THE LAW OFFICE OF
PAUL K. JOSEPH, PC
PAUL K. JOSEPH (SBN 287057)
paul@pauljosephlaw.com
4125 W. Pt. Loma Blvd., No. 309
San Diego, California 92110
Phone: (619) 767-0356
Fax: (619) 331-2943
Counsel for Plaintiff and the Proposed Class

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

EVLYN ANDRADE-HEYMSFIELD, on behalf of herself, all others similarly situated, and the general public,

Plaintiff,

v.

THE HAIN CELESTIAL GROUP, INC.,

Defendant.

Case No: '19CV433 AJB LL

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.*; and BREACH OF EXPRESS & IMPLIED WARRANTIES

DEMAND FOR JURY TRIAL

Plaintiff Evlyn Andrade-Heymsfield, on behalf of herself, all others similarly situated, and the general public, by and through her undersigned counsel, hereby sues Defendant, The Hain Celestial Group, Inc. ("Hain"), and alleges the following upon her own knowledge, or where she lacks personal knowledge, upon information and belief, including the investigation of her counsel.

INTRODUCTION

1. Reliable and compelling scientific studies demonstrates that the oil or fat from coconuts detrimentally affects the body's cardiovascular system, increasing risk of heart disease—the number one cause of death in the United States—among other morbidity. Because of its harmful effects and because it "has no known offsetting favorable effects" the American Heart Association and other groups have warned and advised against its consumption.

2. Despite the compelling evidence of the harmful effects of consuming the oil or fat from coconuts, Hain sells Coconut Dream (the Product"), a coconut "milk" style drink that is primarily coconut oil (or coconut oil and added sugar) in water. Hain specifically markets Coconut Dream to health conscious consumers using health and wellness claims, with the goal of increasing the price and sales of its Coconut Dream Product.

3. Plaintiff, who was deceived into purchasing the Product, brings this action challenging Defendant's deceptive claims on behalf of herself and all others similarly situated consumers in California, alleging violations of the Consumer Legal Remedies Act (Cal. Civ. Code § 1750, *et seq*., "CLRA"), Unfair Competition Law (Cal. Bus. & Prof. Code § 17200, *et seq*., "UCL"), and False Advertising Law (id. § 17500, *et seq*., "FAL"), as well as breaches of express and implied warranties.

4. Plaintiff primarily seeks an order compelling Defendant to cease marketing the Product using deceptive claims.

PARTIES

5. Plaintiff Evlyn Andrade-Heymsfield is a resident and citizen of San Diego County, California.

6. Defendant The Hain Celestial Group, Inc. is a Delaware Corporation, with its principal place of business in Lake Success, New York. Hain markets, distributes, and sells the Coconut Dream Product.

JURISDICTION & VENUE

7. 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. In addition, more than two-thirds of the members of the class reside in states other than the state in which Defendant is a citizen and in which this case is filed, and therefore any exceptions to jurisdiction under 28 U.S.C. § 1332(d) do not apply.

8. The Court has personal jurisdiction over Hain because it has purposely availed itself of the benefits and privileges of conducting business activities within California, specifically, by intentionally distributing, marketing, and selling the Product in California.

9. Venue is proper in this Court pursuant to 28 U.S.C. § 1391 because Plaintiff resides in and suffered injuries as a result of Defendant's acts in this District. Thus, many of the acts and transactions giving rise to this action occurred in this District. Further, Defendant is subject to personal jurisdiction in this District.

FACTS

I. The Composition of the Coconut Dream Product

10. The Coconut Dream Product is an emulsion of coconut oil suspended in water, made through an process where the coconut meat ("copra") is pressed to "release" the oil from the meat.

11. The Product comes in three flavors, Vanilla, Original, and Unsweetened.

12. According to the Nutrition Facts box of Vanilla Coconut Dream, each 1 cup (8 fl. oz.) serving contains 90 calories, 45 of which come from fat. According to the Vanilla Coconut Dream Nutrition Facts box, each serving contains 5 grams of total fat and 5 grams of saturated fat. Each serving also contains 8 grams of sugar, nearly all of which is added sugar.

13. According to the Nutrition Facts box of Unsweetened Coconut Dream, each 1 cup (8 fl. oz.) serving contains 60 calories, 45 of which come from fat. According to the Unsweetened Coconut Dream Nutrition Facts box, each serving contains 5 grams of total fat and 5 grams of saturated fat.

14. According to the Nutrition Facts box of Original Coconut Dream, each 1 cup (8 fl. oz.) serving contains 80 calories, 45 of which come from fat. According to the Original Coconut Dream Nutrition Facts box, each serving contains 5 grams of total fat and 5 grams of saturated fat. Each serving also contains 7 grams of sugar, nearly all of which is added sugar.

15. As demonstrated by the studies cited below, consuming Coconut Dream, which is basically saturated fat (or saturated fat and added sugar) in water, is unhealthy as it increases risk of CHD, stroke, and other morbidity.

II. Because of its High Saturated Fat Content, Coconut Dream Detrimentally Impacts Health, and Increases Risk of Cardiovascular Diseases and Other Morbidity

A. Saturated Fat Consumption Increases the Risk of Cardiovascular Heart Disease and Other Morbidity

1. The Role of Cholesterol in the Human Body

16. Cholesterol is a waxy, fat-like substance found in the body's cell walls. The body uses cholesterol to make hormones, bile acids, vitamin D, and other substances. The body synthesizes all the cholesterol it needs, which circulates in the bloodstream in packages called

lipoproteins, of which there are two main kinds—low density lipoproteins, or LDL cholesterol, and high density lipoproteins, or HDL cholesterol.

17. LDL cholesterol is sometimes called "bad" cholesterol because it carries cholesterol to tissues, including the arteries. Most cholesterol in the blood is LDL cholesterol.

18. HDL cholesterol is sometimes called "good" cholesterol because it takes excess cholesterol away from tissues to the liver, where it is removed from the body.

2. High Total and LDL Blood Cholesterol Levels are Associated with Increased Risk of Morbidity, Including Coronary Heart Disease and Stroke

19. Total and LDL cholesterol blood levels are two of the most important risk factors in predicting coronary heart disease (CHD), with higher total and LDL cholesterol levels associated with increased risk of CHD.[1]

20. High LDL cholesterol levels are dangerous because "[e]levated blood LDL cholesterol increases atherosclerotic lipid accumulation in blood vessels."[2] That is, if there is too much cholesterol in the blood, some of the excess may become trapped along artery walls. Built up formations of cholesterol on arteries and blood vessels are called plaque. Plaque narrows vessels and makes them less flexible, a condition called atherosclerosis.

---

[1] *See*, *e.g.*, Dr. Dustin Randolph, *Coconut Oil Increases Cardiovascular Disease Risk and Possible Death Due to Heart Attacks and Stroke* (Sept. 19, 2015) ("Heart attack and stroke risk can be largely predicted based on total and LDL cholesterol levels in people" because "as cholesterol levels increase so does one's risk of symptomatic and deadly heart disease."), *available at* http://www.pursueahealthyyou.com/2015/04/coconut-oil-increases-cardiovascular.html.

[2] USDA Center for Nutrition Policy and Promotion, *Dietary Saturated Fat and Cardiovascular Health: A Review of the Evidence*, Nutrition Insight 44 (July 2011) [hereinafter, "USDA, Review of the Evidence"], *available at* http://www.cnpp.usda.gov/sites/default/files/nutrition_insights_uploads/Insight44.pdf.

21. This process can happen to the coronary arteries in the heart and restricts the provision of oxygen and nutrients to the heart, causing chest pain or angina.

22. When atherosclerosis affects the coronary arteries, the condition is called coronary heart disease, or CHD.

23. Cholesterol-rich plaques can also burst, causing a blood clot to form over the plaque, blocking blood flow through arteries, which in turn can cause an often-deadly or debilitating heart attack or stroke.

24. Thus, "[f]or the health of your heart, lowering your LDL cholesterol is the single most important thing to do."[3]

3. Saturated Fat Consumption Causes Increased Total and LDL Blood Cholesterol Levels, Increasing the Risk of CHD and Stroke

25. The consumption of saturated fat negatively affects blood cholesterol levels because the body reacts to saturated fat by producing cholesterol. More specifically, saturated fat consumption causes coronary heart disease by, among other things, "increas[ing] total cholesterol and low density lipoprotein (LDL) cholesterol."[4]

26. Moreover, "[t]here is a positive linear trend between total saturated fatty acid intake and total and low density lipoprotein (LDL) cholesterol concentration and increased risk of coronary heart disease (CHD)."[5]

27. This linear relationship between saturated fat intake and risk of coronary heart disease is well established and accepted in the scientific community.

---

[3] Pritikin Longevity Center, *Is Coconut Oil Bad for You?*, *available at* https://www.pritikin.com/your-health/healthy-living/eating-right/1790-is-coconut-oil-bad-for-you.html.

[4] USDA Review of the Evidence, *supra* n.2.

[5] Institute of Medicine, *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids*, at 422 (2005) [hereinafter "IOM, Dietary Reference Intakes"], *available at* http://www.nap.edu/catalog.php?record_id=10490.

28. For example, the Institute of Medicine's Dietary Guidelines Advisory Committee "concluded there is strong evidence that dietary [saturated fatty acids] SFA increase serum total and LDL cholesterol and are associated with increased risk of [cardiovascular disease] CVD."[6]

29. In addition, "[s]everal hundred studies have been conducted to assess the effect of saturated fatty acids on serum cholesterol concentration. In general, the higher the intake of saturated fatty acids, the higher the serum total and low density lipoprotein (LDL) cholesterol concentrations."[7]

30. Importantly, there is "no safe level" of saturated fat intake because "any incremental increase in saturated fatty acid intake increases CHD risk."[8]

31. For this reason, while the Institute of Medicine sets tolerable upper intake levels (UL) for the highest level of daily nutrient intake that is likely to pose no risk of adverse health effects to almost all individuals in the general population, "[a] UL is not set for saturated fatty acids."[9]

32. In addition, "[t]here is no evidence to indicate that saturated fatty acids are essential in the diet or have a beneficial role in the prevention of chronic diseases."[10]

33. Further, "[i]t is generally accepted that a reduction in the intake of SFA [saturated fatty acids] will lower TC [total cholesterol] and LDL-cholesterol."[11]

---

[6] USDA Review of the Evidence, *supra* n.2.

[7] IOM, Dietary Reference Intakes, *supra* n.5, at 481.

[8] *Id.* at 422.

[9] *Id.*

[10] *Id.* at 460.

[11] Shanthi Mendis et al., *Coconut fat and serum lipoproteins: effects of partial replacement with unsaturated fats*, 85 Brit. J. Nutr. 583, 583 (2001) [hereinafter "Mendis, Coconut fat"].

34. For these reasons, "reduction in SFA intake has been a key component of dietary recommendations to reduce risk of CVD."[12]

35. The Institute of Medicine's Dietary Guidelines for Americans, for example, "recommend reducing SFA intake to less than 10 percent of calories."[13] And "lowering the percentage of calories from dietary SFA to 7 percent can further reduce the risk of CVD."[14]

36. In short, consuming saturated fat increases the risk of CHD and stroke.[15]

4. In Contrast to Saturated Fat, the Consumption of Dietary Cholesterol has No Appreciable Impact on Blood Cholesterol Levels

37. For many years, there has been a common misperception that dietary cholesterol significantly affects blood cholesterol levels and should be avoided. According to the USDA and Department of Health and Human Services (DHHS), however, "available evidence shows no appreciable relationship between consumption of dietary cholesterol and serum cholesterol."[16]

38. In fact, the USDA and DHHS have concluded that "Cholesterol is not a nutrient of concern for overconsumption."[17]

---

[12] USDA Review of the Evidence, *supra* n.2.

[13] *Id.*

[14] *Id.*

[15] *See* Mendis, Coconut fat, *supra* n.11, at 583.

[16] USDA & DHHS, *Dietary Guidelines for Americans*, Part D., Chapter 1, at 17 (2015) [hereinafter "USDA & DHHS, Dietary Guidelines"], *available at* http://health.gov/dietaryguidelines/2015-scientific-report/pdfs/scientific-report-of-the-2015-dietary-guidelines-advisory-committee.pdf.

[17] *Id.*

39. In contrast, the USDA and DHHS state that "[s]trong and consistent evidence from [randomized control trials] shows that replacing [saturated fats] with unsaturated fats, especially [polyunsaturated fats], significantly reduces total and LDL cholesterol."[18]

40. Therefore, the USDA and DHHS specifically recommend replacing "tropical oils (e.g., palm, palm kernel, ***and coconut oils***)" with "vegetable oils that are high in unsaturated fats and relatively low in SFA (e.g., soybean, corn, olive, and canola oils)."[19]

B. Studies Specifically Demonstrate that Consuming Coconut Oil—the Only Source of Fat in the Product—Increases Risk of Cardiovascular Heart Disease and Other Morbidity

41. Although it is well established that diets generally high in saturated fatty acids increase the risk of CHD,[20] several studies have specifically shown that consuming coconut oil—which is approximately 90 percent saturated fat and the only source of fat in the Product—increases the risk of CHD and stroke.

42. For example, in 2001 the British Journal of Nutrition published a 62-week intervention study that examined the "effect of reducing saturated fat in the diet . . . on the serum lipoprotein profile of human subjects."[21] The study had two intervention phases. In Phase 1 (8 weeks), "the total fat subjects consumed was reduced from 31 to 25 % energy . . . by reducing the quantity of coconut fat (CF) in the diet from 17.8 to 9.3 % energy intake."[22] "At the end of Phase 1, there was a 7.7 % reduction in cholesterol and 10.8 % reduction in LDL and no significant change in HDL and triacylglycerol."[23]

---

[18] *Id*. Part D, Chapter 6, at 12.

[19] *Id.* (emphasis added).

[20] *See* Mendis, Coconut fat, *supra* n.11, at 583.

[21] *Id.*

[22] *Id.*

[23] *Id.*

43. In Phase 2 (52 weeks), the total fat consumed by subjects was reduced from 25 to 20 % energy by reducing the coconut fat consumption from 9.3 to 4.7 % energy intake.[24] At the end of phase 2, these subjects exhibited a 4.2% mean reduction of total cholesterol and an 11% mean reduction in LDL cholesterol.[25]

44. The authors of the study noted that "[a] sustained reduction in blood cholesterol concentration of 1 % is associated with a 2-3 % reduction of the incidence of CHD (Law et al. 1994)." Further, "[i]n primary prevention, a reduction of cholesterol by 20% has produced a 31% reduction in recurrent coronary morbidity, a 33% reduction in coronary mortality, and 22% less total mortality (Grundy, 1997)."[26]

45. Based on these relationships, the researchers estimated that "the reduction in coronary morbidity and mortality brought about by the current dietary intervention would be of the order of about 6-8 %."[27]

46. Simply put, the results of the yearlong study showed that reducing coconut oil consumption "results in a lipid profile that is associated with a low cardiovascular risk."[28]

47. The detrimental health effects of consuming coconut oil are not limited to long-term consumption. To the contrary, a 2006 study published in the Journal of the American College of Cardiology found that consuming a single high-fat meal containing fat from coconut oil "reduces the anti-inflammatory potential of HDL and impairs arterial endothelial function."[29] In the study, researchers examined the effect of consuming a single isocaloric

---

[24] *Id.*

[25] *Id.* at 586.

[26] *Id.* at 588.

[27] *Id.*

[28] *Id.* at 587.

[29] Stephen J. Nicholls et al., *Consumption of Saturated Fat Impairs the Anti-Inflammatory Properties of High-Density Lipoproteins and Endothelial Function*, 48 J. Am. Coll. Cardio. 715 (2006).

meal that contained "1 g of fat/kg of body weight," with "coconut oil (fatty acid composition: 89.6% saturated fat, 5.8% monounsaturated, and 1.9% polyunsaturated fat)" as the source of fat.[30] They found that consuming the coconut oil meal significantly "reduces the anti-inflammatory potential of HDL and impairs arterial endothelial function."[31] In contrast, when the fat from the same isocaloric meal came from "safflower oil (fatty acid composition: 75% polyunsaturated, 13.6% monounsaturated, and 8.8% saturated fat)," "the anti-inflammatory activity of HDL improve[d]."[32]

48. Other studies have similarly demonstrated that coconut oil consumption negatively affects blood plasma markers when compared to other fats.

49. A 2011 study published in the American Journal of Clinical Nutrition found that consuming coconut oil, unlike consuming palm olein and virgin olive oil, decreased postprandial lipoprotein(a), which is associated with an increased the risk of cardiovascular disease.[33]

50. Similarly, a study comparing the effects of consuming coconut oil, beef fat, and safflower oil found that coconut oil consumption had the worst effect on subjects' blood lipid profiles.[34] The authors noted that "[o]f these fats, only CO [coconut oil] appears to consistently elevate plasma cholesterol when compared with other fats."[35]

---

[30] *Id.*

[31] *Id.*

[32] *Id.* at 715.

[33] P.T. Voon et al., *Diets high in palmitic acid (16:0), lauric and myristic acids (12:0 + 14:0), or oleic acid (18:1) do not alter postprandial or fasting plasma homocysteine and inflammatory markers in healthy Malaysian adults*, 94 Am. J. Clin. Nutr. 1451 (2011).

[34] Raymond Reiser et al., *Plasma lipid and lipoprotein response of humans to beef fat, coconut oil and safflower oil*, 42 Am. J Clin. Nutr. 190, 190 (1985).

[35] *Id.*

51. In another study, researchers found that that subjects who consumed 30 percent of energy from fat, with 66.7% coming from coconut oil, had "increased serum cholesterol, LDL, and apo B."[36] Apo B is a protein involved in the metabolism of lipids and is the main protein constituent of VLDL (very low-density lipoproteins) and LDL. Concentrations of apo B tend to mirror those of LDL, so the higher the level of apo B, the greater the risk of heart disease. In sum, the study found that consuming coconut oil increased all three cholesterol markers, signifying an increased risk of cardiovascular disease.[37]

52. In short, as the American Heart Association recently and succinctly stated, "because coconut oil increases LDL cholesterol, a cause of [cardiovascular disease], and *has no known offsetting favorable effects*, we advise against the use of coconut oil" (emphasis added).[38]

II. Because of the High Added Sugar Content, the Consumption of the Original and Vanilla Coconut Dream Further Increases the Risk of Cardiovascular Heart Disease and Other Morbidity

53. Sugars are sweet, short-chain, soluble carbohydrates. Simple sugars are called monosaccharides, while disaccharides are formed when two monosaccharides undergo a condensation reaction. The three most common sugars in our diets are fructose, glucose, and sucrose. Other sugars, like lactose, found in milk, and maltose, formed during the germination of grains like barley, are not generally consumed in large amounts. Glucose is a monosaccharide that occurs naturally in fruits and plant juices and is the primary product of photosynthesis. Most ingested carbohydrates (like bread and pasta) are converted into glucose

---

[36] V. Ganji & C.V. Kies, *Psyllium husk fiber supplementation to the diets rich in soybean or coconut oil: hypercholesterolemic effect in healthy humans*, 47 Int. J. Food Sci. Nutr. 103 (Mar. 1996).

