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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

DAVID SPITTAL, JR., REBECCA CRAMPTON, and METE KARABAS, on behalf of themselves, all others similarly situated, and the general public,

Plaintiffs,

v.

THE COCA-COLA COMPANY,

Defendant.

Case No: **'23CV0218 TWR AGS**

CLASS ACTION

COMPLAINT FOR VIOLATIONS OF CAL. BUS. & PROF. CODE §§ 17200 *et seq.*; CAL. BUS. & PROF. CODE §§ 17500 *et seq.*; CAL. CIV. CODE §§ 1750 *et seq.*; BREACH OF EXPRESS AND IMPLIED WARRANTIES; NEGLIGENT AND INTENTIONAL MISREPRESENTATION; AND UNJUST ENRICHMENT

DEMAND FOR JURY TRIAL

Plaintiffs David Spittal Jr., Rebecca Crampton, and Mete Karabas, on behalf of themselves, all others similarly situated, and the general public, by and through their undersigned counsel, hereby sue Defendant, The Coca-Cola Company ("Coca-Cola"), and allege the following upon their own knowledge, or where they lack personal knowledge, upon information and belief, including the investigation of their counsel.

INTRODUCTION

1. Many of us grew up believing that drinking fruit juice was healthy, and many parents still believe it is healthy. Because whole fruit is healthy it seems sensible that fruit juice, which is derived from fruit, would also be healthy.

2. But compelling scientific evidence establishes that fruit juice is actually unhealthy because drinking it increases the risk of heart disease, type 2 diabetes, metabolic syndrome, and all-cause mortality.

3. Knowing that parents are looking for healthy beverages for their children, the Coca-Cola Company exploits and deceptively perpetuates the misperception that juice is healthy by marketing and labeling its Minute Maid Juice Boxes (the "Juice Boxes" or "Products")[1] as being "Good for You!" and "Part of a Healthy, Balanced Diet."

4. These and other representations and omissions of material facts are, however, false and misleading, because consuming fruit juices like the Juice Boxes actually increases the risk of chronic diseases.

5. Accordingly, Plaintiffs bring this action against Coca-Cola on behalf of themselves and similarly-situated Class Members to enjoin Coca-Cola from deceptively marketing the Juice Boxes, and to recover compensation for injured Class Members.

[1] The Products consist of Minute Maid Juice Boxes in at least Apple, Apple White Grape, Mixed Berry, Fruit Punch, and Lemonade flavors. *See* Appendix A. To the extent that Minute Maid sold additional flavors during the Class Period that Plaintiffs' prefiling investigation was unable to identify, this Complaint should be read to include rather than exclude any such flavors of Juice Boxes.

JURISDICTION & VENUE

6. This Court has original jurisdiction over this action under 28 U.S.C. § 1332(d)(2) (The Class Action Fairness Act) because the matter in controversy exceeds the sum or value of $5,000,000, exclusive of interest and costs, and at least one member of the class of plaintiffs is a citizen of a State different from Defendant.

7. The Court has personal jurisdiction over Coca-Cola because it has purposely availed itself of the benefits and privileges of conducting business activities within California, specifically through distributing and selling the Juice Boxes in California and transactions giving rise to this action occurred in California.

8. Venue is proper pursuant to 28 U.S.C. § 1391(b) and (c), because Coca-Cola resides (*i.e.*, is subject to personal jurisdiction) in this district, and a substantial part of the events or omissions giving rise to the claims occurred in this district.

PARTIES

9. Plaintiff David Spittal Jr. purchased the Products in California and is a citizen of the state of California.

10. Plaintiff Rebecca Crampton purchased the Products in California and is currently a citizen of the state of Utah.

11. Plaintiff Mete Karabas purchased the Products in New York and is currently a citizen of the state of New Jersey.

12. Defendant, Coca-Cola, is a Delaware corporation with its principal place of business in Atlanta, Georgia.

FACTS

I. COCA-COLA MARKETS THE JUICE BOXES AS HEALTHY

13. Coca-Cola is an international conglomerate with a net operating revenue of over $38 billion in 2021.

14. Coca-Cola sells the Minute Maid Juice Boxes on a nationwide basis, including in California and New York.

15. Each Juice Box is 6 fluid ounces, and they are typically sold in packs of eight. Depending on flavor, a 6-fluid-ounce serving of the Juice Boxes contains between 19g and 21g of free sugar, constituting 80% to nearly 100% of each Juice Box's calories.

16. Coca-Cola is well aware that consumers prefer healthful foods and are willing to pay more for, or purchase more often, products marketed and labeled as healthy. For instance, a Nielsen Global Health & Wellness Survey found that "88% of those polled are willing to pay more for healthier foods."[2]

17. Coca-Cola has taken advantage of this by marketing the Juice Boxes as healthy options, including by promoting them with health and wellness messages directly on their labeling and packaging.

18. During the Class Period, Coca-Cola labeled the Juice Boxes as both "Good for You!" and "Part of a Healthy, Balanced Diet."

19. Coca-Cola also uses images of fresh fruit on the Juice Boxes to further reinforce the perception that the Juice Boxes are healthy.

20. Below is a representative example of the Juice Boxes' packaging that were sold during the Class Period.

[2] Gagliardi, N., *Consumers Want Healthy Foods—And Will Pay More For Them*, FORBES (Feb. 18, 2015) (citing *Global Health & Wellness Survey*, NIELSEN (Jan. 2015)).

21. These images and statements, however, are false or at least highly misleading because they convey that the Juice Boxes are healthy (beneficial to health) when in reality regularly consuming them is unhealthy since it increases risk of disease.

II. SCIENTIFIC EVIDENCE DEMONSTRATES THAT CONSUMING JUICE, LIKE COCA-COLA'S JUICE BOXES, IS UNHEALTHY

A. While Consuming Whole Fruit is Beneficial to Health, Processing it into Juice Renders it Harmful to Health

22. Susan Jebb, Professor of Diet and Population at Cambridge University, has explained that many "people believe fruit juices . . . have about the same effects as eating fruit. Unfortunately, this is wrong . . . ."[3] This is because processing intact fruit destroys the fruits' natural food matrix thereby concentrating and releasing the fruit's sugar, which "is absorbed very fast, so by the time it gets to your stomach your body doesn't know whether it's Coca-Cola or orange juice[.]'" Ms. Jebb has accordingly cautioned consumers, "don't fall for the fruit juice trap and don't believe the hype that it's a good addition to a balanced meal."[4]

23. The food matrix is "the nutrient and non-nutrient components of foods and their molecular relationships, i.e., chemical bonds, to each other."[5] The food matrix may be viewed as a physical domain that contains and/or interacts with specific constituents of a food (e.g., a nutrient) providing functionalities and behaviors which are different from those exhibited by the components in isolation or a free state. It is, quite literally, the physical geometry of the food.[6]

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[3] *Don't Fall for the Juice Trap*, Apartments For Us (Oct. 15, 2018), at https://www.apartmentsforus.com/dont-fall-for-the-fruit-juice-trap/.

[4] *Id.*

[5] United States Department of Agriculture, NAL Agricultural Thesaurus, at https://lod.nal.usda.gov/nalt/17238.

[6] *See* Aguilera, J., *The food matrix: implications in processing, nutrition and health*, 59(22) CRIT. REV. FOOD SCI. NUTR. 3612 (2019).

24. The effect of the food matrix (FM-effect) has profound implications in food processing, oral processing, satiation, and satiety, and digestion in the gastrointestinal tract.[7]

25. The effect of the food matrix also explains the counterintuitive reality that consuming two foods with the same chemical composition may lead to significantly different outcomes for health based on their chemical structures.

26. When fruit is processed into fruit juice, the fruits' natural food matrix is destroyed. This both concentrates and releases the sugar from its natural fiber encasing so that it becomes "free sugar."[8] And because of the negative health effects of consuming free sugars, a piece of fruit, while perhaps a healthy food choice when it is whole, is transformed into a decidedly *un*healthy food once processed into juice.[9]

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[7] *See id.*

[8] "Added sugars" include sugars added to foods during processing or preparation, such as brown sugar, sucrose, honey, invert sugar, molasses, and fruit juice concentrates, but under some definitions (like the FDA's), do not include naturally-occurring sugars present in intact fruits, vegetables, and dairy products and—as relevant here—in juiced or pureed fruits and vegetables. "Free sugars," on the other hand (for example, as used by the World Health Organization (WHO)), definitionally excludes only sugars naturally occurring in intact fruits, vegetables, or dairy products, and so includes sugars from juice. Thus, the definitional "distinction between added and free sugars is that the latter includes all naturally occurring sugars in nonintact (i.e., juiced or pureed) fruit and vegetables." *See* Mela, D.J. et al., *Perspective: Total, Added, or Free? What Kind of Sugars Should We Be Talking About?*, 9(2) ADV. NUTR. 63, 63-64 (Mar. 2018) ["Mela, *Sugar Perspective*"]. This is, however, merely semantical. "The existence of these different ways of classifying sugars in foods and beverages in authoritative dietary guidance and nutrition communication implies that the distinctions are deemed to be physiologically relevant. But physiologic differentiation between these classes [of sugars] arise[s] mainly from effects of the [food] matrix in which the sugars are found. For example, it has often been shown that the acute metabolic impact is lower and satiety effects greater for intact fruit than for the comparable fruit juices, the latter having effects more similar to other sugar-sweetened beverages (SSBs)." *Id*. at 64. Thus, "the term 'free sugars' best conveys the nature and sources of dietary sugars that are most consistently related to risks of positive energy balance, and that are also associated with diabetes and dental caries." *Id.* at 67.

[9] *See* Mela, *Sugar Perspective*, *supra* n.8.

27. For example, "studies show that eating whole fruit gives you the most of this food group's potential benefits, like helping to prevent heart disease, stroke and some types of cancer" and "may significantly lower your risk of type 2 diabetes . . . . Conversely, drinking fruit juice every day had the opposite effect, increasing the chances of diabetes by 21 percent."[10]

28. Numerous studies have similarly found that whole fruits have a protective effect regarding diabetes whereas juice consumption not only has no protective effect, but actually increases risk of diabetes.[11]

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[10] McClusky, J., *The Whole Truth About Whole Fruits*, WEBMD (May 31, 2017), https://www.webmd.com/food-recipes/news/20170531/the-whole-truth-about-whole-fruits. *See also* Dreher, M.L., *Whole Fruits and Fruit Fiber Emerging Health Effects*, 12(10) NUTRIENTS 1833, 1833 (Nov. 2018) (emphasis added) ("health benefits [of consuming whole fruits] include: . . . reducing risk of cardiovascular disease, type 2 diabetes and metabolic syndrome; defending against colorectal and lung cancers"); Muraki, I., et al., *Fruit consumption and risk of type 2 diabetes: results from three prospective longitudinal cohort studies*, 347 BRIT. MED. J. f5001 (Aug. 2013) ("Greater consumption of specific whole fruits . . . is significantly associated with a lower risk of type 2 diabetes, whereas greater consumption of fruit juice is associated with a higher risk.").

[11] Bazzano, L.A., et al., *Intake of fruit, vegetables, and fruit juices and risk of diabetes in women*, 31 DIABETES CARE 1311 (2008) (cohort study of 71,346 women from the Nurses' Health Study followed for 18 years showed that those who consumed 2 to 3 apple, grapefruit, and orange juices per day (280-450 calories and 75-112.5 grams of sugar) had an 18% greater risk of type 2 diabetes than women who consumed less than 1 sugar-sweetened beverage per month); Drouin-Chatier, J., et al., *Changes in Consumption of Sugary Beverages and Artificially Sweetened Beverages and Subsequent Risk of Type 2 Diabetes: Results From Three Large Prospective U.S. Cohorts of Women and Men*, 42 DIABETES CARE 2181 (Dec. 2019) (finding that increasing sugary beverage intake—which included both sugar-sweetened beverages and fruit juice—by half-a-serving per day over a 4-year period was associated with a 16% greater risk of type 2 diabetes); Imamura, F., et al., *Consumption of sugar sweetened beverages, artificially sweetened beverages, and fruit juice and incidence of type 2 diabetes: systematic review, meta-analysis, and estimation of population attributable fraction*, 351 BRIT. MED. J. 3576 (2015) (meta-analysis of 17 prospective cohort studies showed higher consumption of fruit juice was associated with a 7% greater incidence of type 2 diabetes); *WHO urges global action to curtail consumption and health impacts of sugary drinks*, World

29. Likewise, while consuming whole fruits is protective and decreases risk of cardiovascular diseases, consuming juice increases risk of cardiovascular diseases[12] and all-cause mortality.[13]

30. In addition, "fruit juice increases the risk for type 2 diabetes and obesity . . . , in contrast to the lowered risk with whole fruit" and "research concurs that eating whole fruit is beneficial to health and prevents a broad category of disease, while fruit juice may be counterproductive to overall health in some categories."[14]

31. As Dr. Robert Lustig, a professor emeritus of Pediatrics, Division of Endocrinology at the University of California, San Francisco, explains, when you drink juice instead of eating whole fruit, you no longer get the suppression of the insulin response, making juice "as egregious a delivery vehicle for sugar as is soda. Studies of juice consumption show increased risk of diabetes and heart disease even after controlling for

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Health Organization (Oct. 11, 2016), https://www.who.int/news/item/11-10-2016-who-urges-global-action-to-curtail-consumption-and-health-impacts-of-sugary-drinks ("Consumption of free sugars, including products like sugary drinks, is a major factor in the global increase of people suffering from obesity and diabetes[.]").

