

Consumption of juice and fruit drinks among children and their parents or caregivers

Background

The Ministry of Health (MOH) does not recommend that children consume juice, cordials, or powdered drinks; instead they are encouraged to drink water and unflavoured milk and to eat fresh fruit. If juice is given to children, intake should be limited to one glass per day and it should be diluted at least 50:50 with water (Ministry of Health, 2012). Juice's high sugar content and acidic nature can contribute to dental caries and tooth erosion, and excessive consumption increases the risk of obesity in older children and young people (American Academy of Pediatrics: Committee on Nutrition, 2001; Touger-Decker & Mobley, 2007; Touger-Decker & Van Loveren, 2003).

These beverage consumption recommendations are promoted by the Health Promotion Agency's (HPA's) nutrition and physical activity programme. In order to monitor trends and patterns in the consumption of beverages and foods, the HPA collects data on what families eat and drink in the Health and Lifestyles Survey (HLS). Findings from the 2012 HLS are reported here.

Methodology

Parents and caregivers were asked how often they drink fruit juice as well as juice from concentrate, powder, or cordials. They were also asked how often their child consumes these beverages. Reported frequencies include drinks consumed both at home and away from home. The eight response options are: never; less than once a month; 1 to 3 times a month; 1 to 2 days a week; 3 to 4 days a week; 5 to 6 days a week; once a day; twice a day or more often. These responses are grouped into five categories to report on overall prevalence: less than one day a week; 1 to 2 days a week; 3 to 4 days a week; 5 to 6 days a week; once a day or more often.

Further analyses investigate if there are differences in juice consumption by gender, ethnicity, age, neighbourhood deprivation status, and parents'/caregivers' education levels. For these analyses,

consumption is grouped by consumed three or more days per week or consumed less than three days per week. These response groupings are in accordance with MOH reporting of beverage consumption (University of Otago and Ministry of Health, 2011).

Statistically significant differences ($p < .05$) are reported.

Consumption of fruit juice

Children

Table 1 shows the reported frequencies of children's and parents/caregivers' consumption of fruit juice as well as juice from concentrate, powder, or cordials. Half (49.1%) of parents and caregivers report that their child consumes fruit juice less than one day a week, while about one in five (20.4%) reports consumption rates of 1 to 2 days a week. Just over 1 in 10 (12.2%) report that their child drinks fruit juice once a day or more often.

Children who are more likely to consume fruit juice three or more days a week are:

- Asian (44.8%) compared to Pacific children (21.8%) (after controlling for neighbourhood deprivation status)
- Those living in the middle deprivation neighbourhood deciles (39.4%) compared with those in low deprivation deciles (24.5%) or high deprivation deciles (25.7%).

There are no differences by gender, age, or parent's/caregiver's education level.

Parents and caregivers

More than half (61.5%) of parents and caregivers report that they drink fruit juice less than one day a week and about one in seven (15.0%) report consumption rates of 1 to 2 days a week. Similar to children's rates, just over 1 in 10 (11.7%) report that they drink fruit juice once a day or more often.

There are no differences by gender, age, ethnicity, education level, or neighbourhood deprivation status.

Relationship between parents/caregivers' consumption and their children's consumption

The frequency of parents and caregivers' consumption of fruit juice is strongly associated with their child's consumption frequency. Children who consume fruit juice three or more days a week are much more likely to have a parent/caregiver who consumes fruit juice three or more days a week compared with having a parent/caregiver who consumes these beverages less frequently (OR=7.8, 4.5-13.5).

Consumption of juice from concentrate, powder, or cordials

Children

More than half (64.9%) of parents/caregivers reported that their child consumes juice from concentrate, powder, or cordials less than one day a week. About 1 in 10 (9.4%) report consumption rates of 1 to 2 days a week while 15.6% consume these beverages once a day or more often.

Children who are more likely to consume juice from concentrate, powder, or cordials three or more days a week are:

- Māori (41.0%) compared with Asian (12.7%) and European/Other ethnicity children (21.7%) (after controlling for parents'/caregivers' education level)
- children whose parents/caregivers have no formal qualification (38.2%) or who have secondary school qualification (30.7%) compared with those whose parents/caregivers have a trade/professional/undergraduate diploma (19.6%) or a bachelor's degree/post-graduate studies (16.2%).

There are no differences by gender, age, or neighbourhood deprivation status.