[37] *Id.*

[38] American Heart Association, *Dietary Fats and Cardiovascular Disease: A Presidential Advisory From the American Heart Association*, Circulation (June 15, 2017), available at http://circ.ahajournals.org/content/early/2017/06/15/CIR.0000000000000510.

during digestion, and glucose is the form of sugar transported around the body in the bloodstream, and used by the cells for energy. Fructose is a monosaccharide that occurs naturally in fruits and honey. It is the sweetest of the sugars. Sucrose is a disaccharide comprised of one molecule of glucose chemically linked to one molecule of fructose. It is found in sugar cane and beets. Common table sugar is sucrose. During digestion and prior to blood absorption, enzymes called sucrases cleave a sucrose molecule into its constituent parts, glucose and fructose.

54. Humans' consumption of sugar has shifted dramatically over time. Cro-Magnon men during the Paleolithic age were hunters and gatherers, with a diet mainly comprised of meat, high in protein, moderate in fat, and low in carbohydrates. Fruits and berries were the major source of carbohydrates, and starch consumption was low.[39] In 1200 B.C., a process was developed in India for extracting sugar in the form of cane juice called khanda, which is where the word "candy" comes from. For nearly 3,000 years, sugar was rare, reserved for nobility. The invention of the pot still in 1700 A.D., however, allowed mass production of refined sugar. But it was still extraordinarily expensive until the middle of the 18th century, when there was a worldwide growth in sugar production, including in America. Thus, humans have been consuming sugar in substantial amounts for less than 300 years.

55. For most of that time, Americans' sugar consumption was almost exclusively table sugar, with only small amounts of glucose and fructose ingested from fruit.[40] And sugar was a condiment, added to coffee or tea, with control over the amount eaten.

56. Fructose is sweeter than either glucose or sucrose. In fruit, it serves as a marker for foods that are nutritionally rich. Before the development of the worldwide sugar industry,

---

[39] Tappy, L., et al., "Metabolic Effects of Fructose in the Worldwide Increase in Obesity," *Physiology Review*, Vol. 90, 23-46, at 24 (2010) [hereinafter "Tappy, Metabolic Effects of Fructose"].

[40] *Id.*

fructose in the human diet was limited to items like honey, dates, raisins, molasses, figs, grapes, raw apples, apple juice, persimmons, and blueberries (which contain approximately 10-15% fructose). Food staples like milk, vegetables, and meat have essentially no fructose. Thus, until relatively recently, human beings have had little dietary exposure to fructose.[41]

57. Today, the majority of sugars in typical American diets are added to foods during processing, preparation, or at the table.[42] The two primary sources of added sugar in processed food are High Fructose Corn Syrup ("HFCS") and sucrose (i.e., granulated sugar used, for example, in baked goods). Added sugar is in more than 74% of processed foods,[43] under more than 60 different names.[44]

58. There has been a rise over the past 45 years in Americans' consumption of added sugars. From 1970 to 2000, there was a 25% increase in available added sugars in the

---

[41] Bray, G., "How bad is fructose?," *American Journal of Clinical Nutrition*, Vol. 86, 895-96 (2007) [hereinafter, "Bray, How Bad is Fructose?"].

[42] U.S. Dep't of Agric. & U.S. Dep't of Health & Human Servs., "Dietary Guidelines for Americans, 2010," at 27 (2010) *available at* http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf.

[43] Ng, S.W., et al., "Use of caloric and non-caloric sweeteners in US consumer packaged foods, 2005-9, *Journal of the Academy of Nutrition and Dietetics*, Vol. 112, No. 11, 1828-34 (2012).

[44] Some examples: Agave nectar, Barbados sugar, Barley malt, Barley malt syrup, Beet sugar, Brown sugar, Buttered syrup, Cane juice, Cane juice crystals, Cane sugar, Caramel, Carob syrup, Castor sugar, coconut palm sugar, Coconut sugar, concentrated fruit juices, Confectioner's sugar, Corn sweetener, Corn syrup, Corn syrup solids, Date sugar, Dehydrated case juice, Demerara sugar, Dextrin, Dextrose, Evaporated cane juice, Free-flowing brown sugars, Fructose, Fruit juice, Fruit juice concentrate, Glucose, Glucose solids, Golden sugar, Golden syrup, Grape sugar, High-Fructose Corn Syrup (HFCS), Honey, Icing sugar, Invert sugar, Malt syrup, Maltodextrin, Maltol, Maltose, Mannose, Maple syrup, Molasses, Muscovado, Palm sugar, Panocha, Powdered sugar, Raw sugar, Refiner's syrup, Rice syrup, Saccharose, Sorghum Syrup, Sucrose, Sugar (granulated), Sweet Sorghum, Syrup, Treacle, Turbinado sugar, and Yellow sugar.

U.S.[45] The American Heart Association found that between 1970 and 2005, added sugars available for consumption increased by an average of 76 calories per day, from 25 teaspoons (400 calories) to 29.8 teaspoons (476 calories), a 19% increase.[46] The Continuing Survey of Food Intake by Individuals from 1994 to 1996 showed that the average person had a daily added sugars intake of 79 grams, equal to 316 calories and about 15% of energy intake. Those in the top one-third of fructose consumption ingested 137 grams of added sugars per day (548 calories, about 26% of energy per day), and those in the top 10% of fructose consumption ingested 178 grams of fructose per day (712 calories, about 34% of energy).[47]

59. In 2014, researchers analyzing data obtained from National Health and Nutrition Examination Survey (NHANES) showed that during the most recent period of 2005-2010, the mean percent of calories from added sugar in the American diet was 14.9%. Most adults, 71.4%, consumed 10% or more of their calories from added sugar, while about 10% of adults consumed 25% or more of their calories from added sugar.[48]

60. While the availability and consumption of added sugars was increasing over the past several decades, documents published in September 2016 demonstrated that "[t]he sugar industry paid scientists in the 1960s to play down the link between sugar and heart disease

---

[45] Bray, How Bad is Fructose?, *supra* n.41, at 895 (citing Havel, P.J., "Dietary fructose: implications for dysregulation of energy homeostasis and lipid/carbohydrate metabolism, *Nutrition Reviews*, Vol. 63, 133-57 (2005) [hereinafter, "*Havel, Dietary Fructose*"]).

[46] Johnson, R.K., et al., on behalf of the American Heart Association Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism and Council on Epidemiology and Prevention, "Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association," *Circulation*, Vol. 120, 1011-20, at 1016-17 (2009) [hereinafter "AHA Scientific Statement"].

[47] Bray, How Bad is Fructose?, *supra* n.41, at 895.

[48] Yang, Quanhe, et al., "Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults," *Journal of the American Medical Association*, at E4-5 (published online Feb. 3, 2014) [hereinafter, "Yang, NHANES Analysis"].

and promote saturated fat as the culprit instead . . . ."[49] The documents show, for example, that "the Sugar Research Foundation, known today as the Sugar Association, paid three Harvard scientists the equivalent of about $50,000 in today's dollars to publish a 1967 review of research on sugar, fat and heart disease."[50] Due to the effort of the sugar industry and its supporters, U.S. food policy, including FDA rulemaking, for many decades inappropriately focused on fats, largely ignoring the detrimental health consequences of consuming excessive added sugar, leading to the obesity and type 2 diabetes epidemics present in the U.S. today.

61. Today, "the vast majority of the U.S. population exceeds recommended intakes of . . . added sugars."[51] Despite some reduction in added sugar intake recently, "intakes of added sugars are still very high . . . and are well above recommended limits . . . ."[52] Approximately 90% of the population exceeds recommended daily limits.[53]

A. The Body's Physiological Response to Excess Sugar Consumption

5. The Body's Response to Glucose

62. The body needs some glucose, largely to meet the brain's metabolic demands, but also because all living cells use glucose for energy. Blood glucose levels below 25mg/dL may result in coma, seizure, or death, while levels consistently exceeding 180 mg/dL can cause long-term damage, including renal failure and atherosclerosis.

---

[49] Anahad O'Connor, "How the Sugar Industry Shifted Blame to Fat," *New York Times* (Sept. 12, 2016).

[50] *Id.*

[51] U.S. Dep't of Agric. & U.S. Dep't of Health & Human Servs., "Scientific Report of the 2015 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Health and Human Services and the Secretary of Agriculture," at 26 (February 2015), *available at* http://www.health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf.

[52] *Id.* at 38.

[53] *Id.* at 35.

63. For these reasons, blood glucose concentration is tightly-regulated by homeostatic regulatory systems. When blood glucose rises after a meal, beta cells in the pancreas secrete insulin into the blood, which helps muscle, fat, and liver cells absorb the glucose for energy, lowering the blood sugar. Too little blood sugar stimulates the secretion of hormones that counteract the insulin and thus restore normal blood sugar.[54]

64. During certain steps in processing glucose, the body forms fructose. However, unlike with glucose, there is no biological need for dietary fructose, i.e., fructose consumed from food, whether fruit, honey, HFCS, or some other form. Moreover, unlike glucose, fructose does not directly stimulate insulin secretion.

65. The body processes glucose and fructose differently. With little processing, fructose passes through the small intestine, into blood bound for the liver, so that it is taken up nearly 100% for processing in the liver (a characteristic shared by substances commonly referred to as poisons). By contrast, glucose is both "burned up" by cells directly, and processed elsewhere outside the liver, so that the liver must process only 20% of glucose consumed.

66. So much glucose is burned up prior to liver processing, because all the body's cells contain a transporter that, when stimulated by insulin, takes in glucose from the blood. By contrast, fructose can only be absorbed by cells that contain a different transporter, which most cells lack.

67. The liver is capable of processing relatively small amounts of sugar, meted out slowly. This is one of the reasons that eating the fructose in fruit is not problematic: the sugar in fruit is encased in the fruit's fiber, which slows the sugar's uptake, and some sugar encased in fruit fiber may not even be released. Thus fruit consumption does not overwhelm the liver. Notably, adding fiber to foods that are high in sugar does not replicate this effect, because the

[54] Ludwig, David S., "The Glycemic Index: Physiological Mechanisms Relating to Obesity, Diabetes, and Cardiovascular Disease," Journal of the American Medical Association, Vol. 287, No. 18, 2414-23, at 2415 (May 8, 2002) (citation omitted).

sugar and fiber remain separate, and the sugar is not encased in the fiber like it is in fruit. Fruit also comes packaged with nutrients, like vitamins, that are beneficial for health, and sends satiation signals to the brain, telling it that the body is full.

68. Because the liver has some capacity to process sugar, there does appear to be a "safe" threshold of daily added sugar consumption, small enough not to overload the liver: approximately 5% of calories, or about 38 grams (9 teaspoons, 150 calories) per day for men, 25 grams (6 teaspoons, 100 calories) per day for women, and 12-15 grams (3-3.5 teaspoons, 50-60 calories) for children depending on age and caloric needs, which is the basis of the American Heart Association's foregoing recommendations for maximum daily added sugar intake.[55]

69. But the long-term consumption of excess sugar can have dire physiological consequences, acting as a chronic, dose-dependent liver toxin, overloading the liver and causing chronic metabolic disease, also sometimes called metabolic syndrome, a cluster of symptoms that, when present together, increase a person's risk of chronic disease like cardiovascular disease and type 2 diabetes.

70. When excess sugar consumption overloads the liver, the glucose increases insulin secretion, while the fructose gets turned into liver fat, causing insulin resistance. The combination over time results in rapid and dramatic increases in blood glucose and insulin concentrations.[56] Over time, individuals with frequent insulin secretion may develop insulin resistance, where the body produces insulin but does not use it effectively, so that glucose builds up in the blood instead of being absorbed by the cells. Because the muscle, fat, and

---

[55] AHA Scientific Statement, *supra* n.46; *see also* "How Much Is Too Much?," at http://www.sugarscience.org/the-growing-concern-of-overconsumption.

[56] Janssens, J.P., et al., "Effects of soft drink and table beer consumption on insulin response in normal teenagers and carbohydrate drink in youngsters," *European Journal of Cancer Prevention*, Vol. 8, 289-95 (1999) ("In contrast to table beer, consumption of regular soft drinks induced a fast and dramatic increase in both glucose and insulin concentration within a maximum 1 hour after consumption.").

liver cells do not respond properly to insulin and thus cannot easily absorb glucose from the bloodstream, the body needs higher levels of insulin. Eventually the pancreas' beta cells cannot keep up with this increasing demand, and over time can no longer produce enough insulin to overcome insulin resistance, so blood glucose levels remain high.

71. Currently, about two-thirds of the American population is overweight, about one-quarter to one-third is diabetic or pre-diabetic, and another one-quarter is hypertensive. Many Americans also have high serum triglycerides. Insulin resistance is a component of all of these health issues.

72. Energy deposition into fat cells by insulin stimulate them to secrete a hormone called leptin, which is a natural appetite suppressant that tells the brain the body is full and can stop eating. Generally, glucose suppresses the hunger hormone, ghrelin, and stimulates leptin. But high insulin levels brought on by excess sugar consumption have been linked to leptin resistance, where the brain is desensitized to the hormone and so no longer "hears" the message to stop eating.[57] Because increased insulin makes the body feel hungry, excess sugar consumption can create a vicious cycle in which the more sugar one eats, the hungrier one feels.

6. The Body's Response to Fructose

73. But it is the fructose, found in most processed foods, that appears to cause the greatest harm in the shortest amount of time. Nearly all added sugars contain significant amounts of fructose. For example, HFCS typically contains approximately 42% or 55% fructose, while table sugar and other sweeteners, like cane sugar, contain 50% fructose.

74. Fructose is the most lipophilic carbohydrate, meaning it easily converts to a form, glycerol, that supports conversion to fats, including free fatty acids, a damaging form

[57] Shapiro, A., et al., "Fructose-induced leptin resistance exacerbates weight gain in response to subsequent high-fat feeding," *American Journal of Physiology, Regulatory, Integrative and Comparative Physiology*, Vol. 295, No. 5, R1370-75 (2008).

of cholesterol called very low-density lipoprotein (VLDL), and triglycerides, which get stored as fat. Studies in humans and animals have shown that fructose is preferentially metabolized to lipid (fat) in the liver, leading to increased triglyceride levels, which are associated with insulin resistance and cardiovascular disease.[58] Fatty acids created during fructose metabolism accumulate as fat droplets in the liver, also causing insulin resistance, as well as non-alcoholic fatty liver disease. In addition, when the liver turns excess sugar into liver fat and becomes insulin resistant, that generates hyperinsulinemia, which drives energy storage into body fat.

75. Glucose does not do this. Following consumption of 120 calories of glucose, less than 1 calorie should be stored as fat, while 120 calories of fructose should result in 40 calories being stored as fat.

76. The metabolism of fructose also creates several waste products and toxins, including uric acid, which drives up blood pressure, causes gout, and is a risk factor for cardiovascular disease because the production of uric acid utilizes nitric oxide, a key modulator of vascular function, and causes inflammation. Experimental human studies confirm that fructose feeding raises serum uric acid levels.[59]

---

[58] Elliot, S.S., et al., "Fructose, weight gain, and the insulin resistance syndrome," *American Journal of Clinical Nutrition*, Vol. 76, 911-22 (2002) [hereinafter, "Elliot, Fructose & Insulin Resistance"]; Bray, How Bad is Fructose?, *supra* n.41; Havel, Dietary Fructose, *supra* n.45.

[59] Nguyen, S., et al., "Sugar Sweetened Beverages, Serum Uric Acid, and Blood Pressure in Adolescents," *Journal of Pediatrics*, Vol. 154, No. 6, 807-13 (June 2009) (citations omitted) [hereinafter, "Nguyen, Serum Uric Acid"]; Johnson, R.J., "Potential role of sugar (fructose) in the epidemic of hypertension, obesity and the metabolic syndrome, diabetes, kidney disease, and cardiovascular disease," *American Journal of Clinical Nutrition*, Vol. 86, 899-906 (2007); Nakagawa, T., et al., "A causal role for uric acid in fructose-induced metabolic syndrome," *American Journal of Physiology*, Vol. 290, F625-31 (2006).

77. Moreover, fructose interferes with the brain's communication with leptin, which may result in overeating. And while glucose suppresses ghrelin, thus reducing hunger, fructose has no effect on ghrelin.

7. The Addiction Response

78. Research shows that, for some people, eating sugar produces characteristics of craving and withdrawal, along with chemical changes in the brain's reward center, the limbic region, which can be similar to those of people addicted to drugs like cocaine and alcohol.[60] These changes are linked to a heightened craving for more sugar.[61] This can create a vicious cycle leading to chronic illness.

B. There Has Been a Dramatic Rise in Obesity & Chronic Disease That Parallels the Rise in Human Sugar Consumption

79. As noted above, there was a dramatic rise in Americans' use of sugar, first in the mid-18th century, then again starting in the United States in about 1970, with the introduction into the market of HFCS. Concurrently with these changes in the diet have been alarming rises in obesity and chronic disease.

80. In 1924, New York City health commissioner Haven Emerson noted a seven-fold increase in diabetes rate in the city. In 1931, Dr. Paul Dudley White, a cardiologist at Massachusetts General Hospital, warned of an epidemic of heart disease. And in 1988, scientists learned about the advent of adolescent type 2 diabetes.

81. In 2004, researchers reported their analysis of food consumption patterns from 1967 to 2000. Noting that HFCS consumption increased more than 1,000% from 1970 to

---

[60] Volkow, N.D., et al., "Drug addiction: the neurobiology of behavior gone awry," *Nature Reviews Neuroscience*, Vol. 5, No. 12, 963-70 (2004); Brownell, K.D., et al., "Food and addiction: A comprehensive handbook," *Oxford University Press* (2012).

[61] Avena, N., "Evidence for sugar addiction: behavioral and neurochemical effects of intermittent, excessive sugar intake," *Neuroscience Behavior Review*, Vol. 52, No. 1, 20-39 (2008).