[12] Hansen, L., et al., *Fruit and vegetable intake and risk of acute coronary syndrome*, 104 BRIT. J. NUTR. 248 (2010) (finding "a tendency towards a lower risk of ACS [acute coronary syndrome] . . . for both men and women with higher fruit and vegetable consumption," but "a higher risk . . . among women with higher fruit juice intake"); Pase, M.P., et al., *Habitual intake of fruit juice predicts central blood pressure*, 84 APPETITE 658 (2015) (people who consumed juice daily, rather than rarely or occasionally, had significantly higher central systolic blood pressure, a risk factor for cardiovascular disease").

[13] Collin, L.J., et al., *Association of Sugary Beverage Consumption With Mortality Risk in US Adults: A Secondary Analysis of Data From the REGARDS Study*, 2(5) JAMA NETWORK OPEN e193121 (May 2019) (cohort study of 13,440 black and white adults 45 years and older, observed for a mean of 6 years, found each additional 12-oz serving per day of fruit juice was associated with a 24% higher all-cause mortality risk). *See also* Thomas, L., *Differences Between Natural Whole Fruit and Natural Fruit Juice*, NEWS MEDICAL (Feb. 27, 2019) ("In one study, increased fruit juice consumption in early life led to a higher risk of obesity and shorter adult height.").

[14] Thomas, *Differences Between Natural Whole Fruit and Natural Fruit Juice*, *supra* n.13.

calories, while whole fruit demonstrates protection."[15]

32. Barry M. Popkin, PhD, a W. R. Kenan Jr. Distinguished Professor in the Department of Nutrition at University of North Carolina, Gillings School of Global Public Health, explains that "as people change their drinking habits to avoid carbonated soft drinks, the potential damage from naturally occurring fructose in fruit juices and smoothies is being overlooked." "'[P]ulped-up smoothies do nothing good for us but do give us the same amount of sugar as four to six oranges or a large coke. It is deceiving.'"[16]

33. As demonstrated in more detail below, the scientific evidence demonstrates that consuming fruit juice, like the Juice Boxes, increases risk of numerous diseases.

B. Juice Consumption Increases Risk of Cardiovascular Heart Disease

34. Heart disease is the number one killer in the United States. The scientific literature demonstrates that consumption of sugar-containing beverages (SCB), including juices, at amounts typically consumed, has deleterious effects on heart health.

35. In a study published in January 2020, researchers set out to determine whether consumption of SCBs, including juice, is associated with cardiometabolic risk (CMR) in preschool children. They did so using 2007-2018 data from TARGet Kids!, a primary-care, practice-based research network in Canada. After controlling for sociodemographic, familial, and child-related covariates, they found higher consumption of SCB was significantly associated with elevated CMR scores, including lower HDL "good" cholesterol, and higher triglycerides. In addition, when examined separately, juice specifically was significantly associated with lower HDL cholesterol. The researchers stated that their "findings support

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[15] Lustig, R.H., MD, MSL, METABOLICAL: THE LURE AND THE LIES OF PROCESSED FOOD, NUTRITION, AND MODERN MEDICINE 259-60 (Harper Wave 2021).

[16] Boseley, S., *Smoothies and fruit juices are a new risk to health, US scientists warn*, THE GUARDIAN (Sept. 7, 2013) (noting that "researchers from the UK, USA and Singapore found that in large-scale studies involving nurses, people who ate whole fruit, especially blueberries, grapes and apples, were less likely to get type 2 diabetes . . . but those who drank fruit juice were at increased risk. People who swapped their fruit juice for whole fruits three times a week cut their risk by 7%").

recommendations to limit overall intake of SCB in early childhood, in [an] effort to reduce the potential long-term burden of CMR."[17]

36. But juice consumption does not just detrimentally affect children. Analyzing data from the Danish Diet, Cancer and Health cohort study, representing 57,053 men and women aged 50 to 64 years old, researchers found "a tendency towards a lower risk of ACS [acute coronary syndrome] . . . for both men and women with higher [whole] fruit and vegetable consumption," but "a higher risk . . . among women with higher fruit juice intake[.]"[18]

37. In one study, those who consumed juice daily, rather than rarely or occasionally, had significantly higher central systolic blood pressure, a risk factor for cardiovascular disease, even after adjusting for age, height, weight, mean arterial pressure, heart rate, and treatment for lipids and hypertension.[19]

38. Studies of the cardiovascular effects of added sugar consumption further suggest juice consumption causes increased risk for and contraction of cardiovascular disease, since the free sugars in juice act physiologically identically to added sugars, such as those in sugar-sweetened beverages.

39. For example, data obtained from NHANES surveys during the periods of 1988-1994, 1999-2004, and 2005-2010—after adjusting for a wide variety of other factors—demonstrate that those who consumed 10% - 24.9% of their calories from added sugar had a 30% greater risk of cardiovascular disease (CVD) mortality than those who consumed 5% or less of their calories from added sugar. In addition, those who consumed 25% or more of their calories from added sugar had an average 275% greater risk of CVD mortality than those who

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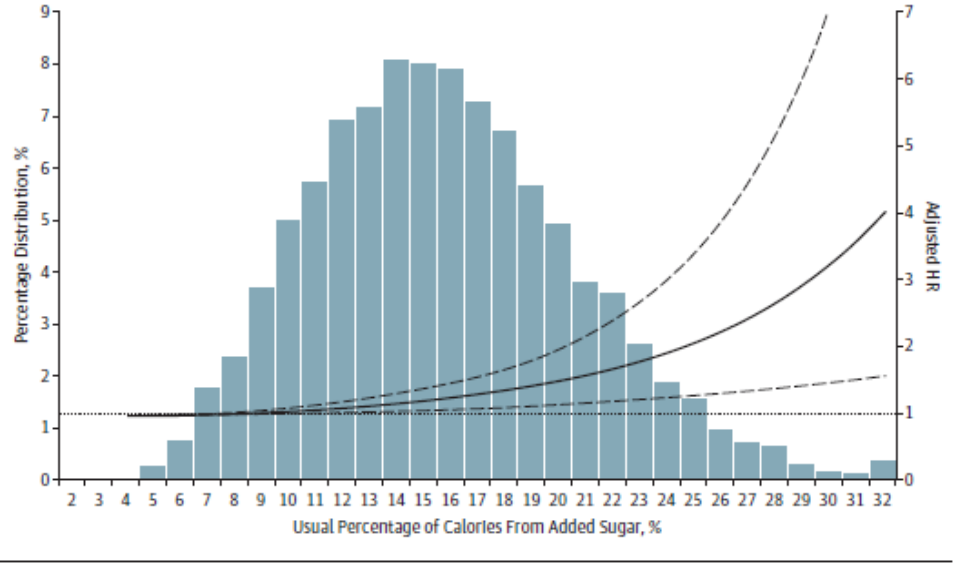
[17] Eny, K.M., et al., *Sugar-containing beverage consumption and cardiometabolic risk in preschool children*, 17 PREV. MED. REP. 101054, 101054 (Jan. 14, 2020).

[18] Hansen, L., et al., *Fruit and vegetable intake and risk of acute coronary syndrome*, 104 BRITISH J. NUTR. 248, 248 (2010).

[19] Pase, M.P., et al., *Habitual intake of fruit juice predicts central blood pressure*, 84 APPETITE 658 (2015).

consumed less than 5% of calories from added sugar. Similarly, when compared to those who consumed approximately 8% of calories from added sugar, participants who consumed approximately 17% - 21% (the 4th quintile) of calories from added sugar had a 38% higher risk of CVD mortality, while the relative risk was more than double for those who consumed 21% or more of calories from added sugar (the 5th quintile). Thus, "[t]he risk of CVD mortality increased exponentially with increasing usual percentage of calories from added sugar," as demonstrated in the chart below.[20]

Figure 1. Adjusted Hazard Ratio (HR) of the Usual Percentage of Calories From Added Sugar for Cardiovascular Disease Mortality Among US Adults 20 Years or Older: National Health and Nutrition Examination Survey Linked Mortality Files, 1988-2006



Histogram of the distribution of usual percentage of calories from added sugar in the population. Lines show the adjusted HRs from Cox models. Midvalue of quintile 1 (7.4%) was the reference standard. The model was adjusted for age, sex, race/ethnicity, educational attainment, smoking status, alcohol consumption, physical activity level, family history of cardiovascular disease, antihypertensive medication use, Healthy Eating Index score, body mass index, systolic blood pressure, total serum cholesterol, and total calories. Solid line indicates point estimates; dashed lines indicate 95% CIs.

40. The NHANES analysis also found "a significant association between sugar-sweetened beverage consumption and risk of CVD mortality," with an average 29% greater risk of CVD mortality "when comparing participants who consumed 7 or more servings/wk (360 mL per serving) with those who consumed 1 serving/wk or less . . . ."[21] The study concluded that "most US adults consume more added sugar than is recommended for a healthy diet. A higher percentage of calories from added sugar is associated with significantly

[20] Yang, Q., et al., *Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults*, 174(4) JAMA INTERN. MED. 516, 519-20 (2014).

[21] *Id.* at 521.

increased risk of CVD mortality. In addition, regular consumption of sugar-sweetened beverages is associated with elevated CVD mortality."[22]

41. Data from the Nurses' Health Study consistently showed that, after adjusting for other unhealthy lifestyle factors, those who consumed two or more sugar-sweetened beverages per day (280 calories, or 70 grams of sugar or more) had a 35% greater risk of coronary heart disease compared with infrequent consumers.[23]

42. In another prospective cohort study, it was suggested that reducing sugar consumption in liquids is highly recommended to prevent CHD. Consumption of sugary beverages was significantly shown to increase risk of CHD, as well as adverse changes in some blood lipids, inflammatory factors, and leptin.[24]

[22] *Id.* at 522.

[23] Fung, T.T., et al., *Sweetened beverage consumption and risk of coronary heart disease in women*, 89 AM. J. CLIN. NUTR. 1037 (Feb. 2009).

[24] Koning, L.D., et al., *Sweetened Beverage Consumption, Incident Coronary Heart Disease, and Biomarkers of Risk in Men*, 125 CIRCULATION 1735 (2012).

43. Juice consumption is also associated with several key risk factors for heart disease. For example, consumption of sugary beverages like juice has been associated with dyslipidemia,[25] obesity,[26] and increased blood pressure.[27]

C. Juice Consumption Increases Risk of Type 2 Diabetes

44. Diabetes affects 34.2 million Americans—just over 1 in 10. From 2001 to 2017, the number of people under age 20 living with type 1 diabetes increased by 45%, and the number living with type 2 diabetes grew by 95%.[28]

45. "Increases in diabetes are always troubling – especially in youth. Rising rates of diabetes, particularly type 2 diabetes, which is preventable, has the potential to create a cascade of poor health outcomes," says Giuseppina Imperatore, MD, PhD, chief of the Surveillance, Epidemiology, Economics, and Statistics Branch in the Centers for Disease Control (CDC)'s Division of Diabetes Translation. "Compared to people who develop

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[25] Elliott, S.S., et al., *Fructose, weight gain, and the insulin resistance syndrome*, 76(5) AM. J. CLIN. NUTR. 911 (2002).

[26] Faith, M.S., et al., *Fruit Juice Intake Predicts Increased Adiposity Gain in Children From Low-Income Families: Weight Status-by-Environment Interaction*, 118 PEDIATRICS 2066 (2006) ("Among children who were initially either at risk for overweight or overweight, increased fruit juice intake was associated with excess adiposity gain, whereas parental offerings of whole fruits were associated with reduced adiposity gain."); Schulze, M.B., et al., *Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type 2 Diabetes in Young and Middle-Aged Women*, 292(8) JAMA 927 (2004) ["Schulze, *Diabetes in Young & Middle-Aged Women*"]; Ludwig, D.S., et al., *Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis*, 257 LANCET 505 (2001); Dennison, B.A., et al., *Excess fruit juice consumption by preschool-aged children is associated with short stature and obesity*, 99 PEDIATRICS 15 (1997).

[27] Hoare, E., et al., *Sugar- and Intense-Sweetened Drinks in Australia: A Systematic Review on Cardiometabolic Risk*, 9(10) NUTRIENTS 1075 (2017).