Table 1. Consumption frequency of fruit juice and juice from concentrate, powder, or cordials

Frequency of consumption	Fruit juice		Juice from concentrate, powder, or cordials	
	Children % (Confidence Interval)	Parent/Caregiver % (Confidence Interval)	Children % (Confidence Interval)	Parent/Caregiver % (Confidence Interval)
Less than 1 day a week	49.1 (43.9-54.3%)	61.5 (56.5-66.4%)	64.9 (59.8-70.0%)	74.9 (69.9-80.0%)
1 to 2 days a week	20.4 (16.4-24.4%)	15.0 (11.4-18.6%)	9.4 (6.4-12.4%)	8.9 (6.3-11.4%)
3 to 4 days a week	12.1 (8.6-15.6%)	7.2 (4.7-9.6%)	6.6 (4.3-9.0%)	4.6 (2.8-6.4%)
5 to 6 days a week	6.2 (3.7-8.7%)	4.7 (2.7-6.7%)	3.5 (1.8-5.3%)	3.4 (1.5-5.4%)
Once a day or more often	12.2 (8.9-15.4%)	11.7 (8.3-15.0%)	15.6 (11.5-19.7%)	8.2 (5.2-11.2%)
Grouped frequency:				
Less than 3 days a week	69.5 (64.8-74.3%)	76.5 (71.6-81.3%)	74.3 (69.4-79.1%)	83.8 (79.5-88.1%)
3 or more days a week	30.5 (25.7-35.2%)	23.5 (18.7-28.4%)	25.7 (20.9-30.6%)	16.2 (11.9-20.5%)

Parents and caregivers

Three-quarters (74.9%) of parents and caregivers report that they drink juice from concentrate, powder, or cordials less than one day a week. Less than 1 in 10 parents/caregivers report consumption rates of 1 to 2 days a week (8.9%) or once a day or more often (8.2%).

Parents and caregivers who are more likely to consume juice from concentrate, powder, or cordials three or more days a week are those with no formal qualification (22.5%) or with a secondary school qualification (22.2%) compared with those having a trade/professional/undergraduate diploma (8.2%) or a university/postgraduate degree (10.0%). There are no differences by gender, age, ethnicity (after controlling for education), or neighbourhood deprivation status.

Relationship between parents/caregivers' consumption and their children's consumption

The frequency of parents and caregivers' consumption of juice from concentrate, powder, or cordials is strongly associated with their child's consumption frequency. Children who consume these beverages three or more days a week are much more likely to have a parent/caregiver who consumes them three or more days a week compared with having a parent/caregiver whose consumption is less frequent (OR=15.4, 8.2-28.9).

Key points

- Just over 1 in 10 children drink fruit juice (12.2%) and juice from concentrate, powder, or cordials (15.6%) every day or more often.
- Children who consume juice beverages three or more days a week are much more likely to have a parent/caregiver who consumes them three or more days a week compared with having a parent/caregiver whose consumption is less frequent.
- Asian children are more likely to drink fruit juice three or more days a week (44.8%), compared with Pacific children (21.8%).
- Children living in the middle decile neighbourhoods are more likely to drink fruit juice three or more days a week (39.4%), compared with children in the low (24.5%) or high (25.7%) deciles.
- Māori children are more likely to drink juice from concentrate, powder, or cordials three or more days a week (41.0%), compared with Asian (12.7%) or European/Other ethnicity children (21.7%).
- Children whose parents have lower educational attainment are more likely to drink juice from concentrate, powder, or cordials three or more days a week, compared with those whose parents have a trade/professional/university diploma or higher education level.

About the Health and Lifestyle Survey

- The HLS is a nationwide in-home face-to-face survey conducted every two years, starting in 2008. The 2012 HLS consisted of a sample of 2,672 New Zealanders aged 15 years and over, who provided information about their health behaviours and attitudes relating to tobacco, sun safety, healthy eating, gambling, and alcohol. Parents and caregivers also responded to a sub-set of questions for 806 children aged 5 to 16 years.
- In 2012, the parent/caregiver sample, with a response rate of 87.7%, included 337 people of European/Other ethnicity, 211 Māori, 213 Pacific people and 45 Asian people (prioritised ethnicity).
- The data have been adjusted (weighted) to ensure they are representative of the New Zealand population.
- For this analysis, proportions and 95% confidence intervals were produced. Odds ratios were undertaken to compare responses between groups. The significance level used for statistical analyses was set to $\alpha=0.05$.
- Data were analysed by:
 - gender
 - ethnicity (Māori; Pacific; Asian; European/Other)
 - age (Children: 5 to 7 years; 8 to 10 years; 11 to 13 years; 14 to 16 years. Adults: 15 to 24 years; 25 to 34 years; 35 to 44 years; 45 to 54 years; 55 and above.)
 - neighbourhood deprivation status (Low: Deciles 1 to 3; Mid: Deciles 4 to 7; High: Deciles 8 to 10)
 - parents/caregivers' education level (No formal qualification; Secondary school; Trade/Professional/Undergraduate diploma; Bachelor's Degree/Postgraduate).
- A full description of the 2012 HLS survey methodology and further HLS publications can be found online at <http://www.hpa.org.nz/research-library/research-publications>.

About the HPA

The HPA is a Crown entity that leads and delivers innovative, high quality and cost-effective programmes and activities that promote health, wellbeing and healthy lifestyles, and prevent disease, illness and injury. The HPA also enables environments that support health and wellbeing and healthy lifestyles, and reduce personal, social and economic harm.

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