1990, "far exceeding the changes in intake of any other food or food group," researchers found this "mirrors the rapid increase in obesity" seen during the same period, as demonstrated in the below graphic.[62]

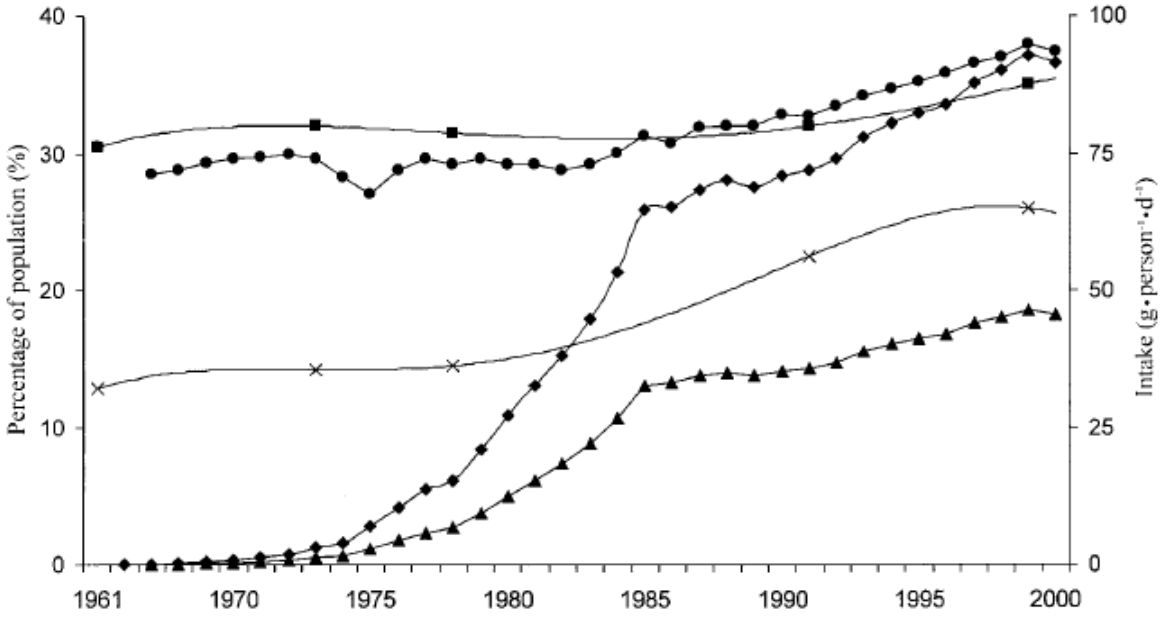


FIGURE 1. Estimated intakes of total fructose (●), free fructose (▲), and high-fructose corn syrup (HFCS, ♦) in relation to trends in the prevalence of overweight (■) and obesity (x) in the United States. Data from references 7 and 35.

82. Besides the compelling circumstantial evidence that increased sugar consumption has led to chronic disease, there is substantial research showing the causal mechanisms of disease and demonstrating substantial increased risk of chronic disease with excess sugar consumption.

[62] Bray, G.A., et al., "Consumption of high-fructose corn syrup in beverages may play a role in the epidemic of obesity," *American Journal of Clinical Nutrition*, Vol. 79, 537-43, at 537, 540-41 & Table 2 (2004); *see also* Flegal, K.M., et al., "Prevalence and trends in obesity among US adults, 1999-2000," *Journal of the American Medical Association,* Vol. 288, 1723-27 (2002); Putnam, J.J., et al., "Food consumption, prices and expenditures, 1970-97," *U.S. Department of Agriculture Economic Research Service statistical bulletin no. 695* (April 1999).

C. There is Substantial Scientific Evidence That Excess Sugar Consumption Causes Metabolic Syndrome, Cardiovascular Disease, Type 2 Diabetes, and Other Morbidity

83. Research shows that overloading the mitochondria—the energy-burning factories within the cells—in any given organ will manifest various forms of chronic metabolic disease. Whatever organ becomes insulin resistant manifests its own chronic metabolic disease. For example, insulin resistance of the liver leads to type 2 diabetes. Insulin resistance of the brain causes Alzheimer's disease. Insulin resistance of the kidney leads to chronic renal disease.

84. After artificial trans fat, the chemical that best overloads mitochondria is sugar.

1. Excess Sugar Consumption Causes Metabolic Syndrome

85. Excess consumption of added sugar 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.[63]

86. 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);

[63] Te Morenga, L., et al., "Dietary sugars and body weight: systematic review and meta-analyses of randomized controlled trials and cohort studies," *BJM* (January 2013) [hereinafter, "Te Morenga, Dietary Sugars & Body Weight"].

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).

87. 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."[64]

88. 56 million Americans have metabolic syndrome, or about 22.9% over the age of 20, placing them at higher risk for chronic disease.

89. 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[65] 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 . . . ."[66]

---

[64] Fried, S.K., "Sugars, hypertriglyceridemia, and cardiovascular disease," *American Journal of Clinical Nutrition*, Vol. 78 (suppl.), 873S-80S, at 873S (2003) [hereinafter, "Fried, Hypertriglyceridemia"].

[65] Because 1 sugar-sweetened beverage typically has 140-150 calories and 35-37.5 grams of sugar per 12-ounce serving, this is equivalent to between 140 and 300 calories per day, and 35 to 75 grams of sugar per day.

[66] Malik, Vasanti S., et al., "Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes," *Diabetes Care*, Vol. 33, No. 11, 2477-83, at 2477, 2480-81 (November 2010) [hereinafter "Malik, 2010 Meta-Analysis"].

90. 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 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.[67]

91. Recently, researchers concluded a study to determine whether the detrimental effects of dietary sugar were due to extremely high dosing, excess calories, or because of its effects on weight gain, rather than caused by sugar consumption directly.[68] In other words, the researchers dissociated the metabolic effects of dietary sugar from its calories and effects on weight gain.

92. Because the researchers did not want to give subjects sugar to see if they got sick, they instead took sugar away from people who were already sick to see if they got well. But if subjects lost weight, critics would argue that the drop in calories or weight loss was the reason for the clinical improvement. Therefore, the researchers designed the study to by isocaloric, by giving back to subjects the same number of calories in starch that were taken away in sugar. The study involved 43 children, ages 8 to 19, each obese with at least one other co-morbidity demonstrating metabolic problems. All were high consumers of added sugar in their diets.[69]

---

[67] 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," *Circulation*, Vol. 116, 480-88 (2007) [hereinafter "Dhingra, Cardiometabolic Risk"].

[68] Robert H. Lustig, et al., "Isocaloric Fructose Restriction and Metabolic Improvement in Children with Obesity and Metabolic Syndrome," *Pediatric Obesity*, Vol. 24, No. 2, 453-60 (Feb. 2016).

[69] *See id.* at 453-54.

93. To perform the study, researchers assessed subjects' home diets by two questionnaires to determine how many calories, and how much fat, protein, and carbohydrate they were eating. Subjects were then tested at a hospital based on their home diets. Then, for the next 9 days, researchers catered the subjects' meals. The macronutrient percentages of fat, protein, and carbohydrate were not changed. Subjects were fed them the same calories and percent of each macronutrient as their home diet; but within the carbohydrate fraction, researchers took the added sugar out, and substituted starch. For example, researchers took pastries out, and put bagels in; took yogurt out, and put baked potato chips in; took chicken teriyaki out, and put turkey hot dogs in (although subjects were still given whole fruit). Researchers reduced subjects' dietary sugar consumption from 28% to 10% of calories. Researchers also gave subjects a scale to take home, and each day they would weigh themselves. If they were losing weight, they were instructed to eat more. The goal was for subjects to remain weight-stable over the 10 days of study. On the final day, subjects came back to the hospital for testing on their experimental low-added sugar diet. The study team analyzed the pre- and post-data in a blinded fashion so as not to introduce bias.[70]

94. Researchers analyzed three types of data. First, diastolic blood pressure decreased by 5 points. Second, baseline blood levels of analytes associated with metabolic disease, such as lipids, liver function tests, and lactate (a measure of metabolic performance) all improved significantly. Third, fasting glucose decreased by 5 points. Glucose tolerance improved markedly, and fasting insulin levels fell by 50%. Each of these results was highly-statistically-significant.[71]

95. In sum, the study indicated that subjects improved their metabolic status in just 10 days, even while eating processed food, by just removing added sugar and substituting

[70] *See id.* at 454-55.

[71] *See id.* at 455-56.

starch. The metabolic improvement, moreover, was unrelated to changes in weight or body fat.

2. Excess Sugar Consumption Causes Type 2 Diabetes

96. Diabetes affects 25.8 million Americans, and can cause kidney failure, lower-limb amputation, and blindness. In addition, diabetes doubles the risk of colon and pancreatic cancers and is strongly associated with coronary artery disease and Alzheimer's disease.[72]

97. In 2010, Harvard researchers also 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.[73] Moreover, "larger studies with longer durations of follow-up tended to show stronger associations."[74] Thus, the meta-analysis showed "a clear link between SSB consumption and risk of . . . type 2 diabetes."[75]

98. An analysis of data for more than 50,000 women from the Nurses' Health Study,[76] during two 4-year periods (1991-1995, and 1995-1999), showed, after adjusting for

---

[72] Aranceta Bartrina, J. et al., "Association between sucrose intake and cancer: a review of the evidence," *Nutrición Hospitalaria*, Vol. 28 (Suppl. 4), 95-105 (2013); Garcia-Jimenez, C., "A new link between diabetes and cancer: enhanced WNT/beta-catenin signaling by high glucose," *Journal of Molecular Endrocrinology*, Vol. 52, No. 1 (2014); Linden, G.J., "All-cause mortality and periodontitis in 60-70-year-old men: a prospective cohort study," *Journal of Clinical Periodontal*, Vol. 39, No. 1, 940-46 (October 2012).

[73] Malik, 2010 Meta-Analysis, *supra* n.66 at 2477, 2480.

[74] *Id.* at 2481.

[75] *Id.*

[76] 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 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

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.[77]

99. The result of this analysis shows a statistically significant linear trend with increasing sugar consumption.[78]

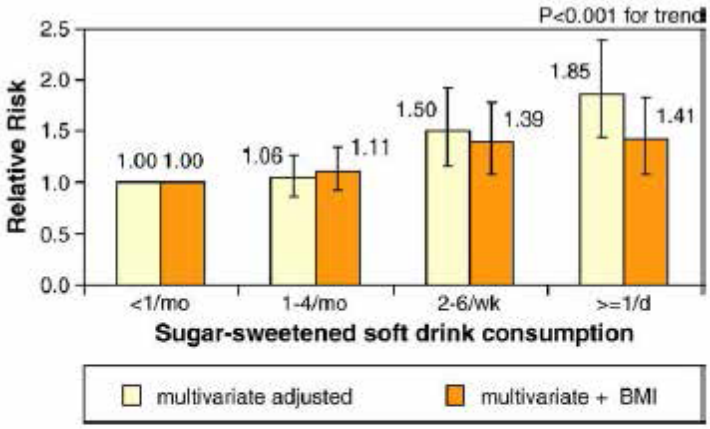


Fig. 4. Multivariate relative risks (RRs) of type 2 diabetes according to sugar-sweetened soft drink consumption in the Nurses' Health Study II 1991–1999 (Multivariate RRs were adjusted for age, alcohol (0, 0.1–4.9, 5.0–9.9, 10+ g/d), physical activity (quintiles), family history of diabetes, smoking (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]).

---

in women ever conducted. *See generally* "The Nurses' Health Study," *at* http://www.channing.harvard.edu/nhs.

[77] Schulze, M.B., et al., "Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type 2 Diabetes in Young and Middle-Aged Women," *Journal of the American Medical Association*, Vol. 292, No. 8, 927-34 (Aug. 25, 2004) [hereinafter "Schulze, Diabetes in Young & Middle-Aged Women"].

[78] Hu, F.B., et al., "Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemioligic evidence," *Physiology & Behavior*, Vol. 100, 47-54 (2010).

100. 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 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.[79]

101. A large cohort study of more than 70,000 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.[80]

[79] Palmer, J.R., et al., "Sugar-Sweetened Beverages and Incidence of Type 2 Diabetes Mellitus in African American Women," *Archive of internal Medicine*, Vol. 168, No. 14, 1487-82 (July 28, 2008) [hereinafter "Palmer, Diabetes in African American Women"].

[80] Bazzano, L.A., et al., "Intake of fruit, vegetables, and fruit juices and risk of diabetes in women," *Diabetes Care*, Vol. 31, 1311-17 (2008).

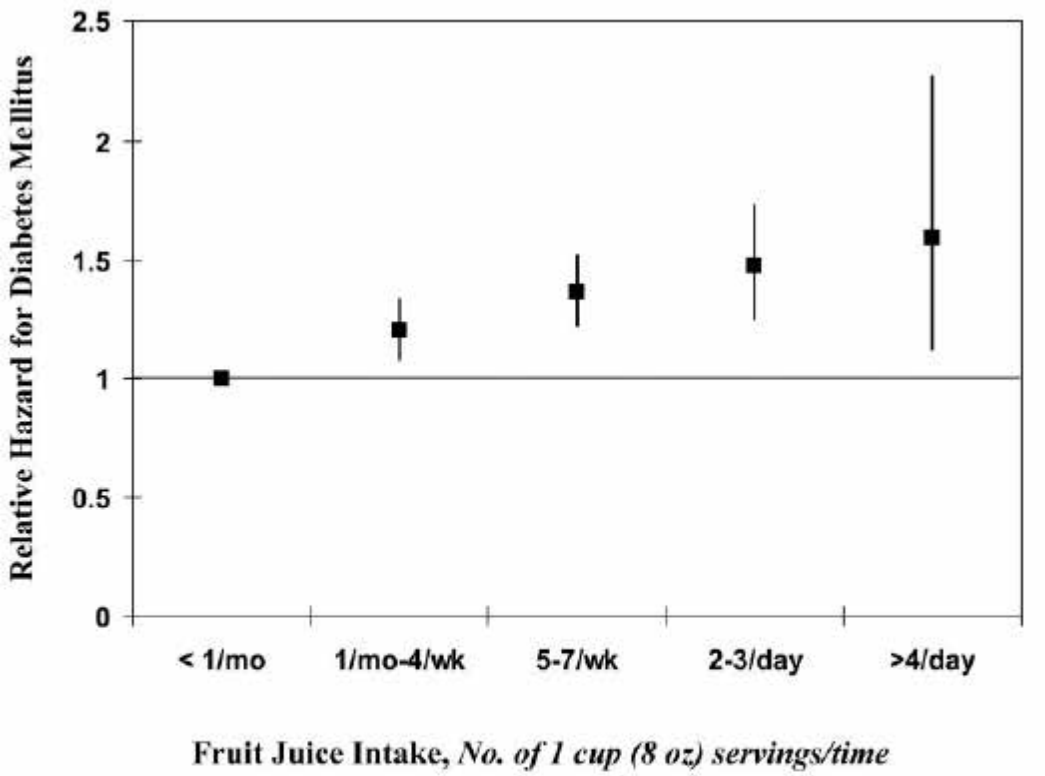


Figure 1—*Multivariate-adjusted relative hazard of diabetes by category of cumulatively updated fruit juice intake. Values were adjusted for cumulatively updated BMI, physical activity, family history of diabetes, postmenopausal hormone use, alcohol use, smoking, and total energy intake. For an increase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

102. 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.[81]

103. Most convincingly, an econometric analysis of repeated cross-sectional data published in 2013 established a causal relationship between sugar availability and type 2

[81] de Konig, L., et al., "Sugar-sweetened and artificially sweetened beverage consumption and risk of type 2 diabetes in men," *American Journal of Clinical Nutrition*, Vol. 93, 1321-27 (2011).

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.[82]

3. Excess Sugar Consumption Causes Cardiovascular Disease

104. Sixteen million Americans have heart disease, which is the number one killer in the United States.[83]

105. 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 between 10% - 24.9% of their calories from added sugars 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 sugars had an average 275% greater risk of CVD mortality than those who consumed less than 5% of calories from added sugar.[84]

106. 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,"[85] as demonstrated in the chart below.

---

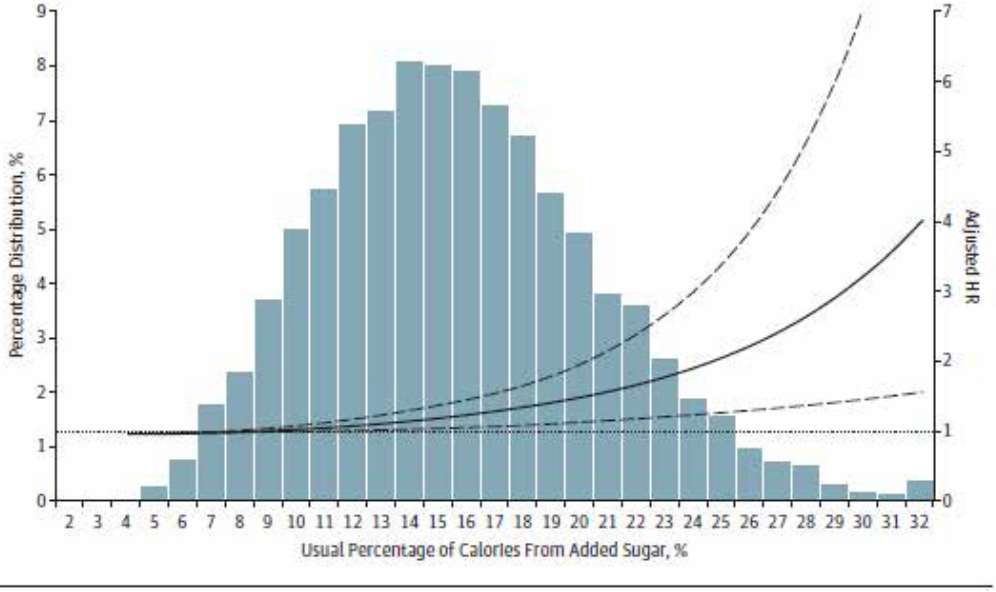
[82] Basu, S., et al., "The Relationship of Sugar to Population-Level Diabetes Prevelance: An Econometric Analysis of Repeated Cross-Sectional Data," *PLOS Online*, Vol. 8, Issue 2 (February 27, 2013).

[83] Gaddam, K.K., et al., "Metabolic syndrome and heart failure—the risk, paradox, and treatment," *Current Hypertension Reports*, Vol. 13, No. 2, 142-48 (2011).

[84] Yang, NHANES Analysis, *supra* n.48 at E4-5.

[85] *Id.*

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.

107. 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 . . . ."[86] 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 increased risk of CVD mortality. In addition, regular consumption of sugar-sweetened beverages is associated with elevated CVD mortality."[87]

108. The Nurses' Health Study found that, after adjusting for other unhealthy lifestyle factors, those who consumed two or more sugar-sweetened beverages per day (280 calories

[86] *Id.* at E6.

[87] *Id.* at E8.

and 70 grams of sugar or more) had a 35% greater risk of coronary heart disease compared with infrequent consumers.[88]

4. Excess Sugar Consumption Causes Liver Disease

109. Fructose 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), 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.[89]

110. 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.[90]

111. 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 estimates are that 31% of American adults, and 13% of American children suffer from NAFLD.[91]

---

[88] Fung T.T., et al., "Sweetened beverage consumption and risk of coronary heart disease in women," *American Journal of Clinical Nutrition*, Vol. 89 at 1037-42 (February 2009).

[89] Farrell, G.C., et al., "Nonalcoholic fatty liver disease: from steatosis to cirrhosis," *Hepatology*, Vol. 433, No. 2 (Suppl. 1), S99-S112 (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," *Hepatology*, Vol. 11, No. 1 (1990).