[28] Centers for Disease Control and Prevention, *New Research Uncovers Concerning Increases in Youth Living with Diabetes in the U.S.*, (Aug. 24, 2021) *available at* https://www.cdc.gov/media/releases/2021/p0824-youth-diabetes.html (last visited December 5, 2022).

diabetes in adulthood, youth are more likely to develop diabetes complications at an earlier age and are at higher risk of premature death."[29]

46. Diabetes can cause kidney failure, lower-limb amputation, and blindness; doubles the risk of colon and pancreatic cancers; and is strongly associated with coronary artery disease and Alzheimer's disease.[30]

47. In 2010, Harvard researchers performed a meta-analysis of 8 studies concerning sugar-sweetened beverage consumption and risk of type 2 diabetes, involving a total of 310,819 participants. They concluded that individuals in the highest quantile of SSB intake had an average 26% greater risk of developing type 2 diabetes than those in the lowest quantile.[31] Moreover, "larger studies with longer durations of follow-up tended to show stronger associations."[32] Thus, the meta-analysis showed "a clear link between SSB consumption and risk of . . . type 2 diabetes."[33]

48. An analysis of data for more than 50,000 women from the Nurses' Health Study,[34] during two 4-year periods (1991-1995, and 1995-1999), showed, after adjusting for

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[29] *Id.*

[30] Aranceta Bartrina, J., et al., *Association between sucrose intake and cancer: a review of the evidence*, 28 NUTRICIÓN HOSPITALARIA 95 (2013); Garcia-Jimenez, C., *A new link between diabetes and cancer: enhanced WNT/beta-catenin signaling by high glucose*, 52(1) J. MOLECULAR ENDOCRINOLOGY R51 (2014); Linden, G.J., *All-cause mortality and periodontitis in 60-70-year-old men: a prospective cohort study*, 39(1) J. CLINICAL PERIODONTAL 940 (October 2012).

[31] Malik, V.S., et al., *Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes*, 33(11) DIABETES CARE 2477, 2480 (November 2010) ["Malik, *2010 Meta-Analysis*"].

[32] *Id.* at 2481.

[33] *Id.*

[34] The Nurses' Health Study was established at Harvard in 1976, and the Nurses' Health Study II, in 1989. Both are long-term epidemiological studies conducted on women's health. The

confounding factors, that women who consumed 1 or more sugar-sweetened soft drink per day (*i.e.*, 140-150 calories and 35-37.5 grams of sugar), had an 83% greater relative risk of type 2 diabetes compared with those who consumed less than 1 such beverage per month, and women who consumed 1 or more fruit punch drinks per day had a 100% greater relative risk of type 2 diabetes.[35]

49. The result of this analysis shows a statistically significant linear trend with increasing sugar consumption.[36]

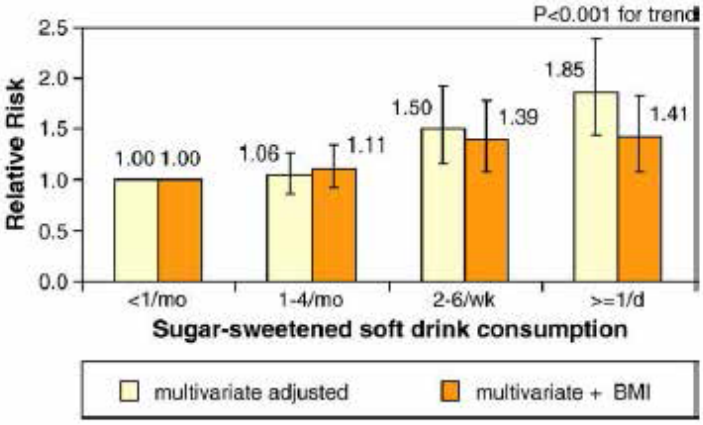

Fig. 4. Multivariate relative risks (RRs) of type 2 diabetes according to sugar-sweetened soft drink consumption in the Nurses' Health Study II 1991–1999 (Multivariate RRs were adjusted for age, alcohol (0, 0.1–4.9, 5.0–9.9, 10+ g/d), physical activity (quintiles), family history of diabetes, smoking (never, past, current), postmenopausal hormone use (never, ever), oral contraceptive use (never, past, current), intake (quintiles) of cereal fiber, magnesium, trans fat, polyunsaturated:saturated fat, and consumption of sugar-sweetened soft drinks, diet soft drinks, fruit juice, and fruit punch (other than the main exposure, depending on model). The data were based on Ref. [50]).

50. A prospective cohort study of more than 43,000 African American women between 1995 and 2001 showed that the incidence of type 2 diabetes was higher with higher

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study followed 121,700 women registered nurses since 1976, and 116,000 female nurses since 1989, to assess risk factors for cancer, diabetes, and cardiovascular disease. The Nurses' Health Studies are among the largest investigations into risk factors for major chronic disease in women ever conducted. *See generally The Nurses' Health Study*, *available at* http://www.channing.harvard.edu/nhs.

[35] Schulze, *Diabetes in Young & Middle-Aged Women*, *supra* n.26.

[36] Hu, F.B., et al., *Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemioligic evidence*, 100 PHYSIOLOGY & BEHAVIOR 47 (2010).

intake of both sugar-sweetened soft drinks and fruit drinks. After adjusting for confounding variables, those who drank 2 or more soft drinks per day (*i.e.*, 140-300 calories and 35-75 grams of sugar) showed a 24% greater risk of type 2 diabetes, and those who drank 2 or more fruit drinks per day showed a 31% greater risk of type 2 diabetes than those who drank 1 or less such drinks per month.[37]

51. A large cohort study of 71,346 women from the Nurses' Health Study followed for 18 years showed that those who consumed 2 to 3 apple, grapefruit, and orange juices per day (280-450 calories and 75-112.5 grams of sugar) had an 18% greater risk of type 2 diabetes than women who consumed less than 1 sugar-sweetened beverage per month. The data also showed a linear trend with increased consumption, as demonstrated below.[38]

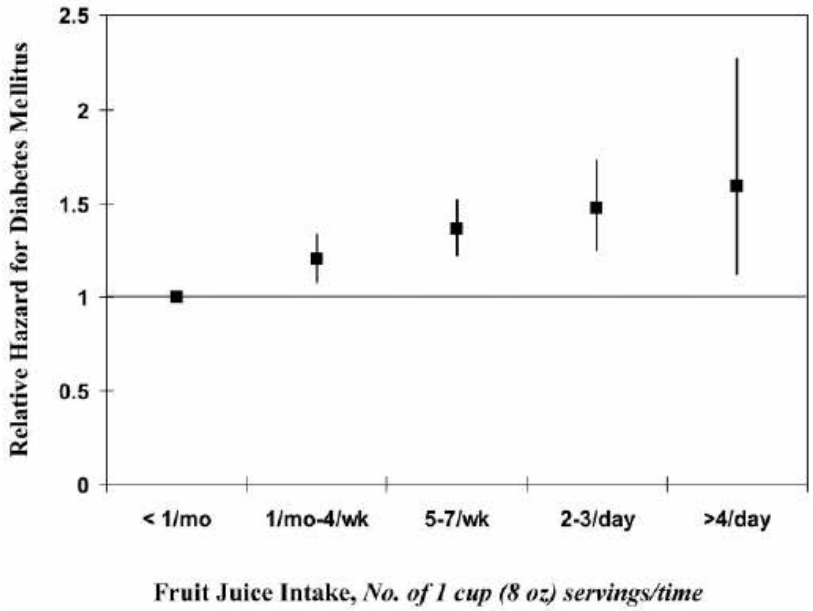

Figure 1—*Multivariate-adjusted relative hazard of diabetes by category of cumulatively updated fruit juice intake. Values were adjusted for cumulatively updated BMI, physical activity, family history of diabetes, postmenopausal hormone use, alcohol use, smoking, and total energy intake. For an increase of 1 serving/day of fruit juice, the multivariate-adjusted relative risk was 1.18 (95% CI 1.10–1.26; P < 0.0001).*

[37] Palmer, J.R., et al., *Sugar-Sweetened Beverages and Incidence of Type 2 Diabetes Mellitus in African American Women*, 168(14) ARCHIVE INTERNAL MED. 1487 (July 28, 2008) ["Palmer, *Diabetes in African American Women*"].

[38] Bazzano, L.A., et al., *Intake of fruit, vegetables, and fruit juices and risk of diabetes in women*, 31 DIABETES CARE 1311, 1316 (2008).

52. An analysis of more than 40,000 men from the Health Professionals Follow-Up Study, a prospective cohort study conducted over a 20-year period, found that, after adjusting for age and a wide variety of other confounders, those in the top quartile of sugar-sweetened beverage intake had a 24% greater risk of type 2 diabetes than those in the bottom quartile, while consumption of artificially-sweetened beverages, after adjustment, showed no association.[39]

53. In an analysis of tens of thousands of subjects from three prospective longitudinal cohort studies (the Nurses' Health Study, Nurses' Health Study II, and Health Professionals Follow-up Study), researchers found, after adjusting for BMI, initial diet, changes in diet, and lifestyle covariates, that increasing sugary beverage intake—which included both sugar-sweetened beverages and fruit juice—by half-a-serving per day over a 4-year period was associated with a 16% greater risk of type 2 diabetes.[40]

54. In another study of subjects from the Nurses' Health Study, Nurses' Health Study II, and Health Professionals Follow-up Study, researchers set out to "determine whether individual fruits are differentially associated with risk of type 2 diabetes," looking at the associated risk with eating three servings per week of blueberries, grapes and raisins, prunes, apples and pears, bananas, grapefruit, oranges, strawberries, cantaloupe, and peaches, plums and apricots, as well as "the same increment" in fruit juice consumption. They found that "[g]reater consumption of specific whole fruits" was "significantly associated with a lower risk of type 2 diabetes, whereas greater consumption of fruit juice is associated with a higher risk." The increased risk was approximately 8% based on three fruit juice servings per

[39] De Konig, L., et al., *Sugar-sweetened and artificially sweetened beverage consumption and risk of type 2 diabetes in men*, 93 AM. J. CLIN. NUTR. 1321 (2011).

[40] Drouin-Chatier, J., et al., *Changes in Consumption of Sugary Beverages and Artificially Sweetened Beverages and Subsequent Risk of Type 2 Diabetes: Results From Three Large Prospective U.S. Cohorts of Women and Men*, 42 DIABETES CARE 2181 (Dec. 2019).

week.[41] Similarly, a meta-analysis of 17 prospective cohort studies showed higher consumption of fruit juice was associated with a 7% greater incidence of type 2 diabetes after adjusting for adiposity.[42]

55. An econometric analysis of repeated cross-sectional data published in 2013 established a causal relationship between sugar availability and type 2 diabetes. After adjusting for a wide range of confounding factors, researchers found that an increase of 150 calories per day related to an insignificant 0.1% rise in diabetes prevalence by country, while an increase of 150 calories per day in sugar related to a 1.1% rise in diabetes prevalence by country, a statically-significant 11-fold difference.[43]

D. Juice Consumption Increases Risk of Metabolic Disease

56. Excess sugar consumption leads to metabolic syndrome by stressing and damaging crucial organs, including the pancreas and liver. When the pancreas, which produces insulin, becomes overworked, it can fail to regulate blood sugar properly. Large doses of fructose can overwhelm the liver, which metabolizes fructose. In the process, the liver will convert excess fructose to fat, which is stored in the liver and released into the bloodstream. This process contributes to key elements of metabolic syndrome, including high blood fats and triglycerides, high cholesterol, high blood pressure, and extra body fat, especially in the belly.[44]

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[41] Muraki, I., et al., *Fruit consumption and risk of type 2 diabetes: results from three prospective longitudinal cohort studies*, 347 BRIT MED. J. 5001 (Aug. 28, 2013).

[42] Imamura, F., et al., *Consumption of sugar sweetened beverages, artificially sweetened beverages, and fruit juice and incidence of type 2 diabetes: systematic review, meta-analysis, and estimation of population attributable fraction*, 351 BRIT MED. J. 3576 (2015).

[43] Basu, S., et al., *The Relationship of Sugar to Population-Level Diabetes Prevelance: An Econometric Analysis of Repeated Cross-Sectional Data*, 8(2) PLOS ONLINE 57873 (February 27, 2013).

[44] Te Morenga, L., et al., *Dietary sugars and body weight: systematic review and meta-analyses of randomized controlled trials and cohort studies*, 346 BRIT MED. J. e7492 (Jan. 2013) ["Te Morenga, *Dietary Sugars & Body Weight*"].

57. Metabolic disease has been linked to type 2 diabetes, cardiovascular disease, obesity, polycystic ovary syndrome, nonalcoholic fatty liver disease, and chronic kidney disease, and is defined as the presence of any three of the following:

a. Large Waist Size (35" or more for women, 40" or more for men);

b. High triglycerides (150mg/dL or higher, or use of cholesterol medication);

c. High total cholesterol, or HDL levels under 50mg/dL for women, and 40 mg for men;

d. High blood pressure (135/85 mm or higher); or

e. High blood sugar (100mg/dL or higher).

58. More generally, "metabolic abnormalities that are typical of the so-called metabolic syndrome . . . includ[e] insulin resistance, impaired glucose tolerance, high concentrations of circulating triacylglycerols, low concentrations of HDLs, and high concentrations of small, dense LDLs."[45]

59. Fifty-six million Americans have metabolic syndrome, or about 22.9% of Americans over the age of 20, placing them at higher risk for chronic disease.

60. In 2010, Harvard researchers published a meta-analysis of three studies, involving 19,431 participants, concerning the effect of consuming sugar-sweetened beverages on risk for metabolic syndrome. They found participants in the highest quantile of 1-2 servings per day had an average 20% greater risk of developing metabolic syndrome than did those in the lowest quantile of less than 1 serving per day, showing "a clear link between SSB consumption and risk of metabolic syndrome . . . ."[46]

61. Researchers who studied the incidence of metabolic syndrome and its components in relation to soft drink consumption in more than 6,000 participants in the

[45] Fried, S.K., *Sugars, hypertriglyceridemia, and cardiovascular disease*, 78 AM. J. CLIN. NUTR. 873S, 873S (2003).

