

## DISCOURAGING FRUIT JUICE FOR CHILDREN AND ADOLESCENTS WON'T HELP OBESITY RISK BUT MAY LEAD TO UNINTENDED CONSEQUENCES FOR FRUIT TARGETS AND DIET QUALITY



There is a belief that 100% fruit juice (100% FJ) contributes to weight gain because of its high sugars content. However, research from observational studies has shown that moderate consumption of 100% FJ is associated with lower Body Mass Index (BMI) in contrast to sugar-sweetened beverages (SSB), which are associated with higher BMI.<sup>1</sup>

This finding is supported by controlled trials and meta-analyses which suggest that, compared with control drinks, daily consumption of 100% FJ has no demonstrable impact on body composition, even when consumed in varying serving sizes with or without an energy-reduced diet.<sup>2</sup>

**Three recently published papers** have reported that 100% FJ consumption may be associated with lower likelihood of overweight and obesity in children and adolescents.

**The first paper<sup>3</sup>** analysed data from the *Growing Up Today Study*, an ongoing prospective cohort study of 26,503 adolescents from across the US, to evaluate associations between 100% orange juice (OJ), anthropometric measures and health behaviours. Results showed that there was a significant trend toward lower prevalence of overweight and obesity among children who were more likely to consume OJ. Furthermore, regular OJ consumers tended to have healthier dietary and lifestyle habits than non-consumers of OJ. The authors concluded that: *"In adjusted analyses controlling for other obesity risk factors, OJ consumption was not associated with higher odds of being overweight or obese."*

**The second paper<sup>4</sup>** used data for 9,069 US children aged 2-19 years from the National Health and Nutrition Examination Survey 2011-2016. Consumption patterns for beverages, including milk and 100% FJ, were analysed in relation to diet quality, American Association of Pediatrics recommendations, and BMI z-scores across time and for different age groups. The results showed that intakes of milk and 100% FJ declined sharply with age, whereas SSB and water consumption increased. Furthermore, the best diet quality scores were associated with higher intakes of water, milk, and 100% FJ and with lower intakes of SSB. Only 30% of children consumed 100% FJ at all, and there were no associations between consumption of milk or 100% FJ and BMI z-scores for any age group. The authors raised concerns about existing attitudes to 100% FJ and concluded: *"Attempts to limit the consumption of milk and 100% juice by children might have the unintended consequence of increasing consumption of SSB."*

Finally, **the third paper<sup>5</sup>** warned of the potentially detrimental consequences of focussing dietary advice on individual foods without considering their impact on overall diet quality. 100% FJ consumers tend to have higher scores for diet quality, and consume more whole fruit, less added sugar, and greater amounts of vitamin C, magnesium, potassium, and fibre-containing foods than non-consumers of 100% FJ. According to the author, concerns that 100% FJ may be associated with childhood weight gain or metabolic consequences have not been supported by recent systematic reviews and meta-analyses. Juice consumption may be particularly important for the diet quality of lower-socioeconomic-status populations. The author concluded: *"Over the past three decades, as fruit juice intake has fallen substantially, the vacuum has not been filled by a comparable increase in servings of whole fruit, keeping Americans from meeting daily fruit recommendations."*

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### References:

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