[90] Charlton, M.R., et al., "Frequency and outcomes of liver transplantation for nonalcoholic steatohepatitis in the United States," *Gastroenterology*, Vol. 141, No. 4, 1249-53 (October 2011).

[91] Lindback, S.M., et al., "Pediatric Nonalcoholic Fatty Liver Disease: A Comprehensive Review," *Advances in Pediatrics*, Vol. 57, No. 1, 85-140 (2010); Lazo, M. et al., "The Epidemiology of Nonalcoholic Fatty Liver Disease: A Global Perspective," *Seminars in Liver*

5. Excess Sugar Consumption Causes Obesity

112. 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.

113. 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."[92]

Disease, Vol. 28, No. 4, 339-50 (2008); Schwimmer, J.B., et al., "Prevalence of Fatty Liver in Children and Adolescents," *Pediatrics*, Vol. 118, No. 4, 1388-93 (2006); Browning, J.D., et al., "Prevalence of hepatic steatosis in an urban population in the United States: Impact of ethnicity," *Hepatology*, Vol. 40, No. 6, 1387-95 (2004).

[92] Malik, V.S., et al., "Intake of sugar-sweetened beverages and weight gain: a systematic review," *American Journal of Clinical Nutrition*, Vol. 84, 274-88 (2006).

114. 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.[93]

115. 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.[94]

116. 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).[95]

117. 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).[96]

118. 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 31% greater risk of obesity than those who consumed less than 1 soft drink per day.[97]

---

[93] Malik, V.S., et al., "Sugar-sweetened beverages and BMI in children and adolescents: reanalyses of a meta-analysis," *American Journal of Clinical Nutrition*, Vol. 29, 438-39 (2009).

[94] Dubois, L., et al., "Regular sugar-sweetened beverage consumption between meals increases risk of overweight among preschool-aged children," *Journal of the American Dietetic Association*, Vol. 107, Issue 6, 924-34 (2007).

[95] Schulze, Diabetes in Young & Middle-Aged Women, *supra* n.77.

[96] Palmer, Diabetes in African American Women, *supra* n.79.

[97] Dhingra, Cardiometabolic Risk, *supra* n.67.

119. The link between sugar intake and weight gain was also demonstrated in a randomized, controlled intervention study, where "[a] simple 12 month school based intervention focused on reducing consumption of carbonated drinks resulted in significant differences in the proportion of overweight children in the control and intervention groups," as demonstrated in the chart below.

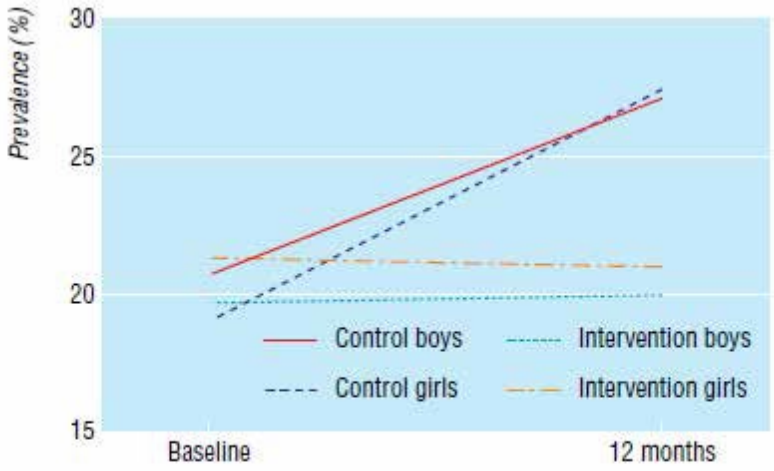


Fig 2 Mean change in prevalence of overweight and obese children from baseline to follow up at 12 months according to clusters

At a three-year follow-up, however, the significant difference seen between the groups after a year of focused education was no longer evident, with overweight more prevalent in both groups, providing further support for the link between sugar and weight gain.[98]

120. Similarly, 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

[98] James, J. et al., "Preventing childhood obesity: two year follow-up results from the Christchurch obesity prevention programme in schools (CHOPPS)," *BJM*, Vol. 335, 762 (2007) (discussing James, J., et al., "Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomized controlled trial," *BJM*, Vol. 328, 1237 (April 27, 2004)).

and 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.[99]

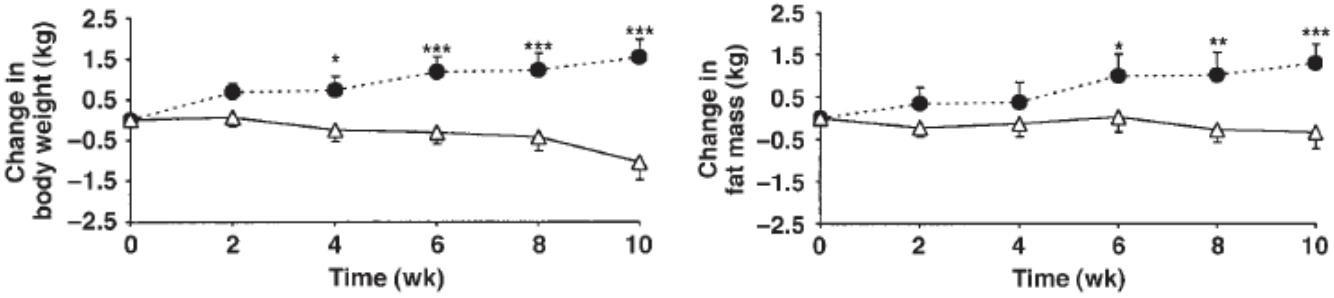


FIGURE 2. Mean (±SEM) changes in body weight, fat mass, and fat-free mass during an intervention in which overweight subjects consumed supplements containing either sucrose (●; $n = 21$) or artificial sweeteners (△; $n = 20$) daily for 10 wk. The diet × time interactions were significant for changes 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).

121. In another, 3-week study, researchers gave normal-weight subjects 1150 grams of soda per day, sweetened with either aspartame or HFCS. The experiment found that drinking artificially-sweetened soda reduced calorie intake and body weight of men, while drinking HFCS-sweetened soda significantly increased calorie intake and body weight of both sexes, as demonstrated in the chart below.[100]

[99] 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," *American Journal of Clinical Nutrition*, Vol. 76, 721-29 (2002) [hereinafter, "Raben, Sucrose vs. Artificial Sweeteners"].

[100] Tordoff, M.G., et al., "Effect of drinking soda sweetened with aspartame or high-fructose corn syrup on food intake and body weight," *American Journal of Clinical Nutrition*, Vol. 51, 963-69 (1990).

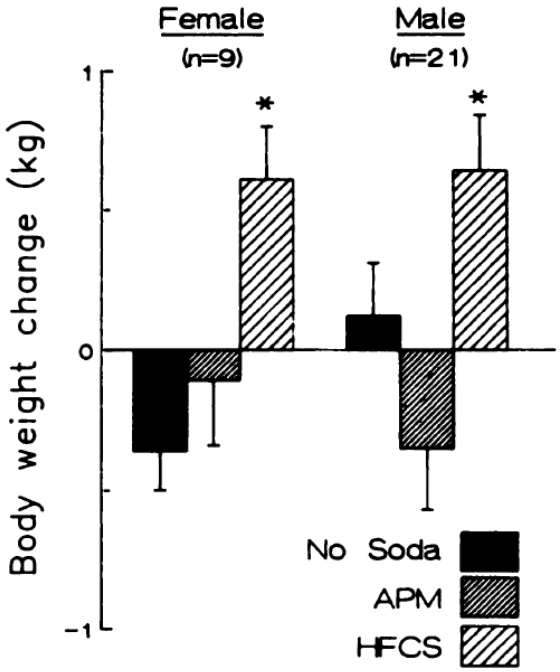


FIG 1. Changes in body weight during 3-wk periods when subjects drank 1150 g/d of soda sweetened with aspartame (APM), an equal weight of soda sweetened with high-fructose corn syrup (HFCS), or had no experimental manipulation (no soda). *$p < 0.05$ relative to weight gain in no-soda period.

6. Excess Sugar Consumption Causes Inflammation

122. Inflammation has been associated with type 2 diabetes, myocardial infarction, and stroke, as well as weight gain and obesity.[101]

123. A 10-week study comparing a group whose sucrose intake was increased by 151% to a group whose intake was decreased by 42% showed the former's blood concentration of the biological markers for inflammation, haptoglobin, transferrin, and C-

[101] Sorensen, L.B., et al., "Effect of sucrose on inflammatory markers in overweight humans," *American Journal of Clinical Nutrition*, Vol. 82, 421-27 (2005) (citations omitted) [hereinafter, "Sorensen, Inflammatory Markers"]; *see also* Pearson, T.A., et al., "Markers of Inflammation and Cardiovascular Disease: Application to Clinical and Public Health Practice, A Statement for Healthcare Professionals From the Centers for Disease Control and Prevention and the American Heart Association," *Circulation*, Vol. 107, 499-511 (2003).

reactive protein, increased by 13%, 5%, and 6%, respectively, while the later group's concentrations decreased by 16%, 2%, and 26% respectively.[102]

124. In a prospective, randomized, controlled crossover trial, 29 subjects were studied over six 3-week interventions in which they either consumed various amounts of fructose, glucose, or sucrose, or received dietary advice to consume low amounts of fructose. The study showed LDL particle size reducing (associated with atherosclerosis) by 0.51 nm after high-fructose intake (80 grams per day), and by 0.43 nm after high-sucrose intake (also 80 grams per day). It also found significant increases in fasting glucose and C-reactive protein, leading the authors to conclude that the "data show potentially harmful effects of low to moderate consumption of SSBs on markers of cardiovascular risk such as LDL particles, fasting glucose, and [C-reactive protein] within just 3 wk in healthy young men, which is of particular significance for young consumers."[103]

125. In a nested case-control study of 656 cases of type 2 diabetes and 694 controls from the Nurses Study, researchers identified a dietary pattern strongly related to inflammatory markers, which was high in sugar-sweetened soft drinks, showing linear trends across quintiles of dietary pattern for six inflammation markers.

[102] Sorensen, Inflammatory Markers, *supra* n.101.

[103] Aeberli, I., et al., "Low to moderate sugar-sweetened beverage consumption impairs glucose and lipid metabolism and promotes inflammation in healthy young men: a randomized controlled trial," *American Journal of Clinical Nutrition*, Vol. 94, 479-85 (2011).

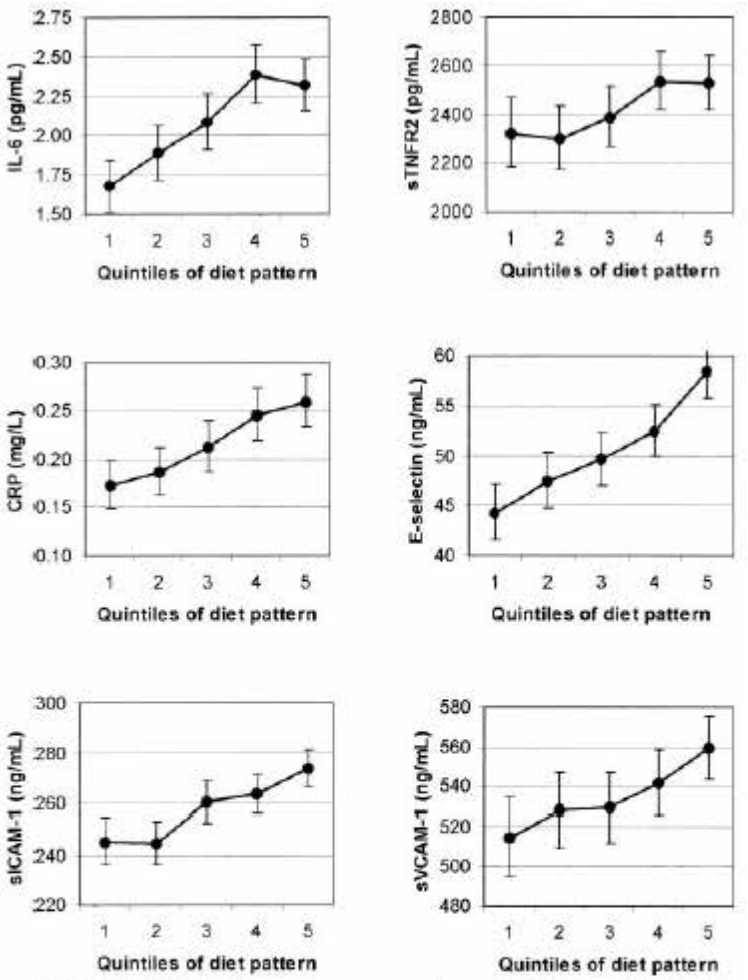


FIGURE 1. Geometric mean concentrations and 95% CIs of interleukin 6 (IL-6), soluble tumor necrosis factor α receptor 2 (sTNFR2), C-reactive protein (CRP), E-selectin, soluble intracellular cell adhesion molecule 1 (sICAM-1), and soluble vascular cell adhesion molecule 1 (sVCAM-1) by quintiles of diet pattern score adjusted for age, BMI (9 categories), physical activity (quintiles), family history of diabetes, smoking (never, past, current, or missing), postmenopausal hormone use (never, ever, or missing), energy intake (quintiles), and fasting status. The comparison between quintile 5 and quintile 1 was significant for all biomarkers, $P < 0.05$. Quintile cutoffs were based on distributions in controls.

7. Excess Sugar Consumption Causes High Blood Triglycerides and Abnormal Cholesterol Levels

126. Fructose facilitates the biochemical formation of triacylglycerols more efficiently than does glucose.[104] This is because fructose metabolism in the liver converts the fructose to fructose-1-phosphate, which readily becomes a substrate for the backbone of the

[104] Elliot, Fructose & Insulin Resistance, *supra* n.58.

triglyceride molecule.[105] As compared to starches, sugars—particularly sucrose and fructose—tend to increase serum triacylglycerol concentrations by about 60%.[106]

127. 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.

128. 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.

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

130. When the liver is overwhelmed by large doses of fructose, it will convert 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.[107]

---

[105] Bray, G.A., "Soft Drinks and Obesity: The Evidence," *CMR e-Journal*, Vol. 2, Issue, 2, 10-14, at 13 (Oct. 2009).

[106] Fried, Hypertriglyceridemia, *supra* n.64, at 873S.

[107] Te Morenga, Dietary Sugars & Body Weight, *supra* n.63.

131. 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.[108]

132. 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.[109]

133. 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 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 mg/dL, 57.5, 53.7, 51.0, and 47.7. Mean triglyceride levels were 105 mg/dL, 102, 111, 113, and 114. Mean LDL levels were 116 mg/dL, 115, 118, 121, and 123 among women, with no significant trend among men. Consumers whose sugar intake accounted for more than 10% of 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.[110]

---

[108] Dhingra, Cardiometabolic Risk, *supra* n.67.

[109] 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," *American Journal of Clinical Nutrition*, Vol. 100, No. 1, 65-79 (May 7, 2014).

[110] Welsh, J.A., et al., "Caloric Sweetener Consumption and Dyslipidemia Among US Adults," *Journal of the American Medical Association*, Vol. 303, No. 15, 1490-97 (April 21, 2010).

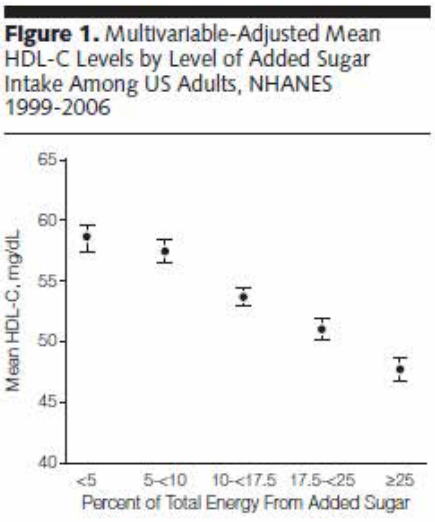


Figure 1. Multivariable-Adjusted Mean HDL-C Levels by Level of Added Sugar Intake Among US Adults, NHANES 1999-2006

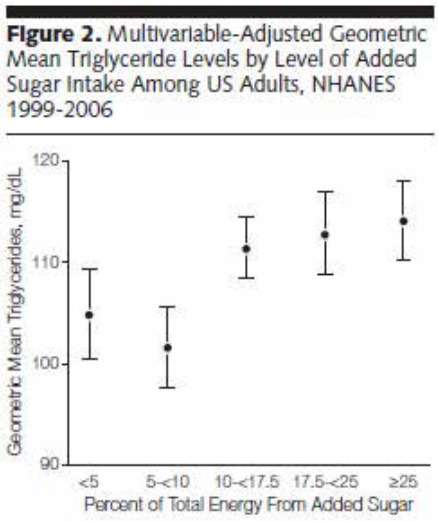


Figure 2. Multivariable-Adjusted Geometric Mean Triglyceride Levels by Level of Added Sugar Intake Among US Adults, NHANES 1999-2006

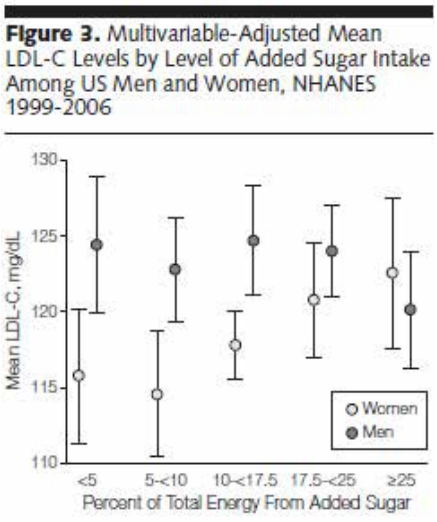


Figure 3. Multivariable-Adjusted Mean LDL-C Levels by Level of Added Sugar Intake Among US Men and Women, NHANES 1999-2006

134. 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%.[111]

135. 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 triglycerides and total cholesterol, while those fed a 25% diet of glucose did not experience the same adverse effects.[112]

136. 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."[113]

---

[111] Bantle, J.P., et al., "Effects of dietary fructose on plasma lipids in healthy subjects," *American Journal of Clinical Nutrition*, Vol. 72, 1128-34 (2000).

[112] 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," *The Journal of Clinical Investigation*, Vol. 119, No. 5, 1322-34 (May 2009).

[113] Aeberli, I., et al., "Fructose intake is a predictor of LDL particle size in overweight schoolchildren," *American Journal of Clinical Nutrition*, Vol. 86, 1174-78 (2007).

