compared with 128ml in non-indigenous young people. In the NSW Schools Physical Activity and Nutrition Survey, there was a tendency for older children of Middle Eastern background to have more soft drinks, and children of Asian backgrounds fewer.

**Availability of soft drinks**

A large proportion of sugar sweetened beverages are purchased for consumption in the home but their availability in other venues also influences consumption. A breakdown of the soft drink market in the USA showed that 48% of all soft drinks consumed are bought in supermarkets, 20% in restaurants, fast food outlets and bars, 12% in convenience store and service stations and 11% through vending machines.

A survey of parents as part of the 2007 Australian National Children’s Nutrition and Physical Activity Survey found that most soft drink consumed by young children is bought from supermarkets, with about 17% bought from school canteens and fast food outlets. About 60% of soft drink is consumed at home.

The strongest predictor of the level of soft drink consumption among NSW schoolchildren was its availability within the home.

There is also strong evidence that indicates that larger serving sizes of sugar sweetened beverages can promote overconsumption.

**Personal and parenting factors**

Children’s consumption patterns are influenced by significant others, and children are more likely to drink soft drink regularly if:

- their parents drink it
- their friends drink it
- they watch a lot of TV
Reducing consumption of sugar-sweetened beverages is likely to contribute to a reduction in ill-health and a reduction in obesity. This could be achieved at limited cost to the community and, in terms of dietary behaviour change, is one of the more straightforward issues to tackle. Sugar-sweetened beverages such as soft drinks, cordials and sports drinks are easy to identify and define; they do not constitute an integral part of a meal; consumption requires a conscious decision; and there are direct substitutes. These drinks are of limited nutritional value and there is general acceptance by health professionals of the value of reducing their consumption. As well, measures to reduce the consumption of sugar-sweetened beverages can be relatively inexpensive.

It is possible to reduce the intake of sugar-sweetened beverages, and reducing consumption can lead to weight loss.56

Strategies to reduce consumption which are currently being explored by national and international health agencies and organisations include:

• Decreasing demand for sugar-sweetened beverages
  - limiting the marketing of sugar-sweetened beverages to children
  - increasing the price of sugar-sweetened beverages and reducing the price of healthier alternatives

• Tackling the widespread availability of sugar sweetened beverages and improving access to more appropriate alternatives
  - reducing or restricting the serving size of sugar-sweetened beverages
  - reducing or limiting the availability of sugar-sweetened beverages in the home, in schools and in community settings
  - improving access to and availability of alternatives to sugar-sweetened beverages such as water and low fat milk

• Providing targeted information and education for the public around the problems of consuming sugar-sweetened beverages and how to reduce intake
  - providing clear guidance on the volume of sugar-sweetened beverages which would be acceptable within a healthy diet
  - encouraging people to replace sugar-sweetened beverages with water
  - encouraging health professionals to raise the issue of sugar-sweetened beverages as part of routine interactions when indicated
WHAT WE NEED TO UNDERSTAND BETTER

The evidence base around the problems of sugar sweetened beverages consumption is strong. As more research and evidence is accumulated, additional effective strategies for community-wide action will also become clearer. Research into a wider range of effective strategies to help reduce the consumption of sugar-sweetened beverages should be further supported.

What is apparent, however, is that Australia needs dietary and nutritional surveys of both adults and children to be carried out more regularly. Without this, policymakers will formulate policy based on limited evidence or may fail to formulate any influential policy action.
CONCLUSION

There is overwhelming evidence that the high consumption of sugar-sweetened beverages represents a significant nutritional problem within Australia and that action to reduce their consumption is warranted.

Sugar sweetened beverages make a relatively large contribution to the energy intake of many Australians. They are discretionary beverages which supply little or no nutrition while being energy dense.

THERE IS A GROWING BODY OF EVIDENCE THAT LINKS HIGHER LEVELS OF CONSUMPTION OF SUGAR-SWEETENED BEVERAGES WITH A RANGE OF HEALTH PROBLEMS

There is a growing body of evidence that links higher levels of consumption of sugar-sweetened beverages with a range of health problems. A number of recent, comprehensive reviews have shown that higher levels of consumption of sugar-sweetened beverages are associated with weight gain and the development of obesity. Higher levels of sugar sweetened beverage consumption (especially soft drinks) have also been linked to a range of other conditions such as type 2 diabetes, cardiovascular disease, metabolic syndrome, osteoporosis and dental caries. Sugar-sweetened beverages also displace healthier foods and drinks from the diet.

Currently there is no specific guidance for the community on how much sugar-sweetened beverages could be consumed without negative health consequences and what proportion of total energy intake they could contribute. However, expert consensus suggests consumption should be limited.

The lack of regular national large scale dietary intake surveys makes it difficult to accurately determine the consumption of sugar-sweetened beverages in Australia. Nonetheless, it is possible to gain an understanding of current sugar-sweetened beverage consumption patterns and trends by examining a wide range of information.

Australians are high consumers of sugar-sweetened beverages such as soft drink both at an individual and population level. Around half of all Australians consume soft drinks and other sugar-sweetened beverages regularly and, on a per capita basis, we are among the top 10 consuming nations in the world. Consumption levels have increased dramatically over the past five decades and remain high although there is some indication that they may be levelling off or declining slightly, especially in children.
In general, males consume more sugar-sweetened beverages than females at every age and adolescents and young adults have the highest levels of consumption of sugar-sweetened beverages. The mean average intake of soft drink among adolescent consumers reported on the day of the 2007 Australian National Children’s Nutrition and Physical Activity Survey was close to 600 ml, and sugar-sweetened beverages contributed, on average, 8.9% of the total energy intake of this age group.³²

There are social variations in consumption patterns. Consumption of soft drinks is highest among the most socio-economically disadvantaged adults, some ethnic groups and is substantially higher among Aboriginal and Torres Strait Islander people.

There is sufficient evidence of the potential benefits of reducing sugar-sweetened beverage consumption to warrant action on this issue, and many health agencies throughout the world have made specific recommendations around limiting sugar-sweetened beverage intake. A range of strategies have been proposed by national and international health agencies and organisations which should be explored and evaluated.
REFERENCES


promoting a healthy australia