

## **Fruit Juice is a “Green” Food by Shane Landen**

Fruit juice is a nutrient dense beverage that makes an important contribution to the diet of Australian children. In addition to the wide range of important nutrients provided by fruit juice, analysis of both the 1995<sup>1</sup> and 2007<sup>2</sup> national nutrition surveys of children reveals the critical role fruit juice plays in helping children meet the recommended fruit servings each day.

The Australian Guide to Healthy Eating includes a fruit juice serving within its fruit serves recommendation and the evidence from the two national surveys strongly reaffirms this advice. The Australian Guide to Healthy Eating sets fruit juice apart from other beverages – reflecting its contribution to the nutritional status of children during the important growing years.

It is vital that any canteen guidelines reflect the most current national dietary evidence for children. The results of the 2007 children’s dietary survey for fruit juice shows that consumption patterns are not only consistent with a healthy diet but that the energy contribution from juice has remained the same from 1995 through to 2007.

The data from both national dietary surveys of children clearly show that consumption patterns for fruit juice remain consistent and that fruit juice continues to play its role in the provision of essential nutrients, hydration and the achievement of the Governments fruit intake recommendations.

### **Specific Findings from the 2007 Children’s Survey.**

#### **Energy Contribution**

A comparison of the 1995 and 2007 National surveys for the dietary intake of children reveals the consumption of fruit juice has remained unchanged in terms of its total contribution to energy. Such that:

*Fruit juice contributed 2% to total energy intake for both the children aged 2-18 years in 1995 and also for the children aged 2-16 years in the 2007 survey<sup>2</sup>*

It should be noted that a 250mL serve of fruit juice accounts for just 3-4% of the energy requirement of a 14year old<sup>3</sup>. This serve size aligns with the data from the 1995 and 2007 surveys that showed when juice is consumed the most popular serving is 200-300g.

#### **Nutrients Contributed by Fruit Juice**

The analysis of the 2007 children’s survey reinforces the array of nutrients contributed by fruit juice including nutrients identified by the National Health and Medical Research Council<sup>3</sup> as important for reducing chronic disease risk such as Vitamin C, Folate and Potassium.

When juice is consumed, it provides the following nutrients to the diet of Australian children:

Nutrient	Percent Contribution to Diet of Children <sup>2</sup>
Vitamin C	56
Folate	21
Potassium	14
Pro-vitamin A	10
Carbohydrate	10
Magnesium	8
Iodine	8
Thiamin	5
Vitamin A	4
Fibre	4
Niacin	4
Riboflavin	4
Phosphorus	3
Calcium	3
Iron	2
Protein	2

In addition, fruit juice does not contribute any salt, fat or saturated fat to the diet of Australian children.

#### **Fruit Juice and its contribution to Fruit Serves**

Perhaps one of the most alarming findings from the 2007 children's survey was the consistently poor intake of fruit across all key age segments. While whole fruit intake may be the preferred option, there is no doubt that fruit juice intake is central to helping more children reach their fruit intake recommendations.

The analysis of the 2007 children's survey states:

**"Only 1% of the older children aged 14-16 years consumed the recommended amounts (of fruit). When fruit juice was included as a 'fruit serve' (as is consistent with the Australian Guide to Healthy Eating), 24% of these 14-16 year olds now reported eating the recommended number of serves of fruits. <sup>2</sup>"**

A similar impact for fruit juice was found for all the younger age groups as well:

#### **4-13 years**

- Without fruit juice 51% met the fruit recommendation.
- With fruit juice 90% met the fruit recommendation.

#### **4-8 years.**

- Without fruit juice 61% met the fruit recommendation.
- With fruit juice 93% met the fruit recommendation.

#### **2-3 years**

Although there is no recommended number of fruit serves for children 2-3 those that consumed at least 1 serve of fruit the following relationship was identified:

- Without fruit juice 68% met the fruit recommendation.
- With fruit juice 90% met the fruit recommendation.

These findings reinforce the vital role fruit juice plays in helping Australian children meet the Government's recommended daily fruit servings.

### Fruit Juice and Fruit – How Do They Compare?

It is of interest that fruit juices and whole fruits listed in the table below do not differ markedly in energy value or sugars content. These, and other minor differences notwithstanding, apart from dietary fibre, the nutritional similarities support the recommendation in the current healthy eating guide, that a serve of fruit juice can be included in the fruit recommendations.

Nutrient comparison of popular whole fruit and fruit juice via NUTTAB 2006, 100gram edible portions<sup>4</sup>.

<b>Product</b>	<b>Water (g)</b>	<b>Energy (kj)</b>	<b>Avail Carb (g)</b>	<b>Sugars (g)</b>	<b>Fibre (g)</b>	<b>Beta Carotene Eq (ug)</b>	<b>Vit C (mg)</b>	<b>Folate (ug)</b>	<b>Calcium (mg)</b>	<b>Potassium (mg)</b>
<b>Orange<sup>a</sup></b>	95.3	185	9.0	9.0	2.1	75	50	N/a	29	170
Orange Juice <sup>c</sup>	89.7	148	8.2	7.9	0.1	93	49	40	8	156
<b>Pineapple<sup>a</sup></b>	96.8	178	8.2	8.2	1.8	21	17	N/a	20	151
Pineapple Juice	88	183	10.3	10.3	-	11	12	8	6	143
<b>Grapefruit<sup>a</sup></b>	99.3	138	5.4	5.4	1.7	14	40	14	24	135
Grapefruit Juice <sup>d</sup>	91.4	120	6.0	6.0	-	-	61	5	9	100
<b>Grape<sup>b</sup></b>	79.6	284	15.5	15.5	2.4	108	5	-	14	221
Grape Juice	85.5	221	13.4	13.4	-	-	24	2	8	85
<b>Apple<sup>b</sup></b>	93.8	236	12.8	12.4	2.2	14	6	-	5	106
Apple Juice <sup>e</sup>	88.9	167	10.1	10.1	-	4	45	4	4	84

a = raw peeled ; b = unpeeled raw ; c = sweetened with vit c ; d = white grapes ; e = with vit c

## **What About Sugars?**

The average sugars contributed by fruit juice to diet of Australian children has remained unchanged at 7% of total sugars from the 1995 to the 2007 survey while the sugars contributed by whole fruit have increased from 10% to 16% of total sugars during this period.

### Sources

1. Record, SJ. 2001. Intakes of fruit and fruit juice in the 1995 National Nutrition Survey. CSIRO Health Sciences and Nutrition.
2. Cobiac L, Chan L, Miller M, Moss, C (2009) Analysis of the 2007 Australian National Children's Nutrition and Physical Activity Survey – Fruit Juice. Final Draft
3. NHMRC. 2006. Nutrient Reference Values for Australia and New Zealand including Recommended Dietary Intakes. Canberra.
4. Landon S 2007 Fruit Juice Nutrition and Health, Food Australia 59 (11) 533-38