8. Excess Sugar Consumption is Associated with Hypertension

137. 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 22% greater incidence, and an 18% greater risk of high blood pressure than those who consumed less than 1 soft drink per day.[114]

138. An analysis of the NHANES data for more than 4,800 adolescents also showed a positive, linear association between sugar-sweetened beverages and higher systolic blood pressure, as well as corresponding increases in serum uric acid levels.[115]

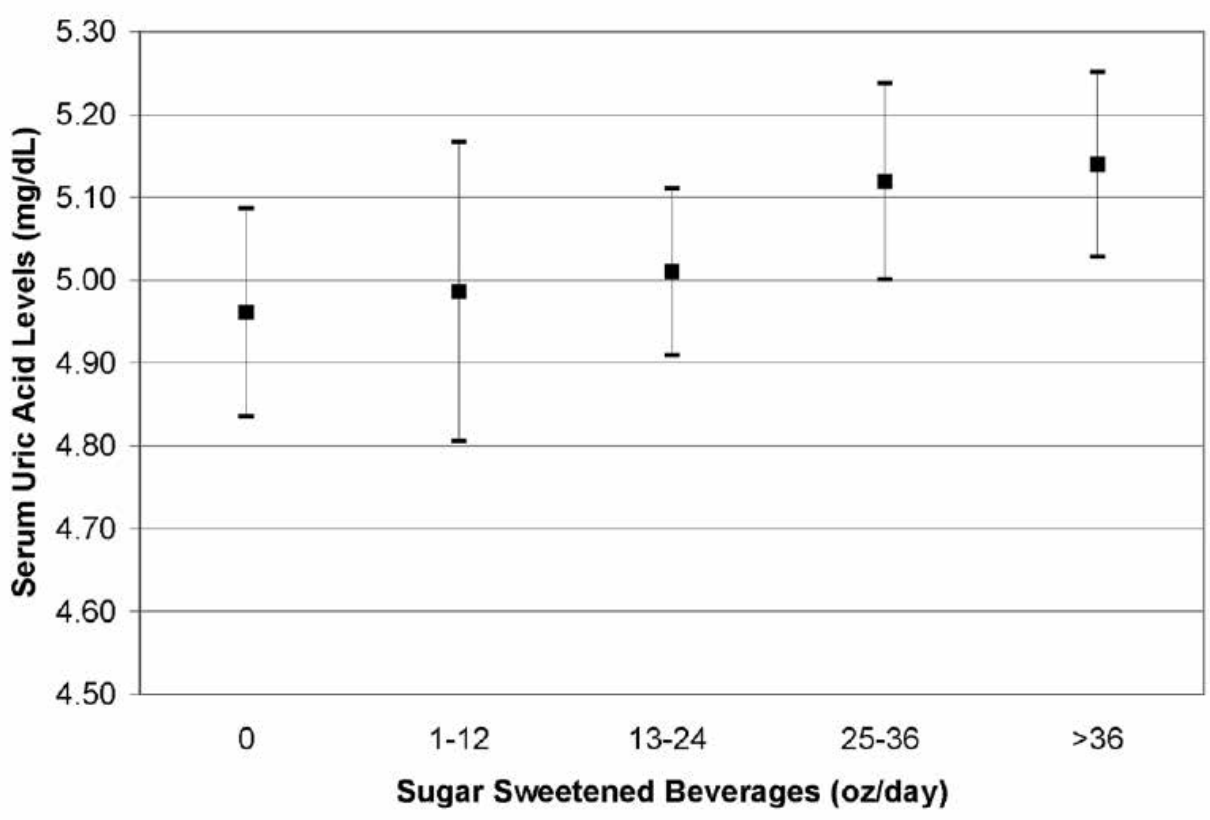


Figure 1.
Sample mean of serum uric acid with 95% confidence intervals by categories of sugar sweetened beverage consumption adjusted for age, race/ethnicity, sex, total calories, BMI z-score, alcohol, smoking, dietary fiber intake, diet beverage consumption, and milk consumption. *P* for trend = 0.01

139. In one study, 15 healthy men drank 500 ml water containing either no sugar, 60 grams of fructose, or 60 grams of glucose. Blood pressure, metabolic rate, and autonomic

[114] Dhingra, Cardiometabolic Risk, *supra* n.67.

[115] Nguyen, Serum Uric Acid, *supra* n.59.

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.[116]

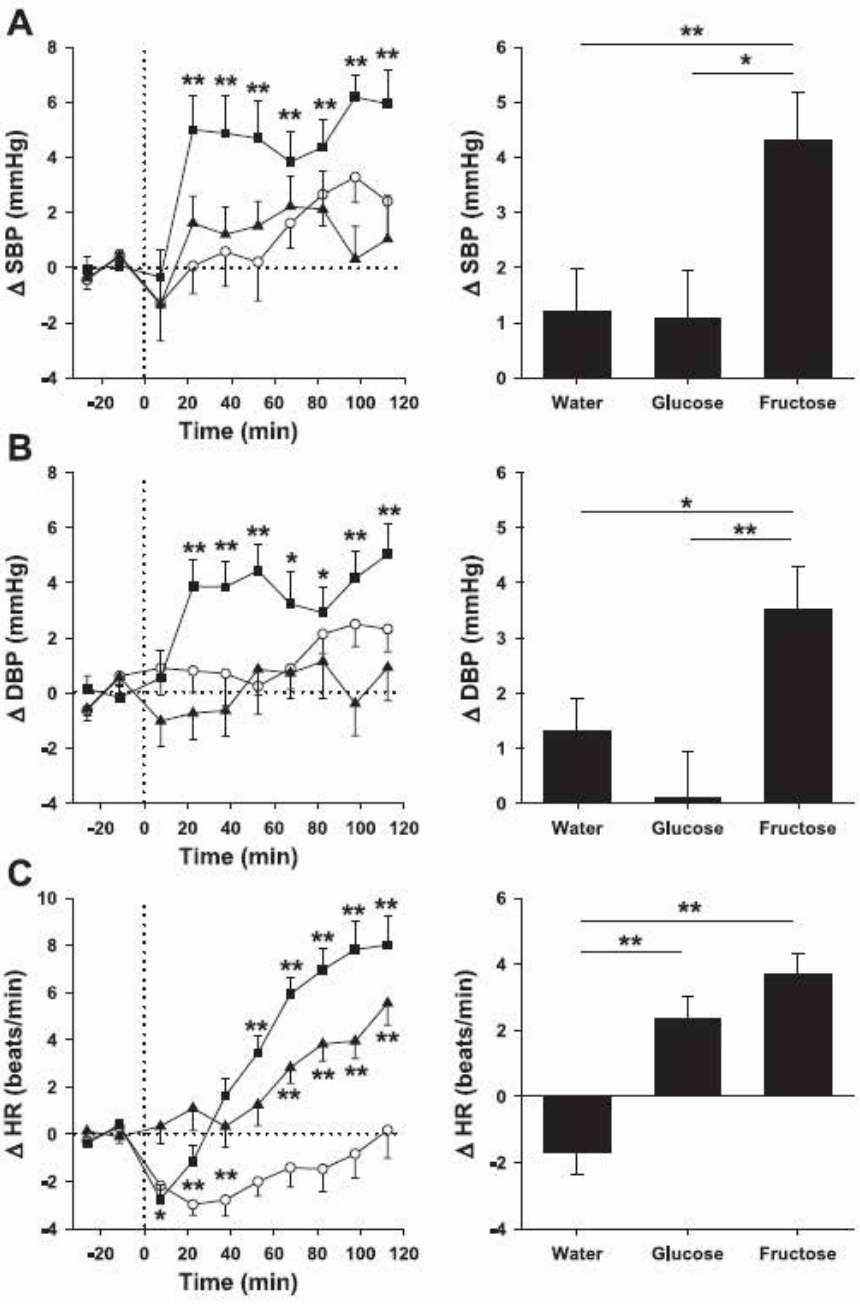


Fig. 1. Time course of the systolic blood pressure (SBP; *A*), diastolic blood pressure (DBP; *B*), and heart rate (HR; *C*) changes (*left*) and mean responses (*right*) to drinking water (○), glucose (▲), and fructose (■). $*P < 0.05$ and $**P < 0.01$, statistically significant differences over time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

[116] Brown, C.M., et al., "Fructose ingestion acutely elevates blood pressure in healthy young humans," *Am. J. Physiol. Regul. Integr. Compl. Physiol.*, Vol. 294, R730-37 (2008).

140. 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.[117]

141. 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.[118]

9. Excess Sugar Consumption is Associated with Alzheimer's Disease, Dementia, and Cognitive Decline

142. In a study of over 2,000 participants over 6.8 years, researchers found that higher average glucose levels within the preceding 5 years (115 mg/dL compared to 100 mg/dL) were related to an 18% increased risk of dementia among those without diabetes. For those with diabetes, higher average glucose levels (190 mg/dL compared to 160 mg/dL) were related to a 40% increased risk of dementia.[119]

143. "To evaluate a possible association between fructose mediated metabolic changes and cognitive behavior," researchers "assessed the correlation of serum triglyceride

---

[117] Raben, Sucrose vs. Artificial Sweeteners, *supra* n.99.

[118] Brown, I.J., et al., "Sugar-Sweetened Beverage, Sugar Intake of Individuals, and Their Blood Pressure: International Study of Macro/Micronutrients and Blood Pressure," *Hypertension*, Vol. 57, 695-701 (2011).

[119] Crane, P.K, et al., "Glucose Levels and Risk of Dementia," *New England Journal of Medicine*, Vol. 369, No. 6, 540-48 (2013).

and insulin resistance levels with memory," and "found a positive correlation between serum triglyceride levels and insulin resistance index . . . , which indicates that increased serum triglyceride levels may contribute to increase[d] insulin resistance . . . ." And researchers "found that the latency time varied in proportion to the insulin resistance . . . , which suggests that memory performance may rely on levels of insulin resistance . . . ."[120]

10. Excess Sugar Consumption is Linked to Some Cancers

144. In a population-based case-control study involving 424 cases and 398 controls, women in the highest quartile of added sugar intake had an 84% greater risk of endometrial cancer.[121] Similarly, in a study of patients with stage 3 colon cancer, those in the highest quintile of glycemic load experienced worsening in disease-free survival of approximately 80% compared to those in the lowest quintile.[122]

145. A population based case-control study on Malaysian women found a significant, two-fold increased risk of breast cancer among premenopausal and postmenopausal women in the highest quartile of sugar intake.[123]

146. A prospective epidemiological study of nearly 45,000 cancer cases among 436,000 participants aged 50-71, found added sugars were positively associated with risk of

[120] Agrawal, R., et al., "'Metabolic syndrome' in the brain: deficiency in omega-3 fatty acid exacerbates dysfunctions in insulin receptor signaling and cognition," *Journal of Physiology*, Vol. 590, No. 10, 2485-99, at 2489 (2012).

[121] King, M.G., et al., "Consumption of Sugary Foods and Drinks and Risk of Endometrial Cancer," *Cancer Causes Control*, Vol. 24, No. 7, 1427-36 (July 2013).

[122] Meyerhardt, J.A., et al. "Association of dietary patterns with cancer recurrence and survival in patients with stage III colon cancer," *Journal of the American Medical Association*, Vol. 298, 754-64 (2007).

[123] Sulaiman, S., et al., "Dietary carbohydrate, fiber and sugar and risk of breast cancer according to menopausal status in Malaysia," *Asian Pacific Journal of Cancer Prevention*, Vol. 15, 5959 (2014).

esophageal adenocarcinoma; added fructose was associated with risk of small intestine cancer; and all investigated sugars were associated with increased risk of pleural cancer.[124]

D. Based on the Scientific Evidence, Authoritative Scientific and Health Organizations Recommend Restricting Added Sugar Consumption to Below 5% or 10% of Daily Calories

147. Based on the scientific research, the AHA recommends restricting added sugar to 5% of calories.[125] Based on the average caloric needs, this equates to 12 grams for children 4 to 8 years old, up to 25 grams for children up to 18 years old, 25 grams for women, and 38 grams for men.

148. Similarly, the World Health Organization recommends that no more than 10% of an adult's calories—and ideally less than 5%—should come from added sugar or from natural sugars in honey, syrups, and fruit juice.[126]

149. In addition, the Food and Drug Administration recently set a daily reference value of 50 grams of added sugar, or 10% of calories based on a 2,000-calorie diet. 81 Fed. Reg. 33742, 33820 (May 27, 2016). While the FDA acknowledged the AHA and WHO recommendations to keep added sugars below 5% of calories, it set the DRV at 50 grams because this was "more realistic considering current consumption of added sugars in the United States as well as added sugars in the food supply." *Id*. at 33,849. Nevertheless, the FDA's rulemaking was based, in part, on the 2015 Dietary Guidelines Advisory Committee's "food pattern analysis," which—consistent with the AHA and WHO recommendations—

---

[124] Tasevska, N., et al., "Sugars in diet and risk of cancer in the NIH-AARP Diet and Health Study," *International Journal of Cancer*, Vol. 130, No. 1, 159-69 (Jan. 1, 2012).

[125] *See* AHA Scientific Statement, *supra* n.46.

[126] *See* World Health Organization, Sugars intake for adult and children: Guideline" (March 4, 2014), *available at* http://www.who.int/nutrition/publications/guidelines/sugars_intake/en (Based on scientific evidence, recommending adults and children reduce daily intake of free sugars to less than 10% of total energy intake and noting that "[a] further reduction to below 5% or roughly 25 grams (6 teaspoons) per say would provide additional health benefits.").

"demonstrate[d] that when added sugars in foods and beverages exceeds 3% to 9% of total calories . . . a healthful food pattern may be difficult to achieve . . . ."[127]

III. The Manufacture, Marketing, and Sale of Coconut Dream

150. Coconut Dream has been sold on a nationwide basis, including in California since at least 2011.

151. According to the Coconut Dream website (www.dreamplantbased.com), the Product is sold at major retailers such as Ralphs, Vons, Target, Sprouts Farmers Market, Walmart, Food 4 Less, and Albertsons, among others.

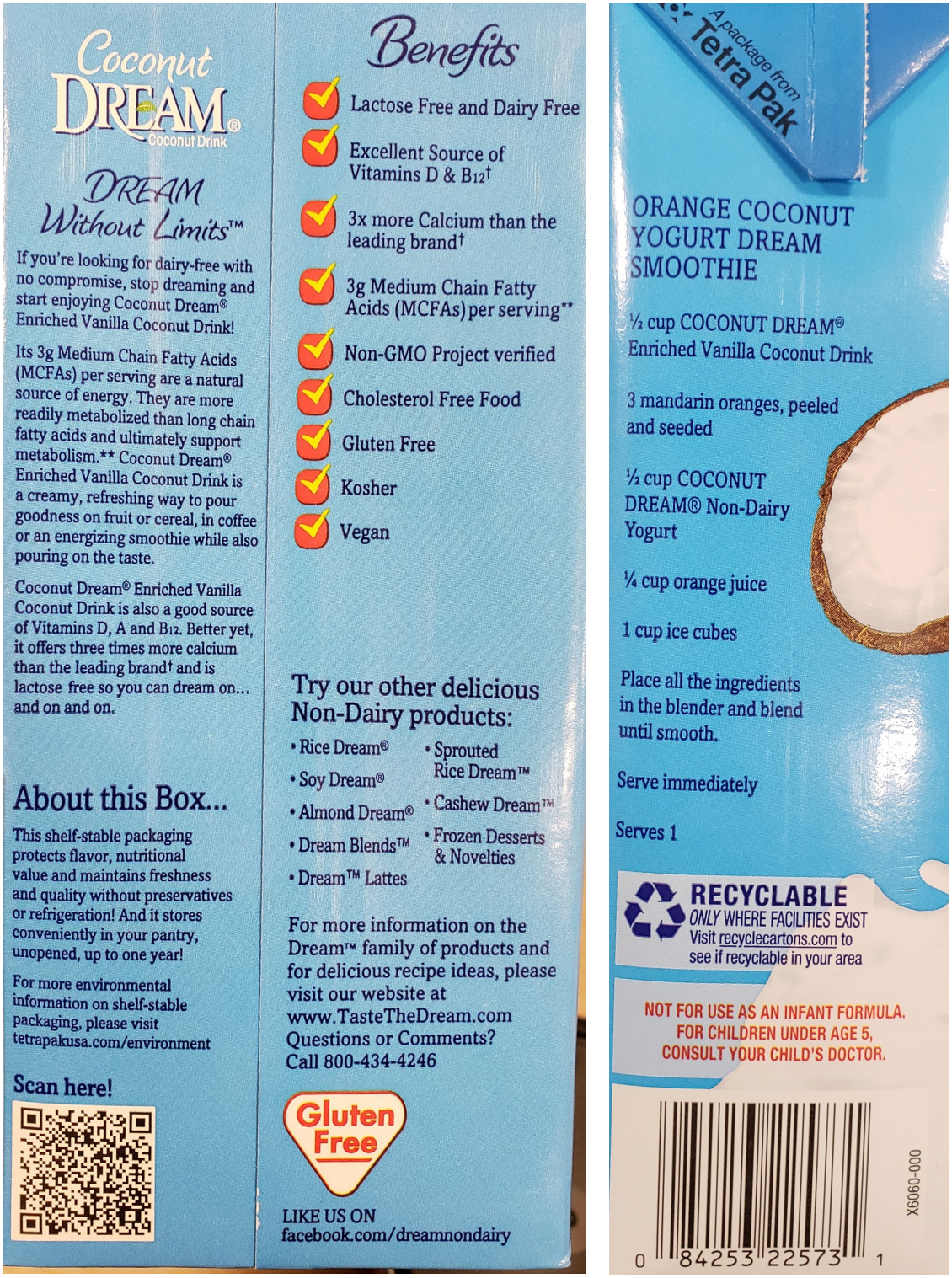
152. The Coconut Dream Product is sold in 32-fluid-ounce containers and in three flavors, Original, Unsweetened, and Vanilla.

153. A Representative exemplar of the Product's labeling sold during the Class Period is seen below. *See also* Appendix A (providing exemplars of each flavor's labeling).

[127] U.S. Department of Agriculture, "Scientific Report of the 2015 Dietary Guidelines Advisory Committee" (February 2015), Ch. 6 p.26.