[46] Malik, *2010 Meta-Analysis*, *supra* n.31.

Framingham Heart Study found that individuals who consumed 1 or more soft drinks per day (i.e., 140-150 calories and 35-37.5 grams of sugar or more) had a 48% higher prevalence of metabolic syndrome than infrequent consumers, those who drank less than 1 soft drink per day. In addition, the frequent-consumer group had a 44% higher risk of developing metabolic syndrome.[47]

E. Juice Consumption Increases Risk of Liver Disease

62. Sugar consumption causes serious liver disease, including non-alcoholic fatty liver disease (NAFLD), characterized by excess fat build-up in the liver. Five percent of these cases develop into non-alcoholic steatohepatitis (NASH), causing scarring as the liver tries to heal its injuries, which gradually cuts off vital blood flow to the liver. About 25% of NASH patients progress to non-alcoholic liver cirrhosis, which requires a liver transplant or can lead to death.[48]

63. Since 1980, the incidence of NAFLD and NASH has doubled, along with the rise of fructose consumption, with approximately 6 million Americans estimated to have progressed to NASH and 600,000 to Nash-related cirrhosis. Most people with NASH also have type 2 diabetes. NASH is now the third-leading reason for liver transplant in America.[49]

64. Moreover, because the liver metabolizes sugar virtually identically to alcohol, the U.S. is now seeing for the first time alcohol-related diseases in children. Conservative

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[47] Dhingra, R., et al., *Soft Drink Consumption and Risk of Developing Cardiometabolic Risk Factors and the Metabolic Syndrome in Middle-Aged Adults in the Community*, 116 CIRCULATION 480 (2007) ["Dhingra, *Cardiometabolic Risk*"].

[48] Farrell, G.C., et al., *Nonalcoholic fatty liver disease: from steatosis to cirrhosis*, 433(2) HEPATOLOGY S99 (February 2006); Powell, E.E., et al., *The Natural History of Nonalcoholic Steatohepatitis: A Follow-up Study of Forty-two Patients for Up to 21 Years*, 11(1) HEPATOLOGY 74 (1990).

[49] Charlton, M.R., et al., *Frequency and outcomes of liver transplantation for nonalcoholic steatohepatitis in the United States*, 141(4) GASTROENTEROLOGY 1249 (October 2011).

estimates are that 31% of American adults, and 13% of American children suffer from NAFLD.[50]

F. Juice Consumption Increases Risk of Obesity

65. Excess sugar consumption also leads to weight gain and obesity because insulin secreted in response to sugar intake instructs the cells to store excess energy as fat. This excess weight can then exacerbate the problems of excess sugar consumption because excess fat, particularly around the waist, is in itself a primary cause of insulin resistance, another vicious cycle. Studies have shown that belly fat produces hormones and other substances that can cause insulin resistance, high blood pressure, abnormal cholesterol levels, and cardiovascular disease. And belly fat plays a part in the development of chronic inflammation in the body, which can cause damage over time without any signs or symptoms. Complex interactions in fat tissue draw immune cells to the area, which triggers low-level chronic inflammation. This in turn contributes even more to insulin resistance, type 2 diabetes, and cardiovascular disease.

66. Based on a meta-analysis of 30 studies between 1966 and 2005, Harvard researchers found "strong evidence for the independent role of the intake of sugar-sweetened beverages, particularly soda, in the promotion of weight gain and obesity in children and adolescents. Findings from prospective cohort studies conducted in adults, taken in conjunction with results from short-term feeding trials, also support a positive association between soda consumption and weight gain, obesity, or both."[51]

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[50] Lindback, S.M., et al., *Pediatric Nonalcoholic Fatty Liver Disease: A Comprehensive Review*, 57(1) ADVANCES PEDIATRICS 85 (2010); Lazo, M. et al., *The Epidemiology of Nonalcoholic Fatty Liver Disease: A Global Perspective*, 28(4) SEMINARS LIVER DISEASE, 339 (2008); Schwimmer, J.B., et al., *Prevalence of Fatty Liver in Children and Adolescents*, 118(4) PEDIATRICS 1388 (2006); Browning, J.D., et al., *Prevalence of hepatic steatosis in an urban population in the United States: Impact of ethnicity*, 40(6) HEPATOLOGY 1387 (2004).

[51] Malik, V.S., et al., *Intake of sugar-sweetened beverages and weight gain: a systematic review*, 84 AM. J. CLINICAL NUTRITION 274 (2006).

67. A recent meta-analysis by Harvard researchers evaluating change in Body Mass Index per increase in 1 serving of sugar-sweetened beverages per day found a significant positive association between beverage intake and weight gain.[52]

68. One study of more than 2,000 2.5-year-old children followed for 3 years found that those who regularly consumed sugar-sweetened beverages between meals had a 240% better chance of being overweight than non-consumers.[53]

69. An analysis of data for more than 50,000 women from the Nurses' Health Study during two 4-year periods showed that weight gain over a 4-year period was highest among women who increased their sugar-sweetened beverage consumption from 1 or fewer drinks per week, to 1 or more drinks per day (8.0 kg gain during the 2 periods), and smallest among women who decreased their consumption or maintained a low intake level (2.8 kg gain).[54]

70. A study of more than 40,000 African American women over 10 years had similar results. After adjusting for confounding factors, those who increased sugar-sweetened beverage intake from less than 1 serving per week, to more than 1 serving per day, gained the most weight (6.8 kg), while women who decreased their intake gained the least (4.1 kg).[55]

71. Experimental short-term feeding studies comparing sugar-sweetened beverages to artificially-sweetened beverages have illustrated that consumption of the former leads to greater weight gain. As demonstrated in the chart below, one 10-week trial involving more than 40 men and women demonstrated that the group that consumed daily supplements of sucrose (for 28% of total energy) increased body weight and fat mass, by 1.6 kg for men and

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[52] Malik, V.S., et al., *Sugar-sweetened beverages and BMI in children and adolescents: reanalyses of a meta-analysis*, 29 AM. J. CLINICAL NUTRITION 438, 438-39 (2009).

[53] Dubois, L., et al., *Regular sugar-sweetened beverage consumption between meals increases risk of overweight among preschool-aged children*, 107(6) J. AM. DIETETIC ASSOC'N 924 (2007).

[54] Schulze, *Diabetes in Young & Middle-Aged Women*, *supra* n.26.

[55] Palmer, *Diabetes in African American Women*, *supra* n.37.

1.3 kg for women, while the group that was supplemented with artificial sweeteners lost weight, 1.0 kg for men and 0.3 kg for women.[56]

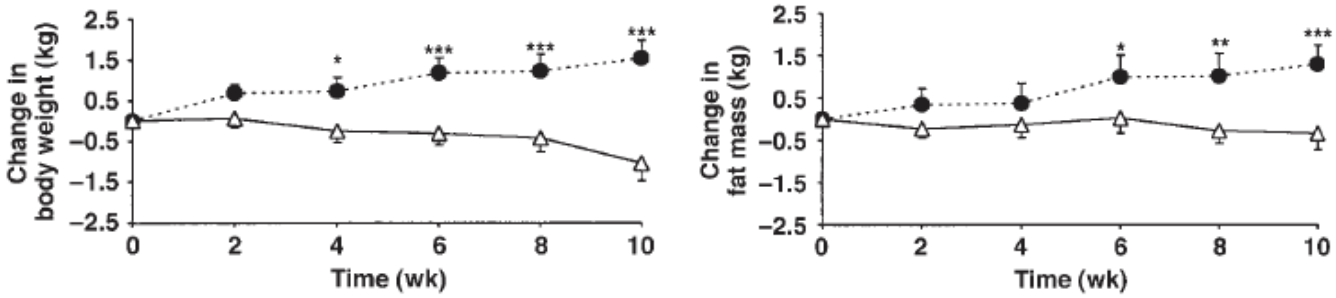

FIGURE 2. Mean (±SEM) changes in body weight, fat mass, and fat-free mass during an intervention in which overweight subjects consumed supplements containing either sucrose (●; $n = 21$) or artificial sweeteners (△; $n = 20$) daily for 10 wk. The diet × time interactions were significant for changes in body weight ($P < 0.0001$) and fat mass ($P < 0.05$) by analysis of variance with Tukey's post hoc tests. At specific time points for changes in body weight and fat mass, there were significant differences between the sucrose and sweetener groups: $^{*}P < 0.05$, $^{**}P < 0.001$, and $^{***}P < 0.0001$ (general linear model with least squares means and adjustment for multiple comparisons).

G. Juice Consumption Increases Risk of High Blood Triglycerides and Abnormal Cholesterol Levels

72. Cholesterol is a waxy, fat-like substance found in the body's cells, used to make hormones, bile acids, vitamin D, and other substances. The human body manufactures all the cholesterol it requires, which circulates in the bloodstream in packages called lipoproteins. Excess cholesterol in the bloodstream can become trapped in artery walls, building into plaque and narrowing blood vessels, making them less flexible, a condition called atherosclerosis. When this happens in the coronary arteries, it restricts oxygen and nutrients to the heart, causing chest pain or angina. When cholesterol-rich plaques in these arteries burst, a clot can form, blocking blood flow and causing a heart attack.

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[56] Raben, A., et al., *Sucrose compared with artificial sweeteners: different effects on ad libitum food intake and body weight after 10 wk of supplementation in overweight subjects*, 76 AM. J. CLIN. NUTR. 721 (2002) ["Raben, *Sucrose vs. Artificial Sweeteners*"].

73. Most blood cholesterol is low-density lipoprotein, or LDL cholesterol, which is sometimes called "bad" cholesterol because it carries cholesterol to the body's tissues and arteries, increasing the risk of heart disease. High-density lipoprotein, or HDL cholesterol, is sometimes called "good" cholesterol because it removes excess cholesterol from the cardiovascular system, bringing it to the liver for removal. Thus, a low level of HDL cholesterol increases the risk of heart disease.

74. Diet affects blood cholesterol. For example, the body reacts to saturated fat by producing LDL cholesterol.

75. When the liver is overwhelmed by large doses of fructose, it will convert the excess to fat, which is stored in the liver and then released into the bloodstream, contributing to key elements of metabolic syndrome, like high blood fat and triglycerides, high total cholesterol, and low HDL "good" cholesterol.[57]

76. A study of more than 6,000 participants in the Framingham Heart Study found those who consumed more than 1 soft drink per day had a 25% greater risk of hypertriglyceridemia and 32% greater risk of low HDL cholesterol than those who consumed less than 1 soft drink per day.[58]

77. A systematic review and meta-analysis of 37 randomized controlled trials concerning the link between sugar intake and blood pressure and lipids found that higher sugar intakes, compared to lower sugar intakes, significantly raised triglyceride concentrations, total cholesterol, and low density lipoprotein cholesterol.[59]

78. A cross-sectional study among more than 6,100 U.S. adults from the NHANES 1999-2006 data were grouped into quintiles for sugar intake as follows: (1) less than 5% of

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[57] Te Morenga, *Dietary Sugars & Body Weight*, *supra* n.44.

[58] Dhingra, *Cardiometabolic Risk*, *supra* n.47.

[59] Te Morenga, L., et al., *Dietary sugars and cardiometabolic risk: systematic review and meta-analyses of randomized controlled trials on the effects on blood pressure and lipids*, 100(1) AM. J. CLIN. NUTR. 65 (May 7, 2014).

calories consumed from sugar, (2) 5% to less than 10%, (3) 10% to less than 17.5%, (4) 17.5% to less than 25%, and (5) 25% or more. These groups had the following adjusted mean HDL levels (because HDL is the "good" cholesterol, higher levels are better): 58.7, 57.5, 53.7, 51.0, and 47.7 mg/dL. Mean triglyceride levels were 105, 102, 111, 113, and 114 mg/dL. Mean LDL levels were 116, 115, 118, 121, and 123 mg/dL among women, with no significant trend among men. Consumers whose sugar intake accounted for more than 10% of their calories had a 50% - 300% higher risk of low HDL levels compared to those who consumed less than 5% of calories from sugar. Likewise, high-sugar consumers had greater risk of high triglycerides. All relationships were linear, as demonstrated in the charts below.[60]

Figure 1. Multivariable-Adjusted Mean HDL-C Levels by Level of Added Sugar Intake Among US Adults, NHANES 1999-2006

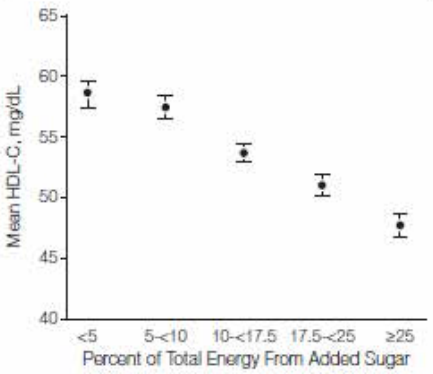


Figure 2. Multivariable-Adjusted Geometric Mean Triglyceride Levels by Level of Added Sugar Intake Among US Adults, NHANES 1999-2006

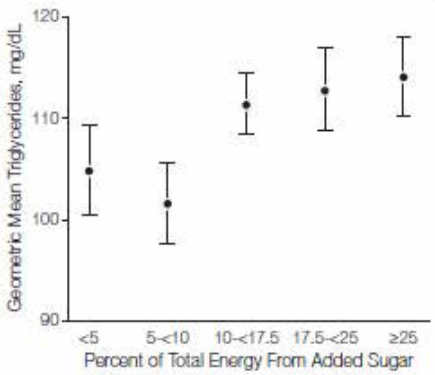
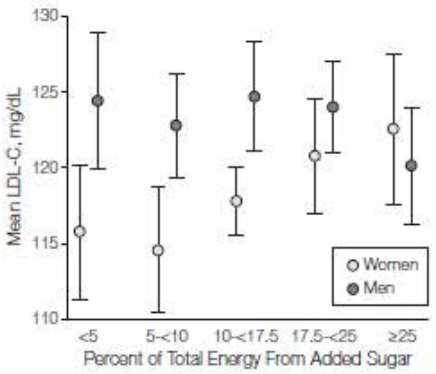


Figure 3. Multivariable-Adjusted Mean LDL-C Levels by Level of Added Sugar Intake Among US Men and Women, NHANES 1999-2006



79. One experimental study showed that, when a 17% fructose diet was provided to healthy men, they showed an increase in plasma triacylglycerol concentrations of 32%.[61]

80. Another 10-week experimental feeding study showed that those who were fed 25% of their energy requirements as fructose experienced increases in LDL cholesterol, small dense LDL cholesterol, and oxidized LDL cholesterol, as well as increased concentrations of

[60] Welsh, J.A., et al., *Caloric Sweetener Consumption and Dyslipidemia Among US Adults*, 303(15) J. AMER. MEDICAL ASSOC'N 1490 (April 21, 2010).

