

Findings	Study
Nutrient	
<p>“100 % fruit juice had no significant effect on fasting blood glucose, fasting blood insulin, the homeostatic model assessment of insulin resistance...”</p> <p>“...no significant associations between 100 % fruit juice and the measures of glucose control.”</p> <p>“Overall, findings from this meta-analysis of RCT suggest a neutral effect of 100 % fruit juice on glycaemic control.”</p>	<p>Mary M. Murphy, Erin C. Barrett, Kara A. Bresnahan and Leila M. Barraj “1100 % Fruit juice and measures of glucose control and insulin sensitivity: a systematic review and meta-analysis of randomised controlled trials” <i>Journal of Nutritional Science</i>. Volume 6 2017, e59</p>
<p>“...epidemiologic studies have frequently shown that fruit juice is a component of a high-quality diet pattern and, in adults, can potentially decrease the risk of obesity.”</p>	<p>Abrams SA and Daniels SR. “Fruit Juice and Child Health.” <i>Pediatrics</i>. 2017;139(4):e20170041</p>
<p>“The nutrient profile for whole fruit only without 100% fruit juice was substantially lower in vitamin C, folate, potassium, and calories than the fruit plus juice nutrient profile.”</p>	<p>Britten P, et al. “MyPyramid food intake pattern modeling for the Dietary Guidelines Advisory Committee” . <i>J Nutr Educ Behav</i>. 2006;38:S143-152</p>
<p>“The potential consequences of decreased 100% fruit juice consumption include an increased risk of shortfall nutrients to encourage (for example, potassium), excesses of nutrients to limit (for example, added sugars), and/or adverse health outcomes (US Dept. of Health and Human Services, US Dept. of Agriculture 2015).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“The 2015 to 2020 Dietary Guidelines for Americans (DGAs) recognize the role of 100% fruit juice in health, to the point of maintaining the inclusion of 100% fruit juice in the fruit group as counting toward daily fruit recommendations.”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“the DGAs describe 100% fruit juice as a nutrient-dense beverage (that should be a primary beverage choice along with water and fat-free/low-fat milk) that can help meet fruit intake recommendations (US Dept. of Health and Human Services, US Dept. of Agriculture 2015).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>

<p>“Evidence has shown that consumption of 100% fruit juice is associated with improved nutrient intakes, including key nutrients such as potassium and vitamin C (Fox and others 2006; Nicklas and others 2008, 2015; O’Neil and others 2012a), and overall better diet quality (Fox and others 2006; Nicklas and others 2008, 2015; O’Neil and others 2010, 2011a, 2011b, 2012a, 2012b; Roger and others 2012; Drewnowski and Rehm 2015).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
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Findings	Study
<p>“Consumption data show that 100% fruit juice is helping to achieve fruit intake recommendations but is not compromising whole fruit intake. In fact, the 2015 to 2020 DGAs note that approximately one-third of fruit intake among all Americans comes from 100% fruit juice, whereas the remaining two-thirds is derived from consuming whole fruit (including cut, cooked, canned, frozen, and dried).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“The peer-reviewed literature collectively indicates that intake of 100% fruit juice ... does not compromise total dietary fiber intake (O’Neil and others 2011b, 2012a) in children or adults.”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Vitamin C insufficiency is virtually eradicated among juice consumers aged 2 to 18 y (O’Neil and others 2012a).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Crowe-White and others (2016) recently reported in a systematic review that “limited evidence” from 8 studies suggests that children consuming 100% fruit juice have higher intake of dietary fiber, vitamin C, magnesium, and potassium.”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Although 100% fruit juice does not contain as much fiber (a nutrient of public health concern) as whole fruit, the totality of evidence indicates that 100% fruit juice consumption does not compromise fiber intake on a population level (O’Neil and others 2011, 2012a; Crowe-White and others 2016).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Like whole fruit, 100% juice plays a critical role in providing a portfolio of vitamins, minerals, and dietary bioactives (for example, polyphenols) that contribute benefits beyond basic nutrition. One hundred percent fruit juice is a top contributor of nutrients such as vitamin C and potassium in the diet (Reedy and others 2010; Berner and others 2014),...”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>