VANILLA
ENRICHED
Vitamin D, A & B12
3x More Calcium
than the leading brand†
Coconut
DREAM®
Coconut Drink
90
Calories
Per Serving
2015
CHEFS
BEST
AWARD
EXCELLENCE
NON
GMO
Project
VERIFIED
nongmoproject.org
32 FL OZ (1QT) 946mL
PARVE


PROTECTS
Tetra Pak®
WHAT'S GOOD
STAYS FRESH 7-10 DAYS IN REFRIGERATOR AFTER OPENING.
Nutrition Facts
Serving Size 1 cup, 8 fl oz (240mL)
Servings Per Container 4
Amount Per Serving
Calories 90 Calories from Fat 45
% Daily Value*
Total Fat 5g** 8%
Saturated Fat 5g 25%
Trans Fat 0g
Polyunsaturated Fat 0g
Monounsaturated Fat 0g
Cholesterol 0mg 0%
Sodium 140mg 6%
Total Carbohydrate 9g 3%
Dietary Fiber 0g 0%
Sugars 8g
Protein 0g
Vitamin A 10% • Vitamin C 0%
Calcium 30% • Iron 2%
Vitamin D 25% • Vitamin B12 25%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:
Calories: 2,000 2,500
Total Fat Less than 65g 80g
Saturated Fat Less than 20g 25g
Cholesterol Less than 300mg 300mg
Sodium Less than 2,400mg 2,400mg
Total Carbohydrate 300g 375g
Dietary Fiber 25g 30g
INGREDIENTS: FILTERED WATER, COCONUT CREAM, EVAPORATED CANE SYRUP, NATURAL VANILLA FLAVOR WITH OTHER NATURAL FLAVORS, TRICALCIUM PHOSPHATE, CARRAGEENAN, GELLAN GUM, SEA SALT, VITAMIN A PALMITATE, VITAMIN D2, VITAMIN B12 (CYANOCOBALAMINE). CONTAINS: COCONUT
MANUFACTURED FOR DISTRIBUTION BY:
THE HAIN CELESTIAL GROUP, INC.
LAKE SUCCESS, NY 11042 USA
HAIN CELESTIAL
**COMPRISED OF 3g MEDIUM CHAIN FATTY ACIDS (MCFAs) PER SERVING – A FORM OF FATTY ACID WHICH IS MORE READILY METABOLIZED THAN LONG CHAIN FATTY ACIDS.
†COCONUT DREAM® COCONUT DRINK CONTAINS 300mg CALCIUM PER SERVING. THE LEADING BRAND CONTAINS 100mg CALCIUM PER SERVING. SEE NUTRITION INFORMATION FOR SATURATED FAT CONTENT.
© 2015 The Hain Celestial Group, Inc.



154. Except for immaterial differences, such as in the name of each flavor the labeling of each flavor is essentially identical, including as to the challenged claims which are identical regardless of flavor.

IV. Defendant Markets Coconut Dream with Misleading Health and Wellness Claims

155. Consumers are generally willing to pay more for foods they perceive as being healthy, or healthier than other alternatives. Nielsen's 2015 Global Health & Wellness Survey, for instance, found that "88% of those polled are willing to pay more for healthier foods."[128]

156. Hain is well aware of consumer preference for healthful foods and indeed holds itself out as a leader in health foods.

157. Hain employs a strategic marketing campaign intended to convince consumers that the Product is healthy, despite that it is almost entirely composed of unhealthy saturated fat (or saturated fat and added sugar).

158. Hain uses both its website and the Dream brand website to create the impression that it is a health food company and Dream Products are healthful.

159. For example, on its website, Hain claims "Our Purpose is to create and inspire A Healthier Way of Life"[129] and Hain claims to be "dedicated to making healthier, better-for-you food."[130]

160. Hain specifically promotes its Dream brand as a health food brand, stating: "Did you know that Dream got its start back in the 1970s? Back then, it was all about creating food that was better. Better quality. Better tasting. Better nutritionally. Better for you. We're proud to say these values have not changed."[131]

---

[128] Nancy Gagliardi, Forbes, Consumers Want Healthy Foods--And Will Pay More For Them (Feb. 18, 2015) (citing Neilson, 2015 Global Health & Wellness Survey, at 11 (Jan. 2015)).

[129] Hain Celestial Company Page, http://www.hain.com/company/ (last visited March 4, 2019).

[130] Hain Celestial Company History Page, http://www.hain.com/company/history/ (last visited March 4, 2019).

[131] Hain Celestial Home Page, http://www.hain.com/ (last visited March 4, 2019).

161. On the Dream website, Hain claims "FOOD IS MORE THAN NUTRITION. . . . *It's about how good we feel knowing we're putting something beneficial into our bodies, becoming stronger, healthier, more able*" (emphasis added).[132]

A. Hain Labels Coconut Dream with Misleading Health and Wellness Claims

162. In addition to using its online platforms to market the Product as healthy, Hain places statements directly on the Product's labeling that convey the concreate message that Coconut Dream is healthful.

163. The labeling of the Product bears false and misleading health and wellness claims. Further, the labeling claims are designed to conceal or distract consumers from noticing that Coconut Dream is high in saturated fat (or saturated fat and added sugar) or convince consumers that it is not harmful to health.

164. The Coconut Dream labeling lists as one of the Product's "Benefits" that it is a "Cholesterol Free Food." This claim, taken individually and in context of the label as a whole, even if literally true, is misleading because it suggests that by the absence of cholesterol that Coconut Dream is healthy and will not detrimentally affect blood cholesterol levels. This is false and misleading because the Product is unhealthy and contains dangerous amounts of saturated fat or (saturated fat and added sugar), the consumption of which detrimentally affects blood cholesterol levels and causes morbidity, including heart disease and stroke.

165. The Coconut Dream labeling further lists as one of the Product's "Benefits" that it has "3g Medium Chain Fatty Acids (MCFAs) per serving." The labeling also bears other similar claims regarding the Product's Medium Chain Fatty Acid content, including "Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy. They are more readily metabolized than long chain fatty acids and ultimately support metabolism. Coconut Dream . . . is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie while also pouring on the taste" and "Comprised of 3g Medium

[132] Dream Home Page, http://www.dreamplantbased.com/ (last visited March 4, 2019).

Chain Fatty Acids (MCFAs) Per Serving – A Form Of Fatty Acid Which Is More Readily Metabolized Than Long Chain Fatty Acids." These claims, taken individually and in context of the label as a whole, are false and misleading because they convey that the Product is healthful or at least the fats within the Product are healthful and will not harm health when in fact the Product is unhealthy as it contains dangerous amounts of saturated fat or (saturated fat and added sugar), the consumption of which detrimentally affects blood cholesterol levels and causes morbidity, including heart disease and stroke.

166. These claims are further false and misleading, both individually and especially in context of the label as a whole, because it is misleading to characterize the Product as containing "3g Medium Chain Fatty Acids" per serving. Each serving of the Product contains 5 grams of fat from coconut oil and in 5 grams of coconut oil there are approximately 3 grams of caprylic, capric, and lauric acid. Of these 3 grams, approximately 80 percent of this (or approximately 2.5 grams) is lauric acid. Lauric acid is not properly characterized as a medium chain fatty acid or medium chain triglyceride. In contrast to the shorter 8- and 10-carbon chain caprylic and capric fatty acids, 12-carbon chain lauric acid "behaves more as a long-chain fatty acid [in terms of digestion and metabolism]." Because of its greater length, most lauric acid cannot be transported to the liver without first being esterified into chylomicron triglycerides. In fact, "the majority of [lauric acid] (70%–75%) is absorbed with chylomicrons." "It is therefore inaccurate to consider coconut oil'" or in this case a Product whose fat content comes from coconut oil, "to contain either predominantly medium-chain fatty acids or predominantly medium-chain triglycerides."[133] "A common misconception is that the SAFA [saturated fatty acids] in coconut oil are mainly medium chain fatty acids [MCFAs], which are metabolized differently from long-chain SAFA [saturated fatty acids]. Actually, coconut oil is mainly C12:0 lauric acid and C14:0 myristic acid, which have potent

[133] Eyres L. et al., Coconut oil consumption and cardiovascular risk factors in humans, 74 Nutr. Rev. 267 (2016).

LDL-C-raising effects."[134] Thus, the representations that each serving contains 3 grams of Medium Chain Fatty Acids and that these are "more readily metabolized" and ultimately support metabolism are false and misleading.

167. Further, characterizing the presence of the MCFAs as a "benefit" misleadingly creates what is well known in both psychology and marketing as a "'health halo[],' in which a claim about single healthy quality gives rise to more positive impression of other, nonclaimed qualities."[135] As explained by Natalie Allen, clinical faculty member of the Biomedical Sciences Department at Missouri State University, "[t]he health halo effect is an phenomenon in which a food or food company is perceived as healthy based on one claim."[136] "Research has consistently found that claims on food Product labels have halo effects (Andrews et al., 2011); they have a positive effect on consumers' perceptions about Product characteristics not mentioned in the claim (Andrews et al., 2011; Schuldt, 2013)."[137] Specifically, surveys have shown that "[c]onsumers who viewed a favorable nutrient content claim had significantly more favorable evaluations of fat content and healthiness (internal

---

[134] Zock PL., et al., Progressing Insights into the Role of Dietary Fats in the Prevention of Cardiovascular Disease, Curr. Cardiol. Rep. 2016;18(11):111.

[135] Catherine Fernan *et al., Health Halo Effects from Product Titles and Nutrient Content Claims in the Context of "Protein" Bars*, Health Communication, at 2 (August 30, 2017), *available at* http://dx.doi.org/10.1080/10410236.2017.1358240.

[136] Melissa Kravitz, "*Brands use this psychological trick to make you think you're buying 'healthy' foods*", (April 18, 2017), *available at*: https://mic.com/articles/173866/brands-use-this-psychological-trick-to-make-you-think-you-re-buying-healthy-foods#.GIe05Cjk2.

[137] Irina A. Iles *et al., Nutrient Content Claims: How They Impact Perceived Healthfulness of Fortified Snack Foods and the Moderating Effects of Nutrition Facts Labels, Health Communication*, Health Communication, at 1 (August 20, 2017) ("Results indicated that the presence of an [Nutrient Content Claim] on a fortified snack food product increased perceived healthfulness of that product, perceptions of the presence of healthful nutrients, and intentions to consume the product. The presence of NCCs also decreased perceptions of the presence of certain less healthful nutrients"), *available at* http://dx.doi.org/10.1080/10410236.2017.1351277.

examples omitted)."[138] Thus, highlighting the presence of MCFAs, and characterizing them as a "Benefit[]" and "support[ing] metabolism" creates the impression that Coconut Dream, as a whole, is healthful. This claim is thus false and misleading both individually and in context of the label as a whole because Coconut Dream is actually unhealthy and contain dangerous amounts of saturated fat (or saturated fat and added sugar), the consumption of which causes morbidity including heart disease and stroke.

168. To further convince consumers that the Product is healthful, the labeling states that "Coconut Dream . . . is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie" and its "shelf-stable packaging protects . . . nutritional value and maintains freshness and quality without preservatives . . . ." These claims, taken individually and in context of the label as a whole, are false and misleading because they convey that the Product is healthful or at least will not harm health when in fact Coconut Dream is unhealthy as it contains dangerous amounts of saturated fat or (saturated fat and added sugar), the consumption of which detrimentally affects blood cholesterol levels and causes morbidity, including heart disease and stroke.

169. To further convince consumers that the Product is healthful, the labeling bears the claims: "Coconut Dream . . . is also a good source of Vitamins D, A and B12. Better yet, it offers three times more calcium than the leading brand . . . . ."; "Enriched Vitamin D, A & B12[;] 3x more Calcium than the leading brand"; "Excellent Source of Vitamins D, A & B12"; and "3x more Calcium than the leading brand". These claims, individually and in context of the label as a whole, are false and misleading, and further contribute to the health halo, creating the misleading impression that the Product as a whole is healthful, which is false and misleading because it is actually unhealthy and detriments health because it contains dangerous amounts of saturated fat (or saturated fat and added sugar), the consumption of which causes morbidity including heart disease and stroke.

---

[138] J. Craig Andrews *et al.*, *Consumer Generalization of Nutrient Content Claims in Advertising*, 62 J. Marketing 62, 67 (Oct. 1998).

170. In sum, the totality of the Coconut Dream labeling conveys the concrete message to a reasonable consumer that the Product is healthful, beneficial to health, or at least won't detriment health.

171. Defendant intended consumers to rely upon this message, which is false and misleading for the reasons stated herein. Its senior officers and directors allowed the Product to be sold with full knowledge or reckless disregard that the challenged claims are fraudulent, unlawful, and misleading.

V. Defendant Deceptively Omits, Intentionally Distracts From, and Otherwise Downplays Coconut Dreams' Negative Physiological Effects

172. In conjunction with marketing Coconut Dream with claims that convey that the Product is beneficial to health and won't detriment health (particularly cholesterol levels), Defendant intentionally omits material information regarding the dangers of consuming the Product. Defendant is under a duty to disclose this information to consumers because (a) Defendant is revealing some information about Coconut Dream—enough to convey it is healthful or conducive to good physical health—without revealing additional material information—that its consumption has detrimental health effects, (b) Defendant's deceptive omissions concern human health, and specifically the detrimental health consequences of consuming Coconut Dream, (c) Defendant was in a superior position to know of the dangers presented by the Product as a manufacturer of foods whose business depends upon food science and that holds itself out to be a leader in health foods, and (d) Defendant actively concealed material facts not known to Plaintiff and the Class.

173. As described above, in marketing the Product, Defendant regularly affirmatively uses certain words and phrases to suggest Coconut Dream is healthful or conducive to good health and physical well-being, which is misleading given the negative health consequences of consuming the Product. In light of these voluntary statements, Defendant has a duty to disclose information regarding the harmful effects of consuming the Product.

VI. The Labeling of Coconut Dream Violates California and Federal Law

A. Any Violation of Federal Food Labeling Statutes or Regulations is a Violation of California Law

174. Pursuant to the California Sherman Food, Drug, and Cosmetic Law, Cal. Health & Safety Code §§ 109875 *et. seq.* (the "Sherman Law"), California has adopted the federal food labeling requirements as its own, *see*, *e.g.*, *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."). *See also id.* § 110665.

175. The Federal Food, Drug, and Cosmetic Act expressly authorizes state regulations, such as the Sherman Law, that are "identical to the requirement[s]" of the FDCA and federal regulations. *See* 21 U.S.C. § 343-1.

176. Because the Sherman Law's requirements are identical to the requirements of the Federal Food, Drug, and Cosmetic Act and FDA regulations the Sherman law is explicitly authorized by the FDCA.

B. The Coconut Dreams' False and Misleading Labeling Claims Render the Product Misbranded Under California and Federal Law

177. Hain's deceptive statements described herein violate Cal. Health & Safety Code § 110660 and 21 U.S.C. § 343(a), which both deem a food misbranded if its labeling is "false or misleading in any particular."

178. As described above, the Product's labeling contains numerous statements that are false or misleading because they state, suggest, or imply that it is healthful, conducive to health, and won't detriment health, which render it misbranded.

179. In addition, the Product's labeling is misleading, and thus misbranded, because "it fails to reveal facts that are material in light of other representations." 21 C.F.R § 1.21.

180. Defendant's voluntary and affirmative misrepresentations challenged herein "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 omitted facts include the detrimental health consequences of consuming the Product.

181. Defendant similarly 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 likely to result from the usual consumption of Coconut Dream.

C. Coconut Dream is Misbranded Because its Labeling Makes Unauthorized Nutrient Content Claims

182. The Product is misbranded because its labeling bears unauthorized nutrient content claims.

183. Under 21 U.S.C. § 343(r)(1)(A), a claim that characterizes the level of a nutrient which is of the type required to be in the labeling of the food must be made in accordance with a regulation promulgated by the Secretary (or, by delegation, FDA) authorizing the use of such a claim. *See also* Cal. Health & Safety Code § 110670 ("Any food is misbranded if its labeling does not conform with the requirements for nutrient content or health claims" set by federal law.).

184. Characterizing the level of a nutrient on food labels and the labeling of a product without complying with the specific requirements pertaining to nutrient content claims for that nutrient renders a product misbranded under 21 U.S.C. § 343(r)(1)(A).

185. The Coconut Dream Product bears the labeling claim, "Cholesterol Free Food."

186. This phrase meets the definition of a nutrient content claim because it characterizes the level of cholesterol in the Product, *see* 21 C.F.R. § 101.13(b), but the Coconut Dream Product fails to meet the requirements for making the claim that it is cholesterol free.

187. Under 21 C.F.R. § 101.62(d)(1), to bear the nutrient content claim "cholesterol free" and similar claims that cholesterol is absent, a food must, *inter alia*, contain less than 2 grams of saturated fat per Reference Amount Customarily Consumed (RACC),[139] *id.* § 101.62(d)(1)(ii)(C), and must disclose the level of total fat in a serving in immediate proximity to the claim, *id.* § 101.62(d)(1)(ii)(D).

188. According to the Product's labeling, it contains 5 grams of saturated fat per 1 cup serving, *see supra* ¶¶ 12-14.

189. Further, the required disclosure statement regarding total fat is not present anywhere on the back panel of the label, much less in immediate proximity to the cholesterol free claim as required.

190. Accordingly, the Product does not meet the saturated fat requirement, instead containing a disqualifying amount of saturated fat, and does not make the mandatory total fat disclosure, making the Product ineligible for "cholesterol free" claims under 21 C.F.R. § 101.62(d)(1)(ii), and rendering it misbranded. *See* 21 U.S.C. § 343(r)(1)(A). *See also* 21 C.F.R. § 101.62(f) ("Any label or labeling containing any statement concerning fat, fatty acids, or cholesterol that is not in conformity with this section shall be deemed to be misbranded.").

191. The front panel of the Coconut Dream labeling bears nutrient content claims regarding the Product's calorie, vitamin, and mineral content. Specifically, it bears "Enriched Vitamin D, A & B12," "3x More Calcium than the leading brand," and "Calories Per Serving" claims.

192. The back panel of the Coconut Dream labeling also bears several nutrient content claims. Specifically it bears the following claims: "Excellent Source of Vitamins D & B12," "good source of Vitamins D, A and B12," "3X more Calcium than the leading

[139] The RACC for the Product is 1 cup, which may be expressed as 240 millimeters or 8 fluid ounces. *See* 21 C.F.R. § 101.12(b), Table 2 ("Milk, milk-substitute beverages . . . soy beverage.").

brand," "three times more calcium than the leading brand," "3g Medium Chain Fatty Acids (MCFAs) per serving" and "Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy."

193. These phrases meet the definition of nutrient content claims. *See* 21 C.F.R. § 101.13(b).

194. Under 21 C.F.R. § 101.13(h), a food that bears an express or implied nutrient content claim, and that contains more than 4 grams of saturated fat per serving, must also bear a disclosure statement on the label, immediately adjacent to the claim, referring the consumer to nutrition information for that nutrient, e.g., "See nutrition information for total fat and saturated fat content." 21 C.F.R. § 101.13(h)(1).

195. Despite that the Product contains 5 grams of saturated fat per serving, its labeling fails to bear the mandatory disclosure statement anywhere on the front or back panels of the Product's label, much less in immediate proximity to the claims. The disclaimer provides consumers with material nutrition information and the lack of the disclaimers renders the nutrient content claims unauthorized and the Coconut Dream Product misbranded.

196. Plaintiff and Class Members would not have purchased Coconut Dream if they knew it was misbranded pursuant to California and federal regulations because its labeling made unauthorized and misleading nutrient content claims and omitted material information and disclosures.

IV. Plaintiff's Purchase, Reliance, and Injury

197. As best she recalls, Evlyn Andrade-Heymsfield has purchased Unsweetened Coconut Dream approximately two to three times during the Class Period. She believes she purchased the Product from local Sprouts and Target stores. Ms. Andrade-Heymsfield consumed Coconut Dream after purchasing it.