[61] Bantle, J.P., et al., *Effects of dietary fructose on plasma lipids in healthy subjects*, 72 AM. J. CLIN. NUTR. 1128 (2000).

triglycerides and total cholesterol, while those fed a 25% diet of glucose did not experience the same adverse effects.[62]

81. In a cross-sectional study of normal weight and overweight children aged 6-14, researchers found that "the only dietary factor that was a significant predictor of LDL particle size was total fructose intake."[63]

H. Juice Consumption Increases Risk of Hypertension

82. An analysis of the NHANES data for more than 4,800 adolescents showed a positive, linear association between sugar-sweetened beverages and higher systolic blood pressure, as well as corresponding increases in serum uric acid levels.[64]

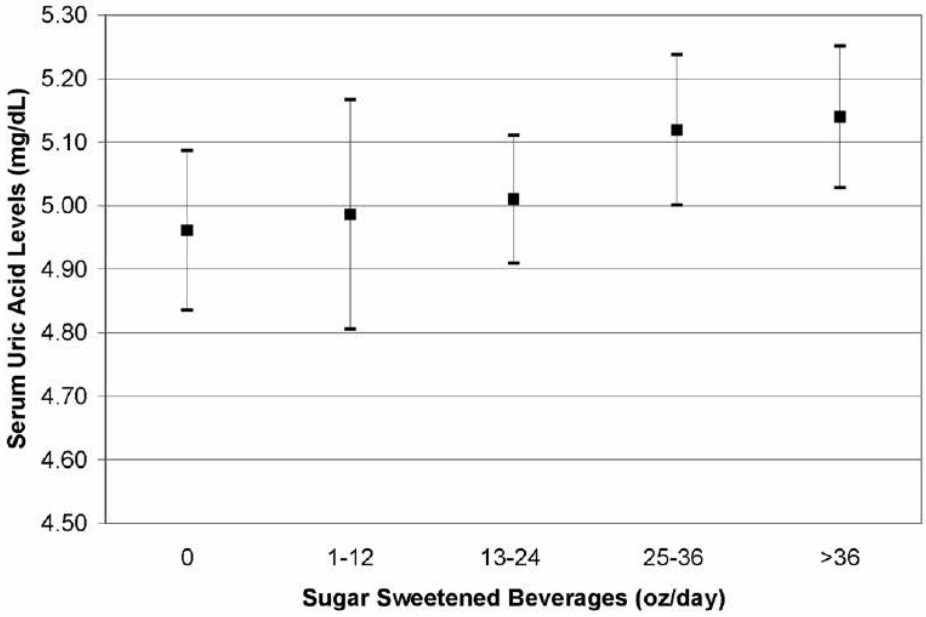


Figure 1.
Sample mean of serum uric acid with 95% confidence intervals by categories of sugar sweetened beverage consumption adjusted for age, race/ethnicity, sex, total calories, BMI z-score, alcohol, smoking, dietary fiber intake, diet beverage consumption, and milk consumption. *P* for trend = 0.01

[62] Stanhope, K.L., et al., *Consuming fructose-sweetened, not glucose-sweetened, beverages increases visceral adiposity and lipids and decreases insulin sensitivity in overweight/obese humans*, 119(5) J. CLIN. INVESTIG. 1322 (May 2009).

[63] Aeberli, I., et al., *Fructose intake is a predictor of LDL particle size in overweight schoolchildren*, 86 AM. J. CLIN. NUTR. 1174 (2007).

[64] Nguyen, S., et al., *Sugar Sweetened Beverages, Serum Uric Acid, and Blood Pressure in Adolescents*, 154(6) J. PEDIATRICS 807 (June 2009).

83. In one study, 15 healthy men drank 500 ml of water containing either no sugar, 60 grams of fructose, or 60 grams of glucose. Blood pressure, metabolic rate, and autonomic nervous system activity were measured for 2 hours. While the administration of fructose was associated with an increase in both systolic and diastolic blood pressure, blood pressure did not rise in response to either water or glucose ingestion, as demonstrated in the chart below.[65]

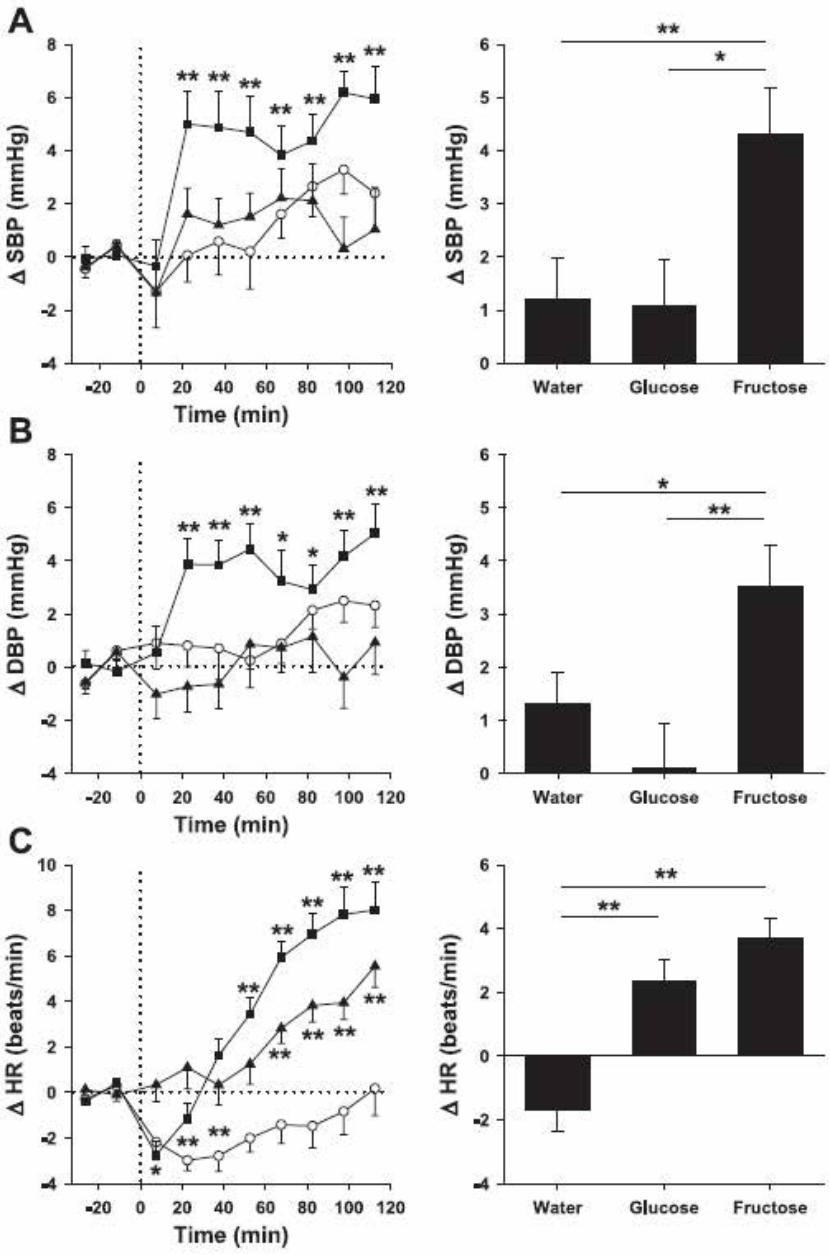


Fig. 1. Time course of the systolic blood pressure (SBP; *A*), diastolic blood pressure (DBP; *B*), and heart rate (HR; *C*) changes (*left*) and mean responses (*right*) to drinking water (○), glucose (▲), and fructose (■). $*P < 0.05$ and $**P < 0.01$, statistically significant differences over time from baseline values (*left*) and differences between responses to the drinks (*right*).

[65] Brown, C.M., et al., *Fructose ingestion acutely elevates blood pressure in healthy young humans*, 294 AM. J. PHYSIOL. REGUL. INTEGR. COMPL. PHYSIOL. 730 (2008).

84. In another study, more than 40 overweight men and women were supplemented for 10 weeks with either sucrose or artificial sweeteners. The sucrose group saw an increase in systolic and diastolic blood pressure, of 3.8 and 4.1 mm Hg, respectively, while the artificial sweetener group saw a decrease in systolic and diastolic blood pressure, of 3.1 and 1.2 mm Hg, respectively.[66]

85. Another study took a variety of approaches to measuring the association between sugar intake and blood pressure, concluding that an increase of 1 serving of sugar-sweetened beverages per day (*i.e.*, 140-150 calories, and 35-37.5 grams of sugar) was associated with systolic/diastolic blood pressure differences of +1.6 and +0.8 mm Hg (and +1.1/+0.4 mm Hg with adjustment for height and weight), while an increase of 2 servings results in systolic/diastolic blood pressure differences of +3.4/+2.2, demonstrating that the relationship is direct and linear.[67]

I. Juice Consumption is Associated with Increased All-Cause Mortality

86. In a cohort study of 13,440 black and white adults 45 years and older, observed for a mean of 6 years, each additional 12-oz serving per day of fruit juice was associated with a 24% higher all-cause mortality risk. This was significantly higher than the increased risk associated with *all* sugary beverages, including sugar-sweetened beverages like soda, which was 11% for each additional 12-oz serving per day. The researchers from Emory University, University of Alabama, and the Weill Cornell Medical College concluded their findings "suggest that consumption of sugary beverages, including fruit juices, is associated with all-cause mortality."[68]

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[66] Raben, *Sucrose vs. Artificial Sweeteners*, *supra* n.56.

[67] Brown, I.J., et al., *Sugar-Sweetened Beverage, Sugar Intake of Individuals, and Their Blood Pressure: International Study of Macro/Micronutrients and Blood Pressure*, 57 HYPERTENSION 695 (2011).

[68] Collin, L.J., et al., *Association of Sugary Beverage Consumption With Mortality Risk in US Adults: A Secondary Analysis of Data From the REGARDS Study*, 2(5) JAMA NETW. OPEN 193121 (May 2019).

J. Because of the Compelling Evidence that Consuming Juice is Unhealthy, Authoritative Bodies Recommend Limiting its Consumption

87. The 2015-2020 Dietary Guidelines for Americans (DGA) warned parents to limit giving fruit juice to children, noting that "[t]he amounts of fruit juice allowed in the USDA Food Patterns for young children align with the recommendation from the American Academy of Pediatrics that young children consume no more than 4 to 6 fluid ounces of 100% fruit juice per day."[69]

88. In September 2019, the American Academy of Pediatrics, the American Heart Association, the Academy of Nutrition and Dietetics and the American Academy of Pediatric Dentistry published a consensus statement on young children's consumption of drinks, recommending no 100% fruit juice for ages 0-12 months, no more than 4 ounces per day for ages 1-3 years, and no more than 4 to 6 ounces per day for ages 4-5 years. [70]

89. Adopting many of the views from the American Academy of Pediatrics, the American Heart Association, the Academy of Nutrition and Dietetics, and the American Academy of Pediatric Dentistry's 2019 consensus statement, the 2020-2025 DGA narrowed the 2015-2020 DGA's recommended 4 to 6 fluid ounces range: "[i]f 100% fruit juice is provided, up to 4 ounces per day can fit in a healthy dietary pattern."[71]

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[69] U.S. Dep't of Health & Human Servs. and U.S. Dept. of Agric., *Dietary Guidelines for Americans 2015–2020*, at 22 (8th ed.), *available at* https://health.gov/sites/default/files/2019-09/2015-2020_Dietary_Guidelines.pdf.

[70] Lott, et al., *Consensus Statement. Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations*, HEALTHY EATING RESEARCH (Sept. 2019), https://healthyeatingresearch.org/research/consensus-statement-healthy-beverage-consumption-in-early-childhood-recommendations-from-key-national-health-and-nutrition-organizations/.