Findings	Study
<p>“...consumption of 100% fruit juice is associated with improved nutrient intakes, including key nutrients such as vitamins A and C, folate, magnesium, phosphorus, and potassium (Fox and others 2006; O’Neil and others 2010, 2012a, 2012b) when comparing juice consumers with nonconsumers.”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Strong observational research and emerging clinical evidence suggests that dietary bioactive compounds (for example, phenolics and flavonoids) present in certain 100% fruit juices may play a role in supporting cardiovascular health”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Many of the polyphenols found in fruits are in the skin and seeds, which individuals often discard when eating the whole fruit. Because the skin and seeds are included in the juicing process, naturally occurring polyphenols in the skin and seeds are transferred in part and retained in 100% juice. Thus, consuming 100% fruit juice may in fact provide a higher concentration of these health-promoting plant nutrients than whole fruit.”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“emerging evidence suggests that the dietary bioactives present in fruits and some 100% juices (for example, apple and Concord grape juices) may bind and inhibit and/or slow a portion of the naturally occurring sugars present in 100% fruit juice from being absorbed, providing a further distinction between SSB and 100% fruit juice consumption from a metabolic perspective”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“...as stated in the 2015 to 2020 DGAs, 100% fruit juice is a nutrient-dense option that should be a primary beverage choice in moderation. There was consensus that, at a time when most Americans do not meet daily recommendations for fruit, it is not sensible—or science based—to restrict access to 100% fruit juice, which plays an important part in meeting daily fruit goals, improving nutrient intake, diet quality, and promoting overall health, particularly in underserved populations.”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>

Findings	Study
<p>“The preponderance of evidence supports the position that 100% fruit juice delivers essential nutrients and phytonutrients, provides year-round access to a variety of fruits, and is a cost-effective way to help people meet fruit recommendations.”</p>	<p>Clemens R, Drewnowski A, Ferruzzi MG, Toner CD, and Welland D. “Squeezing Fact from Fiction about 100% Fruit Juice”. <i>Adv Nutr.</i> 6: 236S–243S, 2015</p>
<p>“Limited evidence from eight studies suggests that children consuming 100% fruit juice have higher intake and adequacy of dietary fiber, vitamin C, magnesium, and potassium.”</p>	<p>Crowe-White K, O'Neil CE, Parrott JS, Benson-Davies S, Droke E, Gutschall M, s. Stote K, Wolfram T, and Ziegler P. “Impact of 100% Fruit Juice Consumption on Diet and Weight Status of Children: An Evidence-based Review.” <i>Critical Reviews in Food Science and Nutrition</i> Vol. 56 , Iss. 5,2016</p>
<p>“Some, such as 100 percent orange juice, are good sources of vitamins C and B (thiamin, B6, and folate), as well as potassium.”</p>	<p>DGAC. Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010. 2010:453</p>
<p>“Among toddlers, juices and fruit flavored drinks are the second and third most important sources of energy.”</p>	<p>Fox MK, et al. “Sources of energy and nutrients in the diets of infants and toddlers”. <i>J Am Diet Assoc.</i> 2006;106:S28-42</p>
<p>“In conclusion, our study demonstrates an acute enhancement of speed of attention and increased calm ratings following purple grape juice in healthy young adults, adding to a growing body of evidence for cognitive benefits of (poly)phenols.”</p>	<p>Haskell-Ramsay CF, Stuart RC, Okello EJ, Watson AW. “Cognitive and mood improvements following acute supplementation with purple grape juice in healthy young adults”. <i>Eur J Nutr.</i> 2017; DOI 10.1007/s00394-017-1454-7</p>
<p>“Drinks that contain ascorbic acid consumed simultaneously with food can increase iron absorption by twofold, which may be important for children who consume diets with low iron bioavailability.”</p>	<p>Heyman MB, Abrams SA. “Fruit Juice in Infants, Children, and Adolescents: Current Recommendations.” <i>Pediatrics.</i> 2017; 139(6):e20170967</p>
<p>“The vitamin C and flavonoids in juice may have beneficial long-term health effects, such as decreasing the risk of cancer and heart disease.”</p>	<p>Heyman MB, Abrams SA. “Fruit Juice in Infants, Children, and Adolescents: Current Recommendations.” <i>Pediatrics.</i> 2017; 139(6):e20170967</p>