198. At the time of purchase and when deciding to purchase Dream Coconut, Plaintiff read and relied on claims made on the Product's labeling including the following claims:

a. "Cholesterol Free Food";

b. "3g Medium Chain Fatty Acids (MCFAs) per serving";

c. "Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy. They are more readily metabolized than long chain fatty acids and ultimately support metabolism. Coconut Dream . . . is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie while also pouring on the taste";

d. "This shelf-stable packaging protects . . . nutritional value and maintains freshness and quality without preservatives . . . .";

e. "Comprised of 3g Medium Chain Fatty Acids (MCFAs) Per Serving – A Form Of Fatty Acid Which Is More Readily Metabolized Than Long Chain Fatty Acids";

f. "Enriched Vitamin D, A & B12[;] 3x More Calcium than the leading brand";

g. Excellent Source of Vitamins D & B12";

h. "3X more Calcium than the leading brand"; and

i. "Coconut Dream . . . is also a good source of Vitamins D, A and B12. Better yet, it offers three times more calcium than the leading brand . . . . ."

199. Based on these representations, Plaintiff believed the Product was healthful, beneficial to health, and that it would not detriment her health.

200. When purchasing Coconut Dream, Plaintiff was seeking a product to consume, which had the qualities described on the Product's labeling, namely, one that was a healthful and nutritious and that would not detriment her health such as by increasing her risk of CHD, stroke, and other morbidity.

201. The representations on the Product's labeling, however, were false and misleading, and had the capacity, tendency, and likelihood to confuse or confound Plaintiff and other consumers acting reasonably (including the putative Class) because, as described

in detail herein, the Product is not healthful but instead its consumption increases the risk of CHD, stroke, and other morbidity.

202. Plaintiff is not a nutritionist, food expert, or food scientist, but rather a lay consumer who did not have the specialized knowledge that Defendant had regarding the nutrients present in the Product or the effects of consuming the Product. At the time of purchase, Plaintiff was unaware that consuming Coconut Dream, adversely affects blood cholesterol levels and increases risk of CHD, stroke, and other morbidity.

203. Plaintiff acted reasonably in relying on the health and wellness claims that Hain intentionally placed on the Product's label with the intent to induce average consumers into purchasing the Product.

204. Plaintiff would not have purchased Coconut Dream if she knew that it was misbranded pursuant to California and FDA regulations in that many of its claims were prohibited due to its saturated fat content, that its labeling claims were false and misleading, and it omitted material information.

205. The Product cost more than similar products without misleading labeling, and would have cost less absent the false and misleading statements.

206. Plaintiff paid more for Coconut Dream, and would only have been willing to pay less, or unwilling to purchase it at all, absent the false and misleading labeling statements and omissions complained of herein.

207. For these reasons, the Product was worth less than what Plaintiff paid for it.

208. Instead of receiving a product that had actual healthful qualities, the Product Plaintiff received was one that is not healthful, but rather its consumption causes increased risk of CHD, stroke, and other morbidity.

209. Plaintiff lost money as a result of the deceptive claims and practices in that she did not receive what she paid for when purchasing the Product.

210. Plaintiff detrimentally altered her position and suffered damages in an amount equal to the amount she paid for the Product.

211. Plaintiff continues to regularly shop at stores where the Product is sold and continues to encounter them when she shops.

212. Without prospective injunctive relief requiring Defendant to label the Product in a truthful manner, she and other consumers will be unable to determine whether a future label bearing similar claims is valid and the Product has been reformulated and improved, or whether Defendant has simply continued or resumed its misleading behavior, and thus will be unable to decide how best to spend their money.

213. The continued use of the challenged claims on the Products' labels threatens to repeatedly infringe upon the substantive right California's consumer protection statutes give Plaintiff to be free from fraud in the marketplace.

214. If Defendant was enjoined from making the false and misleading claims, the market price for Coconut Dream would drop. While Plaintiff would not use the Product on a regular basis, if it did not bear false and misleading claims and she would not have to pay the premium associate with those claims Plaintiff would consider purchasing the Product again and use it in limited amounts on special occasions, for example, when a recipe calls for coconut milk.

215. Even aware of Defendant's misleading labeling, Plaintiff's substantive rights continue to be violated every time Plaintiff is exposed to the misleading labeling.

CLASS ACTION ALLEGATIONS

216. While reserving the right to redefine or amend the class definition prior to seeking class certification, pursuant to Federal Rule of Civil Procedure 23, Plaintiff seeks to represent a class of all persons in California 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 Coconut Dream for personal or household use, and not for resale or distribution (the "Class").

217. 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.

218. Questions of law and fact common to Plaintiff and the Class include:

a. whether Hain communicated a message regarding healthfulness of the Product 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 Hain's conduct violates public policy;

e. whether Hain'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.

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

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

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

222. 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.

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

224. 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.*

225. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

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

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

Fraudulent

228. A statement or practice is fraudulent under the UCL if it is likely to deceive the public, applying an objective reasonable consumer test.

229. As set forth herein, Hain's claims relating to Coconut Dream are likely to deceive reasonable consumers and the public.

Unlawful

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

a. The False Advertising Law, Cal. Bus. & Prof. Code §§ 17500 *et seq.*;

b. The Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750 *et seq.*;

c. The Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 *et seq.*; and

d. The California Sherman Food, Drug, and Cosmetic Law, Cal. Health & Safety Code §§ 109875 *et. seq.*

Unfair

231. Hain's conduct with respect to the labeling, advertising, and sale of Coconut Dream was unfair because Hain'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.

232. Hain's conduct with respect to the labeling, advertising, and sale of Coconut Dream 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.

233. Hain's conduct with respect to the labeling, advertising, and sale of Coconut Dream 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 sales and profits obtained by Hain through the misleading labeling and advertising does not outweigh the harm to Class Members who were deceived into purchasing Coconut Dream believing it was healthful when in fact it detriments health.

234. Hain profited from the sale of the falsely, deceptively, and unlawfully advertised Coconut Dream to unwary consumers.

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

236. Hain's conduct caused and continues to cause substantial injury to Plaintiff and other Class Members. Plaintiff has suffered injury in fact as a result of Hain's unlawful conduct.

237. In accordance with Bus. & Prof. Code § 17203, Plaintiff seeks an order enjoining Hain from continuing to conduct business through unlawful, unfair, and/or fraudulent acts and practices, and to commence a corrective advertising campaign.

238. Plaintiff and the Class also seek an order for the restitution of all monies from the sale of the Product, which was unjustly acquired through acts of unlawful competition.

SECOND CAUSE OF ACTION

Violations of the False Advertising Law,

Cal. Bus. & Prof. Code §§ 17500 *et seq.*

239. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

240. 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.

241. 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*.

242. As alleged herein, the advertisements, labeling, policies, acts, and practices of Hain relating to Coconut Dream misled consumers acting reasonably as to the healthfulness of the Product.

243. Plaintiff suffered injury in fact as a result of Hain's actions as set forth herein because Plaintiff purchased Coconut Dream in reliance on Hain's false and misleading marketing claims stating or suggesting that the Product, among other things, is healthful.

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

245. Hain profited from the sale of the falsely and deceptively advertised Product to unwary consumers.

246. As a result, Plaintiff, 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 Hain was unjustly enriched.

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

THIRD CAUSE OF ACTION

Violations of the Consumer Legal Remedies Act,

Cal. Civ. Code §§ 1750 *et seq.*

248. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

249. 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.

250. Hain's false and misleading labeling and other policies, acts, and practices were designed to, and did, induce the purchase and use of Coconut Dream for personal, family, or

household purposes by Plaintiff 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.

251. Hain profited from the sale of the falsely, deceptively, and unlawfully advertised Product to unwary consumers.

252. As a result, Plaintiff and the Class have suffered harm, and therefore seek (a) actual damages in the amount of the total retail sales price of Coconut Dream sold throughout the Class Period to all Class Members, (b) punitive damages in an amount sufficient to deter and punish, (c) injunctive relief in the form of modified advertising and a corrective advertising plan, (d) restitution, and (e) attorneys' fees and costs.

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

254. Pursuant to California Civil Code § 1782, on or around January 15, 2019, Plaintiff sent written notice of her claims and Hain's particular violations of the Act to Hain by certified mail, return receipt requested. Because Hain failed to implement the demanded remedial measures, Plaintiff on behalf of herself and the Class, seeks actual and punitive damages, including attorneys' fees.

255. Plaintiff, on behalf of herself and the Class, seeks restitution and injunctive relief under Civil Code § 1782(d).

256. In compliance with Cal. Civ. Code § 1780(d), Plaintiff's affidavit of venue is being filed concurrently herewith.

FOURTH CAUSE OF ACTION

Breaches of Express Warranties,

Cal. Com. Code § 2313(1)

257. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

258. Through the following claims on the Product's labeling, Hain made affirmations of fact or promises, or description of goods that the Product is "healthful" through the following labeling statements:

a. "Cholesterol Free Food";

b. "3g Medium Chain Fatty Acids (MCFAs) per serving";

c. "Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy. They are more readily metabolized than long chain fatty acids and ultimately support metabolism. Coconut Dream . . . is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie while also pouring on the taste";

d. "This shelf-stable packaging protects . . . nutritional value and maintains freshness and quality without preservatives . . . .";

e. "Comprised of 3g Medium Chain Fatty Acids (MCFAs) Per Serving – A Form Of Fatty Acid Which Is More Readily Metabolized Than Long Chain Fatty Acids";

f. "Enriched Vitamin D, A & B12[;] 3x More Calcium than the leading brand";

g. Excellent Source of Vitamins D & B12";

h. "3X more Calcium than the leading brand"; and

i. "Coconut Dream . . . is also a good source of Vitamins D, A and B12. Better yet, it offers three times more calcium than the leading brand . . . . ."

259. These and other representations were "part of the basis of the bargain," in that Plaintiff and the Class purchased the Product in reasonable reliance on those statements. Cal. Com. Code § 2313(1).

260. Hain breached its express warranties by selling a Product that is not healthful, but rather that negatively affects cholesterol levels, increasing risk of CHD, stroke, and other morbidity.

261. That breach actually and proximately caused injury in the form of the lost purchase price that Plaintiff and Class Members paid for the Product.

262. As a result, Plaintiff seeks, on behalf of herself and the Class, actual damages arising as a result of Hain's breaches of express warranty.

FIFTH CAUSE OF ACTION

Breach of Implied Warranty of Merchantability,

Cal. Com. Code § 2314

263. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

264. Hain, through its acts set forth herein, in the sale, marketing, and promotion of the Product, made representations to Plaintiff and the Class that regarding the health and nutrition properties of the Product through the following labeling promises:

a. "Cholesterol Free Food";

b. "3g Medium Chain Fatty Acids (MCFAs) per serving";

c. "Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy. They are more readily metabolized than long chain fatty acids and ultimately support metabolism. Coconut Dream . . . is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie while also pouring on the taste";

d. "This shelf-stable packaging protects . . . nutritional value and maintains freshness and quality without preservatives . . . .";

e. "Comprised of 3g Medium Chain Fatty Acids (MCFAs) Per Serving – A Form Of Fatty Acid Which Is More Readily Metabolized Than Long Chain Fatty Acids";

f. "Enriched Vitamin D, A & B12[;] 3x More Calcium than the leading brand";

g. Excellent Source of Vitamins D & B12";

h. "3X more Calcium than the leading brand"; and

i. "Coconut Dream . . . is also a good source of Vitamins D, A and B12. Better yet, it offers three times more calcium than the leading brand . . . . ."

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

266. However, Hain breached that implied warranty in that the Product is not healthful, but negatively affects cholesterol levels, increasing among other things risk of CHD and stroke, as set forth in detail herein.

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

268. Plaintiff and the Class have sustained damages as a proximate result of the foregoing breach of implied warranty in the amount of the Product's purchase price.

PRAYER FOR RELIEF

269. Wherefore, Plaintiff, on behalf of herself, all others similarly situated and the general public, prays for judgment against Hain 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 Plaintiff as class representative, and appointing undersigned counsel as class counsel;

b. An Order requiring Hain to bear the cost of class notice;

c. An Order compelling Hain to conduct a corrective advertising campaign;

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

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

f. An Order requiring Hain 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;

g. An Order requiring Hain to pay compensatory damages and punitive damages as permitted by law;

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

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

JURY DEMAND

270. Plaintiff hereby demands a trial by jury on all issues so triable.

Dated: March 5, 2019

/s/ Paul K. Joseph
THE LAW OFFICE OF PAUL K. JOSEPH, PC
PAUL K. JOSEPH
paul@pauljosephlaw.com
4125 W. Point Loma Blvd., No. 309
San Diego, CA 92110
Phone: (619) 767-0356
Fax: (619) 331-2943

Counsel for Plaintiff and the Proposed Class

Appendix A

Coconut Dream Original

Coconut DREAM® Coconut Drink

DREAM Without Limits™

If you're looking for dairy-free with no compromise, stop dreaming and start enjoying Coconut Dream® Enriched Original Coconut Drink!

Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy. They are more readily metabolized than long chain fatty acids and ultimately support metabolism.** Coconut Dream® Enriched Original Coconut Drink is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie while also pouring on the taste.

Coconut Dream® Enriched Original Coconut Drink is also a good source of Vitamins D, A and B12. Better yet, it offers three times more calcium than the leading brand† and is lactose free so you can dream on...and on and on.

About this Box...

This shelf-stable packaging protects flavor, nutritional value and maintains freshness and quality without preservatives or refrigeration! And it stores conveniently in your pantry, unopened, up to one year!

For more environmental information on shelf-stable packaging, please visit tetrapakusa.com/environment

Scan here!

Benefits

- Lactose Free and Dairy Free
- Excellent Source of Vitamins D & B12†
- 3x more Calcium than the leading brand†
- 3g Medium Chain Fatty Acids (MCFAs) per serving**
- Non-GMO Project verified
- Cholesterol Free Food
- Gluten Free
- Kosher
- Vegan

Try our other delicious Non-Dairy products:

- Rice Dream®
- Soy Dream®
- Almond Dream®
- Dream Blends™
- Dream™ Lattes
- Sprouted Rice Dream™
- Cashew Dream™
- Frozen Desserts & Novelties

For more information on the Dream™ family of products and for delicious recipe ideas, please visit our website at www.TasteTheDream.com
Questions or Comments?
Call 800-434-4246

Gluten Free

LIKE US ON
facebook.com/dreamnondairy

A package from Tetra Pak

COCONUT RASPBERRY SMOOTHIE

2 cups COCONUT DREAM® Enriched Original Coconut Drink

2 cups frozen raspberries

tablespoon honey

lace all the ingredients the blender and blend until smooth.

Divide between 2 glasses and serve immediately

Serves 2

RECYCLABLE
ONLY WHERE FACILITIES EXIST
Visit recyclecartons.com to see if recyclable in your area

NOT FOR USE AS AN INFANT FORMULA.
FOR CHILDREN UNDER AGE 5,
CONSULT YOUR CHILD'S DOCTOR.

0 84253 22572 4

X6058-000

Coconut Dream Unsweetened

Coconut DREAM® Coconut Drink
UNSWEETENED

DREAM Without Limits™

If you're looking for dairy-free with no compromise, stop dreaming and start enjoying Coconut Dream® Enriched Original Unsweetened Coconut Drink!

Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy. They are more readily metabolized than long chain fatty acids and ultimately support metabolism.** Coconut Dream® Enriched Original Unsweetened Coconut Drink is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie while also pouring on the taste.

Coconut Dream® Enriched Original Unsweetened Coconut Drink is also a good source of Vitamins D, A and B12. Better yet, it offers three times more calcium than the leading brand† and is lactose free so you can dream on...and on and on.

About this Box...

This shelf-stable packaging protects flavor, nutritional value and maintains freshness and quality without preservatives or refrigeration! And it stores conveniently in your pantry, unopened, up to one year!

For more environmental information on shelf-stable packaging, please visit tetrapakusa.com/environment

Scan here!

Benefits

- Less than 1g of sugar, that is derived naturally, not added
- Lactose Free and Dairy Free
- Excellent Source of Vitamins D & B12†
- 3x more Calcium than the leading brand†
- 3g Medium Chain Fatty Acids (MCFAs) per serving**
- Non-GMO Project verified
- Cholesterol Free Food
- Gluten Free
- Kosher
- Vegan

Try our other delicious Non-Dairy products:

- Rice Dream®
- Soy Dream®
- Almond Dream®
- Dream Blends™
- Dream™ Lattes
- Sprouted Rice Dream™
- Cashew Dream™
- Frozen Desserts & Novelties

For more information on the Dream™ family of products and for delicious recipe ideas, please visit our website at www.TasteTheDream.com
Questions or Comments?
Call 800-434-4246

Gluten Free

LIKE US ON
facebook.com/dreamnondairy

A package from Tetra Pak

BANANA AND COCONUT SMOOTHIES

1½ cups COCONUT DREAM® Enriched Original Unsweetened Coconut Drink

½ cup ice

½ cup ALMOND DREAM® Vanilla Non-Dairy Frozen Dessert.

½ banana

Place all the ingredients in the blender and blend until smooth.