[71] U.S. Dep't of Health & Human Servs. and U.S. Dept. of Agric., *Dietary Guidelines for Americans 2020–2025*, at 62, *available at* https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf.

90. However, the 2020-2025 DGA clarified that "[a]lthough 100% fruit juice without added sugars can be part of a healthy dietary pattern, it is lower in dietary fiber than whole fruit," and because "[d]ietary fiber is a dietary component of public health concern[,]" "fruit should mostly be consumed in whole forms."[72] Specifically, "[a]t least half of the recommended amount of fruit should come from whole fruit, rather than 100% juice."[73]

91. The World Health Organization (WHO) recommends for "both adults and children, the intake of free sugars should be reduced to less than 10% of total energy intake," adding, "[a] reduction to less than 5% of total energy intake would provide additional health benefits".[74]

92. It also recommends "limiting the consumption of foods and drinks containing high amounts of sugars . . . (i.e. all types of beverages containing free sugars – these include . . . fruit or vegetable juices and drinks . . .)."[75]

III. COCA-COLA'S REPRESENTATIONS AND OMISSIONS ON THE JUICE BOXES ARE FALSE AND MISLEADING

A. Coca-Cola's Health & Wellness Messages and Images on the Juice Boxes are Likely to Deceive Reasonable Consumers

93. Defendant's unqualified labeling representations that the Juice Boxes are "Good for You!" and "Part of a Healthy, Balanced Diet," among other things, are false, or at least highly misleading because the scientific evidence demonstrates, that juice, like the Juice Boxes, increases risk of serious chronic diseases—such that authoritative bodies recommend avoiding or limiting its consumption.

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[72] *Id*. at 88.

[73] *Id*. at 32.

[74] World Health Organization, *Healthy Diet* (April 2020), https://www.who.int/news-room/fact-sheets/detail/healthy-diet.

[75] *Id.*

94. Not only is the challenged labeling false from a scientific perspective, it is especially likely to mislead consumers because (1) Coca-Cola preys on preexisting misconceptions that juice is healthy, (2) Coca-Cola and other sugar industry players have waged a longstanding disinformation campaign regarding the health effects of sugar leading to more consumer confusion, and (3) nothing on the labeling would dispel the express claims that the Juice Boxes are good for you and consumers would have to perform their own research to try to find the truth.

95. For decades Coca-Cola and juice marketers have perpetuated the idea that juice is healthy, and the challenged labeling exploits this misconception by deceptively claiming that the Juice Boxes are beneficial to health.

96. As one researcher explained, "beverages like fruit juice are marketed as a healthy and natural source of vitamins," and "[b]ased on the marketing information, consumers may thus often assume that juice has health benefits and may be reluctant to associate fruit juice with other sugary beverages."[76]

97. In addition to express statements that send the message that juice is healthy, using images of whole fruit also exploit consumers tendency to believe that juice has similar health attributes as whole fruit. In fact, in one survey of parents of young children, 1 in 3 believed that juice was at least as healthy as fruit.[77]

98. In other words, by using wellness marketing "beverage manufacturers distract consumers from the health risks associated with some of the other common ingredients in

[76] Sah, A., et al., *Visible sugar: Salient sugar information impacts health perception of fruit juices but only when motivated to be responsible and not when motivated to enjoy*, 164 APPETITE 105262 (Apr. 2021).

[77] Ferris, H., et al., *People think juice is good for them. They're wrong*, THE WASHINGTON POST (Apr. 26, 2017).

their beverages [such as] sugar . . . often delivered at levels that may have serious negative consequences."[78]

99. Not surprisingly, when the Rudd Center for Food Policy and Obesity surveyed 982 parents of children ages 2 to 17, asking "about the healthfulness of different drink categories for their child, [79 percent] of parents rated 100 % juice . . . as somewhat or very healthy."[79]

100. When a marketer, like Coca-Cola, exploits this misperception it is hard to correct since, "[a]t first glance, it is reasonable to think that juice has health benefits. Whole fruit is healthy, and juice comes from fruit, so it must be healthy, too." In other words, ordinary consumers would have no reason to question or scrutinize wellness statements on 100% juice products since such claims are likely to be congruent with "common knowledge." But "[t]he truth is that fruit juice, even if it is freshly pressed, 100 percent juice, is little more than sugar water."[80]

101. Another reason it is hard for consumers to shake the misperception that juice is "Good For You!" is that "Coca-Cola, like other sugar interests, also pours money into misinformation campaigns aimed at casting doubt on the growing body of scientific evidence showing that excessive sugar consumption is harmful to our health."[81]

102. In fact, documents that became public during a lawsuit between rival industry groups show that "sugar interests have, in fact, intentionally and actively worked for more

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[78] Crawford, P., et al., *Hiding Under a Health Halo: Examining the Data Behind Health Claims on Sugary Beverages*, CALIFORNIA CENTER FOR PUBLIC HEALTH ADVOCACY (Aug. 2014).

[79] Harris et al., *Children's Drink FACTS 2019: Sales, Nutrition, and Marketing of Children's Drinks*, UNIVERSITY OF CONNECTICUT RUDD CENTER OF FOOD POLICY & OBESITY, at 7, 13 (Oct. 2019).

[80] Ferris, *People think juice is good for them. They're wrong*, *supra* n.80

[81] *"The Coke Side of Life"—More Sugar, Less Science*, Union of Concerned Scientists (Aug. 14, 2015).

than 40 years to suppress the scientific evidence linking sugar consumption to negative health consequences."[82]

103. As one article described it, "[i]nternal US sugar industry documents recently revealed the part that the industry conspiracy with scientists, and by lobbying public institutions, played in the 1960s and 1970s in determining that public health policy to reduce mortality from coronary heart disease should focus on saturated fats as the main cause of such disease whilst ignoring the impact of sugar consumption."[83]

104. Documents that became public during the course of a lawsuit between rival sugar industry groups revealed that the sugar industry has engaged in "unscrupulous strategies reminiscent of the tobacco and fossil fuel industries, including manufacturing doubt about the science and engaging in deliberate and elaborate misinformation campaigns."[84]

105. The Union of Concerned Scientists identified five main tactics used by the sugar industry. These include:

Tactic 1: Attacking the Science

- Planning to "bury the data" if the science is inconvenient
- Threatening to suspend funding to the World Health Organization
- Seeking to discredit scientific findings by intimidating the study authors

Tactic 2: Spreading Misinformation

- Emphasizing unknowns while ignoring what is known

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[82] Goldman, G., et al., *Industry Tactics to Obscure the Science: How Industry Obscures Science and Undermines Public Health Policy on Sugar*, Union of Concerned Scientists (2014). *See also* Kearns CE, et al., *Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents*, 176(11) JAMA INTERN MED. 1680 (2016).

[83] Calvillo, A., *Public health sequestered for 50 years by sugar industry*, NCD ALLIANCE (Sept. 29, 2016), *available at* https://ncdalliance.org/news-events/blog/new-blog-public-health-sequestered-for-50-years.

[84] Goldman, *Industry Tactics to Obscure the Science: How Industry Obscures Science and Undermines Public Health Policy on Sugar*, *supra* n.82.

- Repeating untruthful claims
- Manufacturing bogus scientific claims
- Widely publishing claims that have not been subjected to scientific scrutiny

Tactic 3: Deploying industry scientists

- Exploiting science communication and blogging communities
- Failing to disclose scientists' conflicts of interest
- Hijacking scientific language for product promotion

Tactic 4: Influencing academia

- Buying credibility through academic scientists
- Funding research to support their preconceived positions
- Paying academic scientists to persuade other scientists of sugar interests' positions

Tactic 5: Undermining policy

- Pouring lobbying dollars into sugar policy debates at the federal, state, and local levels
- Supporting political candidates in influential positions
- Influencing rule making at federal agencies

106. One of the main goals of such disinformation campaigns is to "manufacture doubt"[85] so that consumers do not know what to believe.

107. Survey evidence demonstrates this problem is prevalent regarding nutrition. For example, among the "Key Findings" of the 2018 Food & Health Survey from the International Food Information Council (IFIC), which surveyed approximately 1,000 American consumers

[85] *See* Goldberg, R.F. and Vandenberg L.N., *The science of spin: targeted strategies to manufacture doubt with detrimental effects on environmental and public health*, 20(1) ENVIRON. HEALTH 33 (Mar. 2021) (describing how "[n]umerous groups, such as the tobacco industry, have deliberately altered and misrepresented knowable facts and empirical evidence to promote an agenda, often for monetary benefit," including the sugar industry"); Goldberg R.F. and Vandenberg L.N., *Distract, display, disrupt: examples of manufactured doubt from five industries*, 34(4) REV. ENVIRON. HEALTH 349 (2019).

to understand their perceptions, beliefs and behaviors around food and food purchasing decisions, found that 80% of the surveyed consumers encountered contradictory information about food and nutrition in their search for nutritious foods, making "consumer confusion . . . a prevalent issue."[86]

108. "And Coca-Cola has a history of pouring money into misinformation campaigns aimed at casting doubt on [scientific evidence showing that too much sugar is bad for our health]. One of the company's tactics has been to fund its own scientific research through in-house research institutes such as the 'Beverage Institute for Health and Wellness' established in 2004."[87]

109. But scientists have noted that "Coca-Cola's Beverage Institute for Health and Wellness features misleading content on its website. The site confuses the science around sugar consumption and ill-health by focusing on the role of sugar-sweetened beverages in 'hydration' and 'energy balance' while ignoring the negative impacts of sugar-sweetened beverages, including their role in obesity and metabolic diseases."[88]

110. More recently, "Coca-Cola quietly funded a research institute out of the University of Colorado designed to persuade people to focus on exercise, not calorie intake, for weight loss strategies." Of course, "when the institute's motives and funding stream were exposed, Coca-Cola announced it would halt operations due to 'resource limitations.'"[89]

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[86] *2018 Food & Health Survey*, International Food Information Council at 3, 5, https://foodinsight.org/wp-content/uploads/2018/05/2018-FHS-Report-FINAL.pdf.

[87] *How Coca-Cola Disguised Its Influence on Science about Sugar and Health*, Union of Concerned Scientists (Oct 11, 2017), https://www.ucsusa.org/resources/how-coca-cola-disguised-its-influence-science-about-sugar-and-health.

[88] *The Coke Side of Life"—More Sugar, Less Science*, Union of Concerned Scientists (Aug. 14, 2015), https://blog.ucsusa.org/deborah-bailin/the-coke-side-of-life-more-sugar-less-science-847/.

[89] *How Coca-Cola Disguised Its Influence on Science about Sugar and Health*, Union of Concerned Scientists, *supra* n.87.

111. As we now know, sugar interests including Coca-Cola specifically, have secretly created an immense amount of disinformation making it hard for ordinary consumers to understand the harms of sugar such that simply knowing the amount of sugar is not sufficient for most consumers to understand the negative impact that sugar will have and thus assess the healthfulness of food and beverages.

112. Finally, nothing on the labeling dispels the expressly intended message that the Juice Boxes are "Good For You!" Looking at the nutrition facts, for example, would not necessarily lead consumers to believe that the Juice Boxes are not good for them since they would see there is no added sugar and therefore consider the sugar content to be less of an issue when, in fact, the free sugar in the Juice Boxes has the identical physiological effect as added sugar. Thus, to discover the truth, consumers would have to look beyond the label and perform their own research to try to find the truth, which Coca-Cola has made all the harder through its disinformation campaigns.

B. Coca-Cola Deceptively Omits Material Information

113. While representing that the Juice Boxes are healthy, Defendant regularly and intentionally omits material information regarding the detrimental effects of juice consumption on overall health.

114. Defendant is under a duty to disclose this information to consumers because it is revealing some information about the Juice Boxes—enough to suggest they are healthy—without revealing directly relevant information regarding the harmful effects of juice consumption described herein.

115. Defendant is further under a duty to disclose this information because its deceptive omissions concern bodily health, specifically the detrimental health consequences of regularly consuming the Juice Boxes.

116. Defendant is further under a duty to disclose this information because it was in a superior position to know of the dangers presented by juice consumption, as it is a large, sophisticated company that holds itself out as having expert knowledge regarding the health impact of consuming the sugar in the Juice Boxes.

117. Moreover, Defendant is under a duty to disclose this information because, including through the acts alleged herein, it actively concealed material facts not known to Plaintiffs and the Class concerning the detrimental effects of regularly consuming the Juice Boxes.

118. Rather than correct the misconception created by its labeling—that the Juice Boxes are healthy—Defendant continues to leverage consumer confusion to increase its profits, at the expense of consumers' health.

IV. THE JUICE BOXES' LABELING VIOLATES CALIFORNIA AND FEDERAL LAW

119. The Juice Boxes and their challenged labeling statements violate California Health and Safety Code §§109875, *et. Seq.* (the "Sherman Law"), which has expressly adopted the federal food labeling requirements as its own. *See*, *e.g.*, *id.* § 110100; *id.* § 110670 ("Any food is misbranded if its labeling does not conform with the requirements for nutrition labeling as set forth in Section 403(r) (21 U.S.C. Sec. 343(r)) of the federal act and the regulation adopted pursuant thereto.").