Findings	Study
<p>“The current review summarizes data published between 1995 and 2012 related to PFJ [pure fruit juice] with a focus on juices that are widely available and studied in forms representing native juice without supplemental nutrients or enhanced phytochemical content.”</p> <p>“Collectively, the data presented in this review suggest that some potential health-related and disease prevention markers associated with consuming PFJ [pure fruit juice] as part of a balanced diet should not be overlooked.”</p>	<p>Hyson D. “A review and critical analysis of the scientific literature related to 100% fruit juice and human health.” <i>Advances in Nutrition</i>. January 2015; 6: 37-51.</p>
<p>“Replacing FJ [fruit juice] with WF [whole fruit] had only a limited impact on nutrient intake, with a ‘trade-off’ for fiber with vitamin C and total sugars.”</p>	<p>Nicklas TA, O’Neil CE, Fulgoni VL. “Replacing 100% Fruit Juice with Whole Fruit Results in a Trade Off of Nutrients in the Diets of Children.” <i>Current Nutrition and Food Science</i>, October 2015; 11(4): 267-273.</p>
<p>“Consumption of 100% FJ [fruit juice] was associated with better nutrient intake and diet quality and was not associated with body weight/adiposity in a nationally representative sample of children. Thus, consumption of 100% FJ should be recommended as a component of a healthy diet. In conclusion, 100% FJ is not just another sugary drink that may contribute to adiposity among some children.”</p>	<p>Nicklas TA, O’Neil CE, Fulgoni VL. “Consumption of 100% Fruit Juice is Associated with Better Nutrient Intake and Diet Quality but not with Weight Status in Children: NHANES 2007-2010”. <i>International Journal of Child Health and Nutrition</i>, 2015, Vol. 4, No. 2</p>
<p>“As expected, 100% OJ consumers had increased intake of nutrients typically found in 100% OJ (ie, vitamin C, folate, and potassium). One hundred percent OJ consumers were also less likely to have intakes below the EAR for vitamin A, vitamin C, folate, vitamin B6, and magnesium than non-consumers.”</p>	<p>O’Neil CE, et al. “100% Orange juice consumption is associated with better diet quality, improved nutrient adequacy, decreased risk for obesity, and improved biomarkers of health in adults: National Health and Nutrition Examination Survey, 2003-2006”. <i>Nutrition J</i>. 2012, 11:107.</p>
<p>“Consumption of 100% FJ was associated with an increase above the usual intake of vitamins A and C, folate, Mg, P and K. There were no differences in usual intake of vitamin E or dietary fibre. Consumption of 100% FJ was also associated with an increased likelihood of meeting the recommendations for shortfall nutrients. Thus, 100% FJ consumption was associated with improved nutrient adequacy and can contribute to a healthy diet.”</p>	<p>O’Neil C, et al. “Fruit juice consumption is associated with improved nutrient adequacy in children and adolescents: The National Health and Nutrition Examination Survey (NHANES) 2003-2006”. <i>Public Health Nutr</i>. 2012;15:1871-1878</p>

Findings	Study
<p>“While both approaches used here to fill the fruit shortfall resulted in beneficial changes to vitamin C, dietary fiber, potassium and calcium consumption, the whole fruit alone model was clearly superior for dietary fiber, but the combined model was superior for the other nutrients, and was able to fill the shortfall in fruit consumption at a significantly lower-cost than through whole fruit alone.”</p>	<p>Rehm and Drewnowski BMC Pediatrics (2016) 16:83 DOI 10.1186/s12887-016-0620-z</p>
<p>“A large number of studies supported the view that consumption of juice could prevent the increase of blood pressure and improve lipids.”</p>	<p>Zheng J, Zhou Y, Li S, Zhang P, Zhou T, Xu DP, and Li HB. “Effects and Mechanisms of Fruit and Vegetable Juices on Cardiovascular Diseases.” <i>Int. J. Mol. Sci.</i> 2017, 18, 555; doi:10.3390/ijms18030555</p>
<p>“Some juices, such as sweetie fruit juice, pomegranate juice, guava fruit juice, cherry juice, and beetroot juice could improve both SBP [systolic blood pressure] and DBP [diastolic blood pressure]. On the other hand, juices like apple juice, berry juice, tomato juice could improve one’s lipid profile, such as lower serum LDL-C and total cholesterol, and increase adiponectin and triglyceride.”</p>	<p>Zheng J, Zhou Y, Li S, Zhang P, Zhou T, Xu DP, and Li HB. “Effects and Mechanisms of Fruit and Vegetable Juices on Cardiovascular Diseases.” <i>Int. J. Mol. Sci.</i> 2017, 18, 555; doi:10.3390/ijms18030555</p>
<p>“The main underlying mechanisms of the cardiovascular protection included antioxidant effects, improvement of aspects of cardiovascular system, improvement of endothelial function, inhibition of platelet aggregation, anti-inflammation, and prevention of hyperhomocysteinemia. The effects of juices were related to components of the raw material, such as polyphenols and vitamins.”</p>	<p>Zheng J, Zhou Y, Li S, Zhang P, Zhou T, Xu DP, and Li HB. “Effects and Mechanisms of Fruit and Vegetable Juices on Cardiovascular Diseases.” <i>Int. J. Mol. Sci.</i> 2017, 18, 555; doi:10.3390/ijms18030555</p>
<p>“The results suggested that some juices might be used as potential supplements for cardiovascular protection, especially mixture of juices containing a variety of fruits and vegetables with polyphenols, vitamins, and minerals.”</p>	<p>Zheng J, Zhou Y, Li S, Zhang P, Zhou T, Xu DP, and Li HB. “Effects and Mechanisms of Fruit and Vegetable Juices on Cardiovascular Diseases.” <i>Int. J. Mol. Sci.</i> 2017, 18, 555; doi:10.3390/ijms18030555</p>
Economic	
<p>“The preponderance of evidence supports the position that 100% fruit juice delivers essential nutrients and phytonutrients, provides year-round access to a variety of fruits, and is a cost-effective way to help people meet fruit recommendations.</p>	<p>Clemens, et al. “Squeezing Fact from Fiction about 100% Fruit Juice”. <i>Adv Nutr.</i> 6: 236S–243S, 2015</p>

Findings	Study
<p>“It is important to communicate the health benefits of fruit, including 100% juice, more clearly to consumers. Such guidance should incorporate the findings that 100% juice in appropriate amounts can help individuals to meet fruit recommendations without a substantial impact on energy intake or food costs.”</p>	<p>Clemens, et al. “Squeezing Fact from Fiction about 100% Fruit Juice”. <i>Adv Nutr.</i> 6: 236S–243S, 2015</p>
<p>“In a previous diet modeling study we found that replacing juice with comparable fresh fruit increased diet costs by about 13%”</p>	<p>Drewnowski A, Rehm C. “Socioeconomic gradient in consumption of whole fruit and 100% fruit juice among US children and adults”. <i>Nutr J.</i> 2015 14:3.</p>
<p>“Replacing juice with fruit also in our models led to higher diet costs. Cost is one of several factors that may explain the preponderance of juice in the diets of children.”</p> <p>“Fresh, whole fruit (and fresh produce in general) are among the most costly sources of dietary energy and FJs provide a lower cost per serving and more nutrients per dollar than many fresh fruits.”</p>	<p>Monsivais, Rehm C. “Potential nutritional and economic effects of replacing juice with fruit in the diets of children in the United States”. <i>Arch Pediatr Adolesc Med.</i> 2012;166(5):459-464</p>
<p>“Meeting fruit consumption guidelines without a substantial increase in diet costs may be a challenge. Combining whole fruit with 100 % fruit juice capped at AAP standards may be one approach to meeting fruit recommendations within cost constraints.”</p>	<p>Rehm and Drewnowski BMC Pediatrics (2016) 16:83 DOI 10.1186/s12887-016-0620-z</p>
<p>“While both approaches used here to fill the fruit shortfall resulted in beneficial changes to vitamin C, dietary fiber, potassium and calcium consumption, the whole fruit alone model was clearly superior for dietary fiber, but the combined model was superior for the other nutrients, and was able to fill the shortfall in fruit consumption at a significantly lower-cost than through whole fruit alone.”</p>	<p>Rehm and Drewnowski BMC Pediatrics (2016) 16:83 DOI 10.1186/s12887-016-0620-z</p>

Findings	Study
Consumption	
<p>“...a meta-analysis of studies focused on the relationship of intake of fruit juice and risk of obesity in children. They found only a small effect of a single serving of fruit juice on BMI change in small children 1 to 6 years of age and no effect in older children. These findings are reassuring that small amounts of fruit juice are not likely to be directly linked to obesity development.”</p>	<p>Abrams SA and Daniels SR. “Fruit Juice and Child Health.” <i>Pediatrics</i>. 2017;139(4):e20170041</p>
<p>“...there is no strong evidence suggesting a benefit or rationale for a complete ban on fruit juice in these programs. Instead, limits (particularly on portion size) consistent with AAP and DGA policies can be advocated and parents cautioned about risks associated with high intakes.”</p>	<p>Abrams SA and Daniels SR. “Fruit Juice and Child Health.” <i>Pediatrics</i>. 2017;139(4):e20170041</p>
<p>“The National Academy of Medicine has recently released guidance for the WIC [Special Supplemental Nutrition Program for Women, Infants, and Children] program; this guidance recommends continuation of provision of 100% fruit juice for children aged >1 year while limiting the amount consistent with AAP guidelines and the role of the WIC program as a supplemental feeding program.⁶ Older children in particular may benefit from fruit juice intake to close the gap with total recommended fruit intake...”</p>	<p>Abrams SA and Daniels SR. “Fruit Juice and Child Health.” <i>Pediatrics</i>. 2017;139(4):e20170041</p>
<p>“In summary, recent data and an unbiased review of the literature support a limited role for fruit juice as a part of the diet of children. Consistent with the recent literature, smaller amounts are recommended by the AAP for children aged <7 years than for older children.”</p>	<p>Abrams SA and Daniels SR. “Fruit Juice and Child Health.” <i>Pediatrics</i>. 2017;139(4):e20170041</p>
<p>“The banning of fruit juice or failure to allow it in government food programs outside the first year of life is not consistent with the available evidence.”</p>	<p>Abrams SA and Daniels SR. “Fruit Juice and Child Health.” <i>Pediatrics</i>. 2017;139(4):e20170041</p>
<p>“Participants with normal weight were likely to consume more fruit juice than obese individuals.”</p>	<p>Akhtar-Danesh N, Dehghan M. “Association between fruit juice consumption and self-reported body mass index among adult Canadians”. <i>J Hum Nutr Diet</i>. 2010, 23, pp. 162–168</p>