120. First, the challenged claims are false and misleading for the reasons described herein, in violation of 21 U.S.C. § 343(a), which deems misbranded any food whose "label is false or misleading in any particular." Defendant accordingly also violated California's parallel provision of the Sherman Law. *See* Cal. Health & Safety Code § 110670.

121. Second, despite making the challenged claims, Defendant "fail[ed] to reveal facts that are material in light of other representations made or suggested by the statement[s], word[s], design[s], device[s], or any combination thereof," in violation of 21 C.F.R. § 1.21(a)(1). Such facts include the detrimental health consequences of consuming the Juice Boxes at typical levels, including increased risk of metabolic disease, cardiovascular disease, type 2 diabetes, liver disease, obesity, high blood triglycerides and cholesterol, hypertension, and death.

122. Third, Defendant failed to reveal facts that were "[m]aterial with respect to the consequences which may result from use of the article under" both "[t]he conditions

prescribed in such labeling," and "such conditions of use as are customary or usual," in violation of § 1.21(a)(2). Namely, Defendant failed to disclose the increased risk of serious chronic disease that is likely to result from the usual consumption of the Juice Boxes in the customary and prescribed manners.

123. Forth, Coca-Cola fortifies the Juice Boxes in violation of the FDA's fortification policy.

124. The FDA's fortification policy is intended to prevent the "indiscriminate addition of nutrients to foods" that "could [ ] result in deceptive or misleading claims for certain foods." 21 C.F.R. § 104.20(a). To that end, the policy recommends fortification in only four circumstances: (1) "to correct a dietary insufficiency recognized by the scientific community," (2) "to restore such nutrient(s) to a level(s) representative of the food prior to storage, handling and processing," (3) "to avoid nutritional inferiority" when replacing a traditional food, and (4) "in proportion to the total caloric content . . . to balance the vitamin, mineral, and protein content . . . ." 21 C.F.R. §§ 104.20(b)-(e). None of these four circumstances apply to the Juice Boxes.

125. Coca-Cola fortifies the Juice Boxes with, for example, Vitamin C (Ascorbic Acid).

126. The first basis for fortification does not apply because there is no "dietary insufficiency recognized by the scientific community" relating to vitamin C. *See* 21 C.F.R. § 104.20(b). Instead, the Scientific Report of the 2020 Dietary Guidelines Advisory Committee concluded that the underconsumption of vitamin C "do[es] not appear to pose a public health concern, given the present lack of adverse clinical and health outcome data . . . ."[90] The

[90] Scientific Report of the 2020 Dietary Guidelines Advisory Committee, United States Department of Agriculture (July 2020), *available at* https://www.dietaryguidelines.gov/2020-advisory-committee-report.

Centers for Disease Control and Prevention has also reported that a vitamin C deficiency is "rare in the United States."[91]

127. The second basis for fortification is not available to Coca-Cola because it would require "[a]ll nutrients . . . that are lost in a measurable amount [be] restored," 21 C.F.R. § 104.20(c), yet the Juice Boxes do not have all of their nutrients restored, for example, their fiber content has not been restored so that it is equal to that of whole fruit.

128. The third basis for fortification relates to foods that are fortified to contain 21 specific nutrients, *see* 21 C.F.R. § 104.20(d)(3)), and so does not apply to the Juice Boxes.

129. Finally, Coca-Cola cannot rely on the fourth basis for fortification—avoiding nutritional inferiority when replacing a traditional food, 21 C.F.R. § 104.20(e)—because its Juice Boxes' fiber content remains inferior to that of whole fruit.

V. PLAINTIFFS' PURCHASE, RELIANCE, AND INJURY

130. Plaintiff David Spittal Jr. has purchased the challenged Juice Boxes during the Class Period. As best he can recall, Plaintiff David Spittal Jr. purchased Juice Boxes in at least the Apple and Lemonade flavors for his children about twice a month. He believes his most recent purchase was approximately two years ago. He recalls making his purchases at local stores such as Vons, Albertsons, Ralphs, and Walmart in Oceanside or Carlsbad, California.

131. Plaintiff Rebecca Crampton purchased the challenged Juice Boxes for her children during the Class Period. As best she can recall, Ms. Crampton purchased the Juice Boxes most recently in fall of 2022. She purchased the Juice Boxes about once or twice per month. She recalls making her purchases at local stores including Vons located at 7544 Girard Avenue, San Diego, CA 92037, and the Target located at 5680 Balboa Avenue, San Diego, CA 92111.

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[91] *See* Second National Report on Biochemical Indicators of Diet and Nutrition in the U.S. Population, The Centers for Disease Control and Prevention, Division of Laboratory Sciences at the National Center for Environmental Health (2012) at p.74.

132. Plaintiff Mete Karabas purchased Juice Boxes for his family during the Class Period. He believes his most recent purchase was in 2022 and that he most often purchased the Juice Boxes at local stores such as the Shop Rite in Brooklyn, New York.

133. When purchasing the Juice Boxes, Plaintiffs were exposed to, read, and relied upon Coca-Cola's labeling claims that were intended to appeal to consumers, like them, who are interested in health and nutrition. More, specifically, they relied upon the statements "Minute Maid Juice Boxes Are Good For You!" and "Enjoy Minute Maid Juice Boxes as Part of a Healthy, Balanced Diet," as well as the images of whole fruit.

134. Plaintiffs believed these claims and images regarding the healthfulness of the Juice Boxes, which were and are deceptive because they convey that consuming the Juice Boxes promotes good bodily health.

135. The health and wellness representations on the Juice Boxes' packaging, however, were misleading, and had the capacity, tendency, and likelihood to confuse or confound Plaintiffs and other consumers acting reasonably because, as described in detail herein, the Juice Boxes are not healthy and are of the type that increases risk of disease.

136. Plaintiffs are not nutritionists, food experts, or food scientists, but rather lay consumers who did not have the specialized knowledge that Coca-Cola had regarding the health effects of consuming the Juice Boxes. At the time of purchase, Plaintiffs were unaware that consuming juice, such as the Juice Boxes, is unhealthy and the extent to which consuming high amounts of free sugar in juices increases risk of metabolic disease, liver disease, heart disease, diabetes, and other morbidity, or what amount of sugar might have such an effect.

137. The average and reasonable consumer is unaware that consuming juice, such as the Juice Boxes, is unhealthy and the extent to which consuming high amounts of free sugar in juices increases risk of metabolic disease, liver disease, heart disease, diabetes, and other morbidity, or what amount of sugar might have such an effect.

138. Plaintiffs acted reasonably in relying on the challenged labeling claims, which Defendant intentionally placed on the Juice Boxes' labeling with the intent to induce average consumers into purchasing the Juice Boxes.

139. Plaintiffs would not have purchased the Juice Boxes if they knew that the labeling claims were false and misleading in that the products were not as healthy as represented.

140. The Juice Boxes cost more than similar products without misleading labeling, and would have cost less absent Defendant's false and misleading statements and omissions.

141. Through the misleading labeling claims and omissions, Defendant was able to gain a greater share of the juice market than it would have otherwise and also increased the size of the market.

142. Plaintiffs paid more for the Juice Boxes, and would only have been willing to pay less, or unwilling to purchase the Juice Boxes at all, absent the false and misleading labeling complained of herein.

143. Plaintiffs would not have purchased the Juice Boxes if they had known that the Products were misbranded pursuant to California and FDA regulations or that the challenged claims were false or misleading.

144. For these reasons, the Juice Boxes were worth less than what Plaintiffs and the Class paid for them.

145. Instead of receiving products that were actual healthy, the Juice Boxes that Plaintiffs and the Class received were of the type whose consumption is likely to lead to increased risk of disease when consumed regularly.

146. Plaintiffs and the Class lost money as a result of Defendant's deceptive claims, omissions, and practices in that they did not receive what they paid for when purchasing the Juice Boxes.

147. Plaintiffs continue to desire to purchase healthy beverages and continue to see the Juice Boxes at stores when they shop. They would purchase the Juice Boxes in the future if they were in fact healthy as represented, but unless Defendant is enjoined in the manner Plaintiffs request, they may not be able to reasonably determine whether the Juice Boxes have been reformulated to conform to the misleading claims, or whether Defendant has continued to misrepresent the Juice Boxes.

148. Plaintiffs would purchase the Juice Boxes if they could trust that the health and wellness claims were true and not false or misleading, but absent an injunction, Plaintiffs will be unable to trust the representations on the Juice Boxes when they encounter the Juice Boxes in the marketplace.

149. Plaintiffs' substantive right to a marketplace free of fraud, where they are entitled to rely on representations such as those made by Defendant with confidence continues to be violated every time Plaintiffs are exposed to the misleading labeling claims.

150. Plaintiffs' legal remedies are inadequate to prevent these future injuries.

CLASS ACTION ALLEGATIONS

151. While reserving the right to redefine or amend the class definition prior to or as part of a motion seeking class certification, pursuant to Federal Rule of Civil Procedure 23, Plaintiffs seek to represent a class of all persons in the United States, and subclasses of all persons in California and New York, who, at any time from four years preceding the date of the filing of this Complaint to the time a class is notified (the "Class Period"), purchased, for personal or household use, and not for resale or distribution, any of the Juice Boxes (the "Class").

152. The members in the proposed Class are so numerous that individual joinder of all members is impracticable, and the disposition of the claims of all Class Members in a single action will provide substantial benefits to the parties and Court.

153. Questions of law and fact common to Plaintiffs and the Class include:

a. whether Defendant communicated a message regarding healthfulness of the Juice Boxes through its packaging and advertising;

b. whether that message was material, or likely to be material, to a reasonable consumer;

c. whether the challenged claims are false, misleading, or reasonably likely to deceive a reasonable consumer;

d. whether Defendant's conduct violates public policy;

e. whether Defendant's conduct violates state or federal food statutes or regulations;

f. the proper amount of damages, including punitive damages;

g. the proper amount of restitution;

h. the proper scope of injunctive relief; and

i. the proper amount of attorneys' fees.

154. These common questions of law and fact predominate over questions that affect only individual Class Members.

155. Plaintiffs' claims are typical of Class Members' claims because they are based on the same underlying facts, events, and circumstances relating to Defendant's conduct. Specifically, all Class Members, including Plaintiffs, were subjected to the same misleading and deceptive conduct when they purchased the Juice Boxes and suffered economic injury because the Juice Boxes are misrepresented. Absent Defendant's business practice of deceptively and unlawfully labeling the Juice Boxes, Plaintiffs and Class Members would not have purchased the Juice Boxes.

156. Plaintiffs will fairly and adequately represent and protect the interests of the Class, have no interests incompatible with the interests of the Class, and have retained counsel competent and experienced in class action litigation, and specifically in litigation involving the false and misleading advertising of foods.

157. Class treatment is superior to other options for resolution of the controversy because the relief sought for each Class Member is small, such that, absent representative litigation, it would be infeasible for Class Members to redress the wrongs done to them.

158. Defendant has acted on grounds applicable to the Class, thereby making appropriate final injunctive and declaratory relief concerning the Class as a whole.

159. As a result of the foregoing, class treatment is appropriate under Fed. R. Civ. P. 23(a), 23(b)(2), and 23(b)(3).

CAUSES OF ACTION

FIRST CAUSE OF ACTION

Violations of the Unfair Competition Law, Cal. Bus. & Prof. Code §§ 17200 *et seq.*

160. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if set forth in full herein.

161. The UCL prohibits any "unlawful, unfair or fraudulent business act or practice." Cal. Bus. & Prof. Code § 17200.

162. The acts, omissions, misrepresentations, practices, and non-disclosures of Defendant as alleged herein constitute business acts and practices.

Fraudulent

163. A statement or practice is fraudulent under the UCL if it is likely to deceive a significant portion of the public, applying an objective reasonable consumer test.

164. As set forth herein, Defendant's claims relating to the Juice Boxes are likely to deceive reasonable consumers and the public.

Unlawful

165. The acts alleged herein are "unlawful" under the UCL in that they violate at least the following laws:

- The False Advertising Law, Cal. Bus. & Prof. Code §§ 17500 *et seq.*;
- The Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750 *et seq.*;
- The Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 *et seq.*;
- The Code of Federal Regulations, 21 C.F.R. § 1.21; *id.* §§ 101 *et seq*; *id.* §§ 104 *et seq*; and
- The California Sherman Food, Drug, and Cosmetic Law, Cal. Health & Safety Code §§ 110100 *et seq*.

Unfair

166. Defendant's conduct with respect to the labeling, advertising, and sale of the Juice Boxes was unfair because Defendant's conduct was immoral, unethical, unscrupulous,

or substantially injurious to consumers, and the utility of its conduct, if any, does not outweigh the gravity of the harm to its victims.

167. Defendant's conduct with respect to the labeling, advertising, and sale of the Juice Boxes was and is also unfair because it violates public policy as declared by specific constitutional, statutory or regulatory provisions, including but not necessarily limited to the False Advertising Law, portions of the Federal Food, Drug, and Cosmetic Act, and portions of the California Sherman Food, Drug, and Cosmetic Law.

168. Defendant's conduct with respect to the labeling, advertising, and sale of the Juice Boxes was and is also unfair because the consumer injury was substantial, not outweighed by benefits to consumers or competition, and not one consumers themselves could reasonably have avoided. Specifically, the increase in profits obtained by Defendant through the misleading labeling does not outweigh the harm to Class Members who were deceived into purchasing the Juice Boxes believing they were healthy.