Findings	Study
<p>“Consumption of 100% fruit juice is associated with a small amount of weight gain in children ages 1 to 6 years that is not clinically significant, and is not associated with weight gain in children ages 7 to 18 years.”</p>	<p>Auerbach BJ, Wolf FM, Hikida A, et al. “Fruit Juice and Change in BMI: A Meta-analysis.” <i>Pediatrics</i>. 2017;139(4):e20162454</p>
<p>“This systematic review and meta-analysis of 8 prospective cohort studies (n = 34 470 individual children) provides evidence that consumption of 1 daily serving increment of 100% fruit juice is associated with a small amount of weight gain in children ≤6 years old, but not in older children. The small amount of weight gain observed in children <6 years old is not clinically significant at the individual level and is of uncertain significance at the population level.”</p>	<p>Auerbach BJ, Wolf FM, Hikida A, et al. “Fruit Juice and Change in BMI: A Meta-analysis.” <i>Pediatrics</i>. 2017;139(4):e20162454</p>
<p>“...the AAP’s current recommendation that children ages 1 to 6 years limit 100% fruit juice consumption to 4 to 6 oz per day and children ages 7 to 18 limit 100% fruit juice to 8 to 12 oz per day is prudent and should be followed.”</p>	<p>Auerbach BJ, Wolf FM, Hikida A, et al. “Fruit Juice and Change in BMI: A Meta-analysis.” <i>Pediatrics</i>. 2017;139(4):e20162454</p>
<p>“Juice was a substantial contributor to FV intake, particularly for children and teens who, on average consumed 32%-41% of their daily FV servings as juice.”</p>	<p>Black JL, Billette JM. “Do Canadians meet Canada's Food Guide's recommendations for fruits and vegetables?” <i>Appl Physiol Nutr Metab</i>. 2013; 38: pp. 234–242</p>
<p>“The peer-reviewed literature collectively indicates that intake of 100% fruit juice does not contribute to clinically relevant weight gain (Nelson and others 2006; Nicklas and others 2008, 2015; O’Neil and others 2010, 2012b; Crowe-White and others 2016; Auerbach and others 2017;) ...”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Although children aged 1 to 3 y have the highest proportion of intake of 100% fruit juice compared to whole fruit (47% versus 53%, respectively), the average usual intake of 100% fruit juice among this subpopulation remains within the limits provided by AAP (American Academy of Pediatrics Committee on Nutrition, 2001).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>

Findings	Study
<p>“Looking more closely at children aged 1 to 8 y (the only population meeting daily fruit recommendations), whole fruit comprises approximately 60% of this group’s fruit intake, with 40% coming from 100% fruit juice (2015 Dietary Guidelines Advisory Committee 2015; US Dept. of Health and Human Services, US Dept. of Agriculture 2015). Although this age group drinks 100% fruit juice to help meet daily fruit needs, they still eat more whole fruit and drink 100% fruit juice within AAP recommendations (American Academy of Pediatrics Committee on Nutrition 2001; 2015 Dietary Guidelines Advisory Committee 2015).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“...100% fruit juice is not a major source of calories in the diet (2015 Dietary Guidelines Advisory Committee 2015). One hundred percent fruit juice accounts for <2% of total calorie intake, and only about 10% of calories consumed from beverages come from 100% fruit juice (2015 Dietary Guidelines Advisory Committee 2015).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Crowe-White and others (2016) systematic review and meta-analysis, which showed no effects of 100% fruit juice consumption on weight gain and measures of adiposity after adjustment for energy intake.”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“When 100% fruit juice is added to whole fruit intake, the proportion of children and adults meeting the recommended servings of fruit more than doubles among the general population (Roger and others 2012).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Twenty-two studies on weight status provided evidence that did not support an association between 100% fruit juice consumption and weight/adiposity in children after controlling for energy intake.”</p>	<p>Crowe-White K, O'Neil CE, Parrott JS, Benson-Davies S, Droke E, Gutschall M, s. Stote K, Wolfram T, and Ziegler P. “Impact of 100% Fruit Juice Consumption on Diet and Weight Status of Children: An Evidence-based Review.” <i>Critical Reviews in Food Science and Nutrition</i> Vol. 56 , Iss. 5,2016</p>

Findings	Study
<p>“Unless we controlled for total caloric intake, we did not observe an association between consumption of fruit juice and change in BMI during adolescence or find that fruit intake predicted change in BMI.”</p>	<p>Field AE, et al. “Association between fruit and vegetable intake and change in body mass index among a large sample of children and adolescents in the United States”. <i>Int J Obes Relat Metab Disord</i>. 2003;27(7):821-826.</p>
<p>“Consumption (fruit and vegetables) was somewhat higher among adults, but around half fell short of the five-serving minimum.”</p>	<p>Garriguet D. “Canadians’ eating habits”. Health Reports, Vol. 18, No. 2, May 2007 Statistics Canada, Catalogue 82-003</p>
<p>“Beverages help in meeting recommendations from Canada’s Food Guide for the consumption of dairy products (for example, milk) and vegetables and fruit (for example, fruit juice).”</p>	<p>Garriguet Health Reports, Vol. 19, no. 4, December 2008</p>
<p>“These results suggest that adequate intakes of milk and fruit and vegetable juice may reduce the risk of excess body fat in later childhood and adolescence.”</p>	<p>Hasnain SR, et al. “Beverage intake in early childhood and change in body fat from preschool to adolescence”. <i>Child Obes</i>. 2014; 10(1): 42-49.</p>
<p>“Other studies, however, found that children who consumed greater amounts of juice were taller and a had lower BMI than those who consumed less juice⁵⁵ or found no relationship between juice intake and growth variables.⁵⁶ A more recent study suggested that varying intakes of 100% juice were not associated with obesity.⁵⁷”</p>	<p>Heyman MB, Abrams SA. “Fruit Juice in Infants, Children, and Adolescents: Current Recommendations.” <i>Pediatrics</i>. 2017; 139(6):e20170967</p>
<p>Conclusion 3: “One hundred percent fresh or reconstituted fruit juice can be a healthy part of the diet of children older than 1 year when consumed as part of a well-balanced diet.”</p>	<p>Heyman MB, Abrams SA. “Fruit Juice in Infants, Children, and Adolescents: Current Recommendations.” <i>Pediatrics</i>. 2017; 139(6):e20170967</p>
<p>Recommendation 1: “The intake of juice should be limited to, at most, 4 ounces/day in toddlers 1 through 3 years of age, and 4 to 6 ounces/day for children 4 through 6 years of age. For children 7 to 18 years of age, juice intake should be limited to 8 ounces or 1 cup of the recommended 2 to 2.5 cups of fruit servings per day.”</p>	<p>Heyman MB, Abrams SA. “Fruit Juice in Infants, Children, and Adolescents: Current Recommendations.” <i>Pediatrics</i>. 2017; 139(6):e20170967</p>
<p>“Moreover, the improved year-round availability of imported vegetables and fruit as well as the increased variety of low-fat products compared with the early 1980s have made it easier for people to follow dietary recommendations.”</p>	<p>Mikkilä V, et al. “Longitudinal changes in diet from childhood into adulthood with respect to risk of cardiovascular diseases: The cardiovascular risk in young Finns study”. <i>Eur J Clin Nutr</i>. 2004;58:1038-1045c</p>