169. Defendant profited from the sale of the falsely, deceptively, and unlawfully advertised Juice Boxes to unwary consumers.

170. Plaintiffs and Class Members are likely to continue to be damaged by Defendant's deceptive trade practices because Defendant continues to disseminate misleading information. Thus, injunctive relief enjoining Defendant's deceptive practices is proper.

171. Defendant's conduct caused and continues to cause substantial injury to Plaintiffs and other Class Members. Plaintiffs have suffered injury in fact as a result of Defendant's unlawful conduct.

172. In accordance with Bus. & Prof. Code § 17203, Plaintiffs seek an order enjoining Defendant from continuing to conduct business through unlawful, unfair, and/or fraudulent acts and practices.

173. Plaintiffs and the Class also seek an order for the restitution of all monies from the sale of the Juice Boxes, which were unjustly acquired through acts of unlawful competition.

174. Because Plaintiffs' claims under the "unfair" prong of the UCL sweep more broadly than their claims under the FAL, CLRA, or UCL's "fraudulent" prong, Plaintiffs' legal remedies are inadequate to fully compensate Plaintiffs for all of Defendant's challenged behavior.

SECOND CAUSE OF ACTION

Violations of the False Advertising Law, Cal. Bus. & Prof. Code §§ 17500 *et seq.*

175. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if set forth in full herein.

176. The FAL provides that "[i]t is unlawful for any person, firm, corporation or association, or any employee thereof with intent directly or indirectly to dispose of real or personal property or to perform services" to disseminate any statement "which is untrue or misleading, and which is known, or which by the exercise of reasonable care should be known, to be untrue or misleading." Cal. Bus. & Prof. Code § 17500.

177. It is also unlawful under the FAL to disseminate statements concerning property or services that are "untrue or misleading, and which is known, or which by the exercise of reasonable care should be known, to be untrue or misleading." *Id*.

178. As alleged herein, the advertisements, labeling, policies, acts, and practices of Defendant relating to the Juice Boxes misled consumers acting reasonably as to the healthfulness of the Products.

179. Plaintiffs suffered injury in fact as a result of Defendant's actions as set forth herein because Plaintiffs purchased the Juice Boxes in reliance on Defendant's false and misleading marketing claims stating or suggesting that the products, among other things, are healthy.

180. Defendant's business practices as alleged herein constitute unfair, deceptive, untrue, and misleading advertising pursuant to the FAL because Defendant has advertised the Juice Boxes in a manner that is untrue and misleading, which Defendant knew or reasonably should have known, and omitted material information from the Juice Boxes' labeling.

181. Defendant profited from the sale of the falsely and deceptively advertised Juice Boxes to unwary consumers.

182. As a result, Plaintiffs, the Class, and the general public are entitled to injunctive and equitable relief, restitution, and an order for the disgorgement of the funds by which Defendant was unjustly enriched.

183. Pursuant to Cal. Bus. & Prof. Code § 17535, Plaintiffs, on behalf of themselves and the Class, seek an order enjoining Defendant from continuing to engage in deceptive business practices, false advertising, and any other act prohibited by law, including those set forth in this Complaint.

184. Because the Court has broad discretion to award restitution under the FAL and could, when assessing restitution under the FAL, apply a standard different than that applied to assessing damages under the CLRA or commercial code (for Plaintiffs' breach of warranty claims), and restitution is not limited to returning to Plaintiffs and Class Members monies in which they have an interest, but more broadly serves to deter the offender and others from future violations, the legal remedies available under the CLRA and commercial code are more limited than the equitable remedies available under the FAL, and are therefore inadequate.

THIRD CAUSE OF ACTION

Violations of the Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750 *et seq.*

185. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if set forth in full herein.

186. The CLRA prohibits deceptive practices in connection with the conduct of a business that provides goods, property, or services primarily for personal, family, or household purposes.

187. Defendant's false and misleading labeling and other policies, acts, and practices were designed to, and did, induce the purchase and use of the Juice Boxes for personal, family, or household purposes by Plaintiffs and Class Members, and violated and continue to violate the following sections of the CLRA:

a. § 1770(a)(5): representing that goods have characteristics, uses, or benefits which they do not have;

b. § 1770(a)(7): representing that goods are of a particular standard, quality, or grade if they are of another;

c. § 1770(a)(9): advertising goods with intent not to sell them as advertised; and

d. § 1770(a)(16): representing the subject of a transaction has been supplied in accordance with a previous representation when it has not.

188. Defendant profited from the sale of the falsely, deceptively, and unlawfully advertised Juice Boxes to unwary consumers.

189. Defendant's wrongful business practices constituted, and constitute, a continuing course of conduct in violation of the CLRA.

190. Pursuant to California Civil Code § 1782, more than 30 days before filing this lawsuit, Plaintiffs sent written notice of their claims and Defendant's particular violations of the Act to Defendant by certified mail, return receipt requested, but Defendant has failed to implement remedial measures.

191. As a result, Plaintiffs and the Class have suffered harm, and therefore seek (a) actual damages resulting from purchases of the Juice Boxes sold throughout the Class Period to all Class Members, (b) punitive damages, (c) injunctive relief, (d) restitution, and (e) attorneys' fees and costs. *See* Cal. Civ. Code § 1782(d).

192. In compliance with Cal. Civ. Code § 1780(d), Plaintiffs' affidavit of venue is filed concurrently herewith.

FOURTH CAUSE OF ACTION

Breaches of Express Warranties, Cal. Com. Code § 2313(1)

193. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if set forth in full herein.

194. Through the Juice Boxes' labeling, Defendant made affirmations of fact or promises, or description of goods, that, *inter alia*, the Juice Boxes are healthy.

195. These representations were "part of the basis of the bargain," in that Plaintiffs and the Class purchased the Juice Boxes in reasonable reliance on those statements. Cal. Com. Code § 2313(1).

196. Defendant breached its express warranties by selling Juice Boxes that are not healthy, but rather are likely to increase the risk of chronic diseases.

197. That breach actually and proximately caused injury in the form of the lost purchase price that Plaintiffs and Class Members paid for the Juice Boxes.

198. As a result, Plaintiffs seek, on behalf of themselves and other Class Members, their actual damages arising as a result of Defendant's breaches of express warranty, including, without limitation, expectation damages.

FIFTH CAUSE OF ACTION

Breach of Implied Warranty of Merchantability, Cal. Com. Code § 2314

199. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if set forth in full herein.

200. Defendant, through its acts set forth herein, in the sale, marketing, and promotion of the Juice Boxes, made representations to Plaintiffs and the Class that, among other things, the Juice Boxes are healthy.

201. Defendant is a merchant with respect to the goods of this kind which were sold to Plaintiffs and the Class, and there was, in the sale to Plaintiffs and other consumers, an implied warranty that those goods were merchantable.

202. However, Defendant breached that implied warranty in that the Juice Boxes are not healthy, as set forth in detail herein.

203. As an actual and proximate result of Defendant's conduct, Plaintiffs and the Class did not receive goods as impliedly warranted by Defendant to be merchantable in that they did not conform to promises and affirmations made on the container or label of the goods.

204. As a result, Plaintiffs seek actual damages, including, without limitation, expectation damages.

SIXTH CAUSE OF ACTION

Negligent Misrepresentation

205. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if fully set forth herein.

206. As alleged above, Defendant misrepresented the healthfulness of its Products and omitted that consuming the Products increases the risk of metabolic disease, cardiovascular disease, type 2 diabetes, and liver disease, and is further associated with increased all-cause mortality. These misrepresentations and omissions constituted a material fact in that a consumer's decision to purchase the Products would be influenced by the healthfulness of the Products.

207. Defendant's misrepresentations and omissions were made in the course of business transactions (the marketing, advertisement, sale, and purchase of the Products) in which both Plaintiffs and Defendant have a pecuniary interest.

208. Defendant knew or should have known that these representations and omissions were false or misleading and it failed to exercise reasonable care in dissemination of its labels and in its marketing and advertising.

209. Defendant possesses superior knowledge regarding the detrimental health effects of consuming the Juice Boxes. Such knowledge is not readily available to consumers like Plaintiff and Class Members.

210. Defendant has a duty to provide consumers, like Plaintiffs and Class Members, not to provide them with false information when they were making their purchasing decisions regarding the Juice Boxes.

211. Defendant holds itself out as an expert in nutrition and health science.

212. Consumers lack nutritional science expertise that Defendant possesses, and therefore when Defendant makes representations as the healthfulness of its Products on its labels, consumers rely on it to provide truthful and complete information.

213. Defendant knew or should have known that Plaintiffs and other consumers rely on its labeling and health representations and its representations and omissions to induce consumers like Plaintiffs and Class Members into purchasing the Products.

214. Plaintiffs' injuries were proximately caused by Defendant's misrepresentations and omissions. Plaintiffs viewed Defendant's labels prior to purchasing the Products, and the representations and omissions prompted them to purchase the Products. Had Plaintiffs been aware of Defendant's misrepresentations and omissions, they would have been unwilling to purchase the Products, or to purchase them at the price that they paid.

215. Defendant's misrepresentations regarding the Products are material to a reasonable consumer because they relate to bodily health, and reasonable consumers would attach importance to such representations and omissions which would influence their purchasing decision.

216. In selling the Products, Defendant acted in the ordinary course of its business and had a pecuniary interest in Plaintiffs and Class Members purchasing the Products.

217. Defendant owed a duty of care to Plaintiffs, not to provide them false or incomplete information when they were making their purchase decisions regarding the Products.

218. Plaintiffs and Class Members have reasonably and justifiably relied on Defendant's misrepresentations when purchasing the Products, and had the correct facts been known, would not have purchased them or at least not at the prices at which they were offered.

219. Therefore, as a direct and proximate result of Defendant's negligent misrepresentations, Plaintiffs and Class Members have suffered economic losses and other general and specific damages, in the amount of the Products' purchase prices, or some portion thereof, and any interest that would have accrued on those monies, all in an amount to be proven at trial.

SEVENTH CAUSE OF ACTION

Intentional Misrepresentation

49. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if set forth in full herein.

220. Defendant marketed the Products in a manner conveying to reasonable consumers that the Products are healthy. Therefore, Defendant has made misrepresentations about the healthfulness of the Products.

221. Defendant's misrepresentations regarding the Products are material to a reasonable consumer because they relate to bodily health. A reasonable consumer would attach importance to such representations and would be induced to act thereon in making purchasing decisions.

222. At all relevant times, Defendant knew that the misrepresentations were misleading, or has acted recklessly in making the misrepresentations, without regard to their truth.

223. Defendant intended that Plaintiffs and other consumers rely on these misrepresentations on the Products' packaging.

224. Plaintiffs and the Class have reasonably and justifiably relied on Defendant's intentional misrepresentations when purchasing the Products; had the correct facts been known, they would not have purchased the Products, or at least not at the prices at which the Products were offered.

225. Therefore, as a direct and proximate result of Defendant's intentional misrepresentations, Plaintiffs and Class Members have suffered economic losses and other general and specific damages, in the amount of the Products' purchase prices, or some portion thereof, and any interest that would have accrued on those monies, all in an amount to be proven at trial.

EIGHTH CAUSE OF ACTION

Unjust Enrichment

226. Plaintiffs reallege and incorporate the allegations elsewhere in the Complaint as if fully set forth herein.

227. Plaintiffs and Class Members conferred upon Defendant an economic benefit, in the form of profits resulting from the purchase and sale of the Products.

228. Defendant's financial benefits resulting from its unlawful and inequitable conduct are economically traceable to Plaintiffs' and Class Members' purchases of the Products, and the economic benefits conferred on Defendant are a direct and proximate result of its unlawful and inequitable conduct.

229. It would be inequitable, unconscionable, and unjust for Defendant to be permitted to retain these economic benefits because the benefits were procured as a direct and proximate result of its wrongful conduct.

230. As a result, Plaintiffs and Class Members are entitled to equitable relief including restitution and/or disgorgement of all revenues, earnings, profits, compensation and benefits which may have been obtained by Defendant as a result of such business practices.

PRAYER FOR RELIEF

231. Wherefore, Plaintiffs, on behalf of themselves, all others similarly situated, and the general public, pray for judgment against Defendant as to each and every cause of action, and the following remedies:

a. An Order declaring this action to be a proper class action, appointing Plaintiffs as Class Representatives, and appointing Plaintiffs' undersigned counsel as Class Counsel;

b. An Order requiring Defendant to bear the cost of Class Notice;

c. An Order compelling Defendant to destroy all misleading and deceptive advertising materials and product labels, and to recall all offending Products;

d. An Order requiring Defendant to disgorge all monies, revenues, and profits obtained by means of any wrongful act or practice;

e. An Order requiring Defendant to pay restitution to restore all funds acquired by means of any act or practice declared by this Court to be an unlawful, unfair, or fraudulent business act or practice, or untrue or misleading advertising, plus pre-and post-judgment interest thereon;

f. An Order requiring Defendant to pay compensatory damages and punitive damages as permitted by law;

g. An award of attorneys' fees and costs; and

h. Any other and further relief that Court deems necessary, just, or proper.

JURY DEMAND

232. Plaintiffs hereby demand a trial by jury on all issues so triable.

Dated: February 6, 2023

/s/ Paul K. Joseph

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