Findings	Study
<p>“Our results showing the lack of association between fruit juice and weight change are consistent with several other reports.”</p>	<p>Newby PK, et al. “Beverage consumption is not associated with changes weight and body mass index among low-income preschool children in North Dakota”. <i>J Am Diet Assoc.</i> 2004;104:1086-1094.</p>
<p>“Consumption of 100% FJ [fruit juice] ... was not associated with body weight/adiposity in a nationally representative sample of children. Thus, consumption of 100% FJ should be recommended as a component of a healthy diet. In conclusion, 100% FJ is not just another sugary drink that may contribute to adiposity among some children.”</p>	<p>Nicklas TA, O’Neil CE, Fulgoni VL. “Consumption of 100% Fruit Juice is Associated with Better Nutrient Intake and Diet Quality but not with Weight Status in Children: NHANES 2007-2010”. <i>International Journal of Child Health and Nutrition</i>, 2015, Vol. 4, No. 2</p>
<p>“Based on the currently available evidence, it can be concluded that there is no systematic association between consumption of 100% fruit juice and overweight in children and adolescents.”</p>	<p>O’Neil CE, Nicklas TA. “A review of the relationship between 100% fruit juice consumption and weight in children and adolescents”. <i>Am J Lifestyle Med.</i> 2008; 2(4): pp. 315-354.</p>
<p>“The strength of the scientific evidence shows that 100% fruit juice is not associated with weight in children.”</p>	<p>O’Neil CE, Nicklas TA. Chapter 16. “Childhood Obesity and the Consumption of 100% Fruit Juice: Where are the evidence-based findings?” <i>Fructose, High Fructose Corn Syrup, Sucrose and Health</i> (JM Rippe, Ed). Springer. New York NY. 2014. pp. 247-276.</p>
<p>“It is possible that OJ consumers have an overall healthier lifestyle.”</p>	<p>O’Neil C, et al. “One hundred percent orange juice consumption is associated with better diet quality, improved nutrient adequacy, and no increased risk for overweight/obesity in children”. <i>Nutr Res.</i> 2011;31:673-682</p>
<p>“Consumption of any amount of 100% FJ was associated with improved diet quality in all age groups.”</p>	<p>O’Neil CE, et al. “Diet quality is positively associated with 100% fruit juice consumption in children and adults in the United States: NHANES 2003-2006”. <i>Nutr J.</i> 2011;10:17</p>
<p>“Compared with nonconsumers, those who consumed 100% fruit juice were leaner, were more insulin sensitive, and had lower odds of obesity and metabolic syndrome.”</p>	<p>Pereira MA, Fulgoni VL. “Consumption of 100% fruit juice and risk of obesity and Metabolic Syndrome: findings from the National Health and Nutrition Examination Survey 1999–2004”. <i>J Am Coll Nutr.</i> 2010; 29(6): 625–629.</p>

Findings	Study
<p>“Citrus juices are excellent sources of vitamin C and contribute other key nutrients such as potassium, folate, magnesium, and vitamin A. OJ intake has been associated with better diet quality in children and adults. OJ intake has not been associated with adverse effects on weight or other body measures in observational studies in children and adults.”</p>	<p>Rampersaud GC, Valim MF. “100% Citrus Juice: Nutritional Contribution, Dietary Benefits, and Association with Anthropometric Measures”. <i>Critical Reviews in Food Science and Nutrition</i>. 2015; online.</p>
<p>“The present study concluded that the addition of OJ [orange juice] does not affect the weight loss induced by RCD [reduced-calorie diet]. In addition, this combination of RCD and OJ does not increase serum glucose, but improves insulin sensitivity, anti-inflammatory status and the nutritional quality of the diet. Thus, moderate consumption of OJ provides benefits allied to a weight-loss intervention and has no adverse impact on body weight and metabolic parameters in obese patients.”</p>	<p>Ribeiro C, Dourado G, Cesar T. “Orange juice allied to a reduced-calorie diet results in weight loss 1 and ameliorates obesity-related biomarkers: A randomized controlled trial”. <i>Nutrition</i> (2017), doi: 10.1016/j.nut.2016.12.020</p>
<p>“Fruit (which includes 100 percent fruit juice) and Whole Fruit, intakes were significantly higher in 2007-2008, than in 2003-2004 or in 2005-2006.”</p>	<p>USDA. “Diet quality of children age 2-17 years as measured by the healthy eating index-2010”. <i>Nutrition Insights</i>. 2013</p>
<p>“OJ intake has been associated with better diet quality in children and adults. OJ intake has not been associated with adverse effects on weight or other body measures in observational studies in children and adults.”</p>	<p>Vanselow MS, et al. “Adolescent beverage habits and changes in weight over time: findings from Project EAT”. <i>Am J Clin Nutr</i>. 2009;90(6):1489-1495.</p>
<p>“Our failure to find an association between the consumption of fruit juice and the incidence of overweight (among normal/underweight children or children at risk of overweight) supports the findings of Skinner et al^{18,19} and Alexy et al.”</p>	<p>Welsh JA, et al. “Overweight among low-income preschool children associated with the consumption of sweet drinks: Missouri, 1999-2002”. <i>Pediatrics</i>. 2005;115(2):e223-e229.</p>
<p>“Sugar-containing beverages are often seen as a negative influence on diet quality and body weight control. The present study examines the consumption of 100% fruit juice (FJ) based on a seven-day dietary survey in a representative sample of French adults.”</p>	<p>Consumption of 100% pure fruit juice and dietary quality in French adults: analysis of a nationally representative survey in the content of the WHO recommended limitation of free sugars – Bellisle F, Hébel P, Fourniret A, Sauvage E.</p>

<p>“Whether or not drinking 100% fruit juice causes poor health is controversial. Although 100% fruit juice may contain as much sugar as regular soda, it provides needed nutrients to Americans’ diets. We systematically reviewed the current evidence of the association of 100% fruit juice consumption and chronic health conditions in children and adults.”</p>	<p>Review of 100% fruit juice and chronic health conditions: implications for sugar-sweetened beverage policy – Brandon J Auerbach, Sepideh Dibey, Petra Vallila-Buchman, Mario Kratz, James Krieger - <i>Advances in Nutrition</i>, Volume 9, Issue 2, 1 March 2018, Pages 78–85</p>
<p>Dental</p>	
<p>“Drinking juices was associated with less early childhood caries and severe early childhood caries among preschoolers. Snacking on sweets was associated with more S-ECC. Healthy eating, brushing, and bacterial counts were not significantly associated with ECC or S-ECC in multivariate regression.”</p>	<p>AbdelAziz WE, Dowidar KM, El Tantawi MA. Pediatric Dentistry, Volume 37, Number 5, September-October 2015, pp. 462-467(6)</p>

Findings	Study
<p>“The peer-reviewed literature collectively indicates that intake of 100% fruit juice does not contribute to... dental caries (Lim and others 2008; Evans and others 2013; Gupta and others 2013; Vargas and others 2014; National Academies of Sciences, Engineering and Medicine 2015) ...”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“The totality of scientific evidence to date indicates that 100% percent fruit juice does not contribute to dental caries (Lim and others 2008; Evans and others 2013; Gupta and others 2013; Vargas and others 2014; National Academies of Sciences, Engineering, and Medicine 2015, 2017).”</p>	<p>Byrd-Bredbenner C, Ferruzzi MG, Fulgoni VL, Murray R, Pivonka E, and Wallace TC. “Satisfying America’s Fruit Gap: Summary of an Expert Roundtable on the Role of 100% Fruit Juice.” <i>Journal of Food Science</i>. 2017 doi: 10.1111/1750-3841.13754</p>
<p>“Greater frequency of 100% juice exposures was related to fewer new non-cavitated and fewer new cavitated caries.”</p>	<p>Chankanka O, Cavanaugh JE, Levy SM, Marshall TA, Warren JJ, Broffitt B, and Kolker JL. “Longitudinal associations between children’s dental caries and risk factors.” <i>J Public Health Dent</i>. 2011 Fall; 71(4): 289–300. doi: 10.1111/j.1752-7325.2011.00271.x</p>
<p>“For these children living in a non-fluoridated community, more frequent consumption of sweetened food, less frequent consumption of 100% juice, less frequent tooth brushing, and reporting a previous visit to a dentist were significantly associated with greater ECC [early childhood caries] incidence.”</p>	<p>Ghazal T, Levy SM, Childers NK, Broffitt B, Cutter GR, Wiener HW, Kempf MC, Warren J, and Cavanaugh JE. “Factors associated with early childhood caries incidence among high caries-risk children.” <i>Community Dent Oral Epidemiol</i> 2015; 43: 366–374. DOI: 10.1111/cdoe.12161</p>
<p>“Our findings show no evidence of an association between dental caries and usual intake of 100 percent fruit juice when comparing the 10th and 90th percentiles of the usual intake distribution.”</p>	<p>Vargas C, Dye B, Kolasny C, Buckman DW, McNeel TS, Tinanoff N, Marshall TA, and Levy SM. “Early childhood caries and intake of 100 percent fruit juice: Data from NHANES, 1999-2004.” <i>Journal of the American Dental Association</i>. December 2014; 145(12): 1254-1261.</p>

Findings	Study
<p>“Our finding of a lack of association between ECC [early childhood caries] and consumption of 100 percent fruit juice suggests that oral health care providers and educators should recommend limiting consumption of 100 percent fruit juice to 4 to 6 oz per day for children 1 to 6 years of age¹⁴ for its overall health benefit (that is, nutritional value) rather than as a means to prevent caries.”</p>	<p>Vargas C, Dye B, Kolasny C, Buckman DW, McNeel TS, Tinanoff N, Marshall TA, and Levy SM. “Early childhood caries and intake of 100 percent fruit juice: Data from NHANES, 1999-2004.” <i>Journal of the American Dental Association</i>. December 2014; 145(12): 1254-1261.</p>
<p>“Our findings are consistent with those of other studies that show consumption of 100 percent fruit juice is not associated with ECC [early childhood caries].”</p>	<p>Vargas C, Dye B, Kolasny C, Buckman DW, McNeel TS, Tinanoff N, Marshall TA, and Levy SM. “Early childhood caries and intake of 100 percent fruit juice: Data from NHANES, 1999-2004.” <i>Journal of the American Dental Association</i>. December 2014; 145(12): 1254-1261.</p>