Divide between 2 glasses and serve immediately

Serves 2

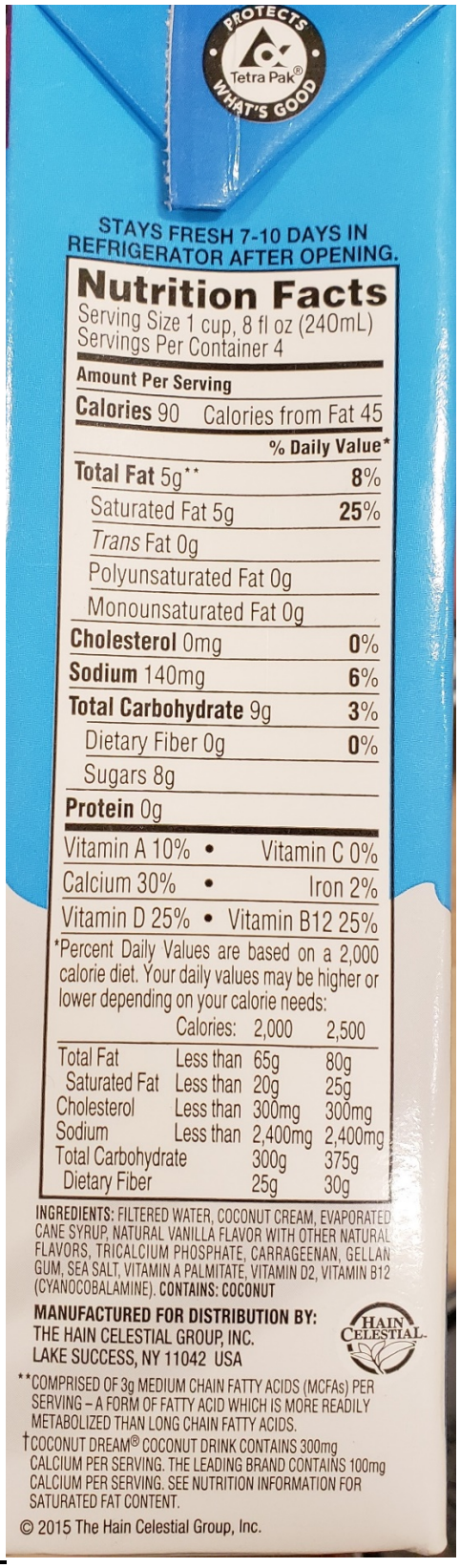
RECYCLABLE
ONLY WHERE FACILITIES EXIST
Visit recyclecartons.com to see if recyclable in your area

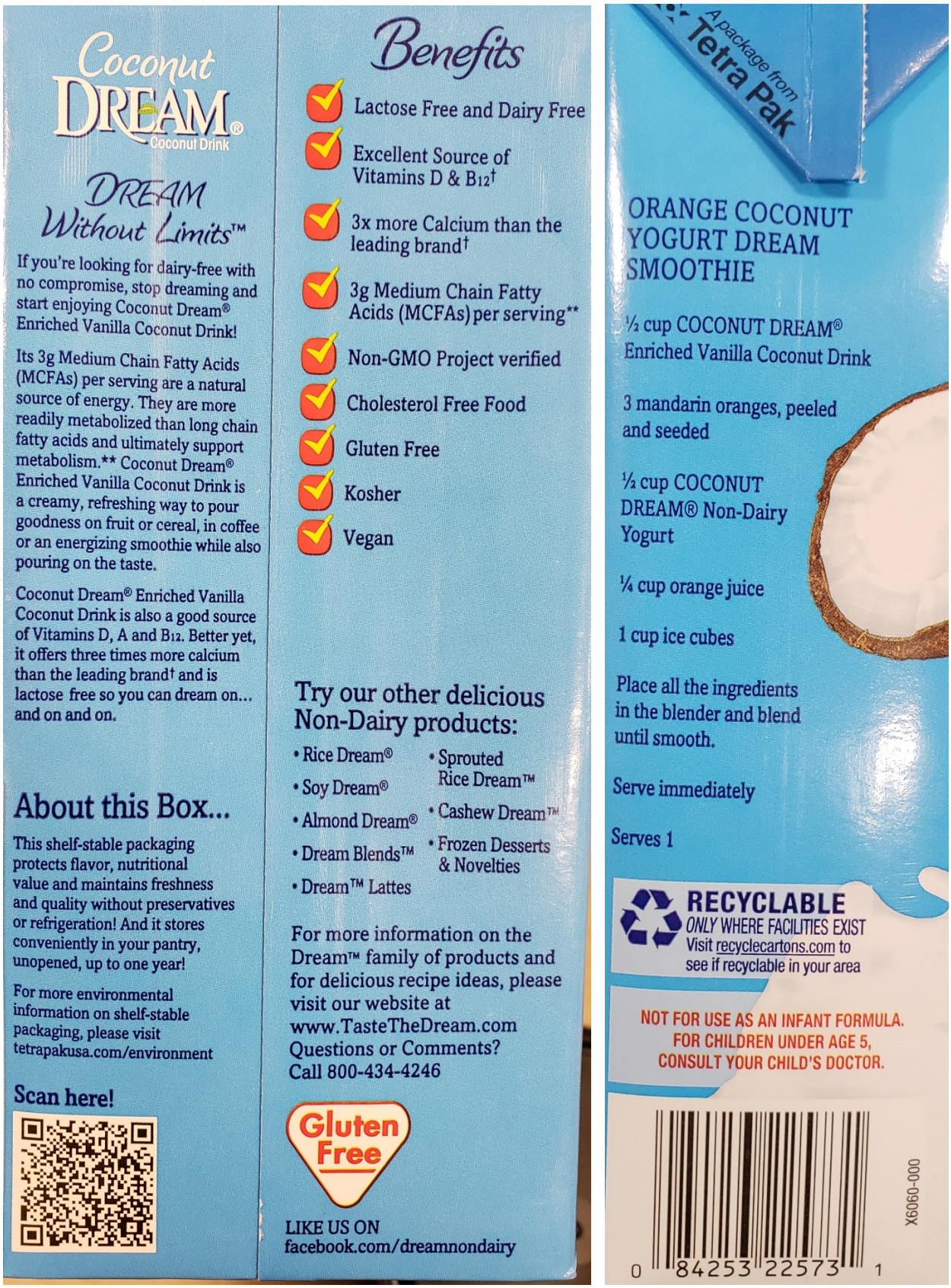
NOT FOR USE AS AN INFANT FORMULA.
FOR CHILDREN UNDER AGE 5,
CONSULT YOUR CHILD'S DOCTOR.

0 84253 22571 7

X6059-000

Coconut Dream Vanilla





Coconut DREAM® Coconut Drink

DREAM Without Limits™

If you're looking for dairy-free with no compromise, stop dreaming and start enjoying Coconut Dream® Enriched Vanilla Coconut Drink!

Its 3g Medium Chain Fatty Acids (MCFAs) per serving are a natural source of energy. They are more readily metabolized than long chain fatty acids and ultimately support metabolism.** Coconut Dream® Enriched Vanilla Coconut Drink is a creamy, refreshing way to pour goodness on fruit or cereal, in coffee or an energizing smoothie while also pouring on the taste.

Coconut Dream® Enriched Vanilla Coconut Drink is also a good source of Vitamins D, A and B12. Better yet, it offers three times more calcium than the leading brand† and is lactose free so you can dream on... and on and on.

About this Box...

This shelf-stable packaging protects flavor, nutritional value and maintains freshness and quality without preservatives or refrigeration! And it stores conveniently in your pantry, unopened, up to one year!

For more environmental information on shelf-stable packaging, please visit tetrapakusa.com/environment

Scan here!

Benefits

- Lactose Free and Dairy Free
- Excellent Source of Vitamins D & B12†
- 3x more Calcium than the leading brand†
- 3g Medium Chain Fatty Acids (MCFAs) per serving**
- Non-GMO Project verified
- Cholesterol Free Food
- Gluten Free
- Kosher
- Vegan

Try our other delicious Non-Dairy products:

- Rice Dream®
- Soy Dream®
- Almond Dream®
- Dream Blends™
- Dream™ Lattes
- Sprouted Rice Dream™
- Cashew Dream™
- Frozen Desserts & Novelties

For more information on the Dream™ family of products and for delicious recipe ideas, please visit our website at www.TasteTheDream.com
Questions or Comments?
Call 800-434-4246

Gluten Free

LIKE US ON
facebook.com/dreamnondairy

A package from Tetra Pak

ORANGE COCONUT YOGURT DREAM SMOOTHIE

½ cup COCONUT DREAM® Enriched Vanilla Coconut Drink

3 mandarin oranges, peeled and seeded

½ cup COCONUT DREAM® Non-Dairy Yogurt

¼ cup orange juice

1 cup ice cubes

Place all the ingredients in the blender and blend until smooth.

Serve immediately

Serves 1

RECYCLABLE
ONLY WHERE FACILITIES EXIST
Visit recyclecartons.com to see if recyclable in your area

NOT FOR USE AS AN INFANT FORMULA.
FOR CHILDREN UNDER AGE 5,
CONSULT YOUR CHILD'S DOCTOR.

0 84253 22573 1

000-09090X

JS 44 (Rev. 06/17)

CIVIL COVER SHEET

The JS 44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. *(SEE INSTRUCTIONS ON NEXT PAGE OF THIS FORM.)*

I. (a) PLAINTIFFS

EVLYN ANDRADE-HEYMSFIELD, on behalf of herself, all others similarly situated, and the general public

(b) County of Residence of First Listed Plaintiff SAN DIEGO
(EXCEPT IN U.S. PLAINTIFF CASES)

(c) Attorneys *(Firm Name, Address, and Telephone Number)* The Law Office of Paul K. Joseph, PC; 4125 W. Point Loma Blvd., No. 309; San Diego, CA 92110; (619) 767-0356

DEFENDANTS

THE HAIN CELESTIAL GROUP, INC.

County of Residence of First Listed Defendant
(IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE TRACT OF LAND INVOLVED.

Attorneys *(If Known)*

'19CV433 AJB LL

II. BASIS OF JURISDICTION *(Place an "X" in One Box Only)*

- ☐ 1 U.S. Government Plaintiff
- ☐ 3 Federal Question *(U.S. Government Not a Party)*
- ☐ 2 U.S. Government Defendant
- ☒ 4 Diversity *(Indicate Citizenship of Parties in Item III)*

III. CITIZENSHIP OF PRINCIPAL PARTIES *(Place an "X" in One Box for Plaintiff and One Box for Defendant)*

(For Diversity Cases Only)

	PTF	DEF		PTF	DEF
Citizen of This State	☒ 1	☐ 1	Incorporated *or* Principal Place of Business In This State	☐ 4	☐ 4
Citizen of Another State	☐ 2	☐ 2	Incorporated *and* Principal Place of Business In Another State	☐ 5	☒ 5
Citizen or Subject of a Foreign Country	☐ 3	☐ 3	Foreign Nation	☐ 6	☐ 6

IV. NATURE OF SUIT *(Place an "X" in One Box Only)*

Click here for: Nature of Suit Code Descriptions.

CONTRACT
- ☐ 110 Insurance
- ☐ 120 Marine
- ☐ 130 Miller Act
- ☐ 140 Negotiable Instrument
- ☐ 150 Recovery of Overpayment & Enforcement of Judgment
- ☐ 151 Medicare Act
- ☐ 152 Recovery of Defaulted Student Loans (Excludes Veterans)
- ☐ 153 Recovery of Overpayment of Veteran's Benefits
- ☐ 160 Stockholders' Suits
- ☐ 190 Other Contract
- ☐ 195 Contract Product Liability
- ☐ 196 Franchise

REAL PROPERTY
- ☐ 210 Land Condemnation
- ☐ 220 Foreclosure
- ☐ 230 Rent Lease & Ejectment
- ☐ 240 Torts to Land
- ☐ 245 Tort Product Liability
- ☐ 290 All Other Real Property

TORTS

PERSONAL INJURY
- ☐ 310 Airplane
- ☐ 315 Airplane Product Liability
- ☐ 320 Assault, Libel & Slander
- ☐ 330 Federal Employers' Liability
- ☐ 340 Marine
- ☐ 345 Marine Product Liability
- ☐ 350 Motor Vehicle
- ☐ 355 Motor Vehicle Product Liability
- ☐ 360 Other Personal Injury
- ☐ 362 Personal Injury - Medical Malpractice

PERSONAL INJURY
- ☐ 365 Personal Injury - Product Liability
- ☐ 367 Health Care/ Pharmaceutical Personal Injury Product Liability
- ☐ 368 Asbestos Personal Injury Product Liability

PERSONAL PROPERTY
- ☒ 370 Other Fraud
- ☐ 371 Truth in Lending
- ☐ 380 Other Personal Property Damage
- ☐ 385 Property Damage Product Liability

CIVIL RIGHTS
- ☐ 440 Other Civil Rights
- ☐ 441 Voting
- ☐ 442 Employment
- ☐ 443 Housing/ Accommodations
- ☐ 445 Amer. w/Disabilities - Employment
- ☐ 446 Amer. w/Disabilities - Other
- ☐ 448 Education

PRISONER PETITIONS

Habeas Corpus:
- ☐ 463 Alien Detainee
- ☐ 510 Motions to Vacate Sentence
- ☐ 530 General
- ☐ 535 Death Penalty

Other:
- ☐ 540 Mandamus & Other
- ☐ 550 Civil Rights
- ☐ 555 Prison Condition
- ☐ 560 Civil Detainee - Conditions of Confinement

FORFEITURE/PENALTY
- ☐ 625 Drug Related Seizure of Property 21 USC 881
- ☐ 690 Other

LABOR
- ☐ 710 Fair Labor Standards Act
- ☐ 720 Labor/Management Relations
- ☐ 740 Railway Labor Act
- ☐ 751 Family and Medical Leave Act
- ☐ 790 Other Labor Litigation
- ☐ 791 Employee Retirement Income Security Act

IMMIGRATION
- ☐ 462 Naturalization Application
- ☐ 465 Other Immigration Actions

BANKRUPTCY
- ☐ 422 Appeal 28 USC 158
- ☐ 423 Withdrawal 28 USC 157

PROPERTY RIGHTS
- ☐ 820 Copyrights
- ☐ 830 Patent
- ☐ 835 Patent - Abbreviated New Drug Application
- ☐ 840 Trademark

SOCIAL SECURITY
- ☐ 861 HIA (1395ff)
- ☐ 862 Black Lung (923)
- ☐ 863 DIWC/DIWW (405(g))
- ☐ 864 SSID Title XVI
- ☐ 865 RSI (405(g))

FEDERAL TAX SUITS
- ☐ 870 Taxes (U.S. Plaintiff or Defendant)
- ☐ 871 IRS—Third Party 26 USC 7609

OTHER STATUTES
- ☐ 375 False Claims Act
- ☐ 376 Qui Tam (31 USC 3729(a))
- ☐ 400 State Reapportionment
- ☐ 410 Antitrust
- ☐ 430 Banks and Banking
- ☐ 450 Commerce
- ☐ 460 Deportation
- ☐ 470 Racketeer Influenced and Corrupt Organizations
- ☐ 480 Consumer Credit
- ☐ 490 Cable/Sat TV
- ☐ 850 Securities/Commodities/ Exchange
- ☐ 890 Other Statutory Actions
- ☐ 891 Agricultural Acts
- ☐ 893 Environmental Matters
- ☐ 895 Freedom of Information Act
- ☐ 896 Arbitration
- ☐ 899 Administrative Procedure Act/Review or Appeal of Agency Decision
- ☐ 950 Constitutionality of State Statutes

V. ORIGIN *(Place an "X" in One Box Only)*

☒ 1 Original Proceeding ☐ 2 Removed from State Court ☐ 3 Remanded from Appellate Court ☐ 4 Reinstated or Reopened ☐ 5 Transferred from Another District *(specify)* ☐ 6 Multidistrict Litigation - Transfer ☐ 8 Multidistrict Litigation - Direct File

VI. CAUSE OF ACTION

Cite the U.S. Civil Statute under which you are filing ***(Do not cite jurisdictional statutes unless diversity)***:
28 U.S.C.S. 1332(d)(2) (the Class Action Fairness Act)

Brief description of cause: False Advertising (Violation of California UCL, FAL, CLRA, and Breach of Warranties

VII. REQUESTED IN COMPLAINT:

☒ CHECK IF THIS IS A **CLASS ACTION** UNDER RULE 23, F.R.Cv.P.

DEMAND $

CHECK YES only if demanded in complaint:

JURY DEMAND: ☒ Yes ☐ No

VIII. RELATED CASE(S) IF ANY

(See instructions):

JUDGE _____ DOCKET NUMBER _____

DATE
2/27/19

SIGNATURE OF ATTORNEY OF RECORD
/s/ Paul K. Joseph

FOR OFFICE USE ONLY

RECEIPT # _____ AMOUNT _____ APPLYING IFP _____ JUDGE _____ MAG. JUDGE _____

INSTRUCTIONS FOR ATTORNEYS COMPLETING CIVIL COVER SHEET FORM JS 44

Authority For Civil Cover Sheet

The JS 44 civil cover sheet and the information contained herein neither replaces nor supplements the filings and service of pleading or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. Consequently, a civil cover sheet is submitted to the Clerk of Court for each civil complaint filed. The attorney filing a case should complete the form as follows:

I.(a) **Plaintiffs-Defendants.** Enter names (last, first, middle initial) of plaintiff and defendant. If the plaintiff or defendant is a government agency, use only the full name or standard abbreviations. If the plaintiff or defendant is an official within a government agency, identify first the agency and then the official, giving both name and title.

(b) **County of Residence.** For each civil case filed, except U.S. plaintiff cases, enter the name of the county where the first listed plaintiff resides at the time of filing. In U.S. plaintiff cases, enter the name of the county in which the first listed defendant resides at the time of filing. (NOTE: In land condemnation cases, the county of residence of the "defendant" is the location of the tract of land involved.)

(c) **Attorneys.** Enter the firm name, address, telephone number, and attorney of record. If there are several attorneys, list them on an attachment, noting in this section "(see attachment)".

II. **Jurisdiction.** The basis of jurisdiction is set forth under Rule 8(a), F.R.Cv.P., which requires that jurisdictions be shown in pleadings. Place an "X" in one of the boxes. If there is more than one basis of jurisdiction, precedence is given in the order shown below.
United States plaintiff. (1) Jurisdiction based on 28 U.S.C. 1345 and 1348. Suits by agencies and officers of the United States are included here.
United States defendant. (2) When the plaintiff is suing the United States, its officers or agencies, place an "X" in this box.
Federal question. (3) This refers to suits under 28 U.S.C. 1331, where jurisdiction arises under the Constitution of the United States, an amendment to the Constitution, an act of Congress or a treaty of the United States. In cases where the U.S. is a party, the U.S. plaintiff or defendant code takes precedence, and box 1 or 2 should be marked.
Diversity of citizenship. (4) This refers to suits under 28 U.S.C. 1332, where parties are citizens of different states. When Box 4 is checked, the citizenship of the different parties must be checked. (See Section III below**; NOTE: federal question actions take precedence over diversity cases.**)

III. **Residence (citizenship) of Principal Parties.** This section of the JS 44 is to be completed if diversity of citizenship was indicated above. Mark this section for each principal party.

IV. **Nature of Suit.** Place an "X" in the appropriate box. If there are multiple nature of suit codes associated with the case, pick the nature of suit code that is most applicable. Click here for: Nature of Suit Code Descriptions.

V. **Origin.** Place an "X" in one of the seven boxes.
Original Proceedings. (1) Cases which originate in the United States district courts.
Removed from State Court. (2) Proceedings initiated in state courts may be removed to the district courts under Title 28 U.S.C., Section 1441. When the petition for removal is granted, check this box.
Remanded from Appellate Court. (3) Check this box for cases remanded to the district court for further action. Use the date of remand as the filing date.
Reinstated or Reopened. (4) Check this box for cases reinstated or reopened in the district court. Use the reopening date as the filing date.
Transferred from Another District. (5) For cases transferred under Title 28 U.S.C. Section 1404(a). Do not use this for within district transfers or multidistrict litigation transfers.
Multidistrict Litigation – Transfer. (6) Check this box when a multidistrict case is transferred into the district under authority of Title 28 U.S.C. Section 1407.
Multidistrict Litigation – Direct File. (8) Check this box when a multidistrict case is filed in the same district as the Master MDL docket.
PLEASE NOTE THAT THERE IS NOT AN ORIGIN CODE 7. Origin Code 7 was used for historical records and is no longer relevant due to changes in statue.

VI. **Cause of Action.** Report the civil statute directly related to the cause of action and give a brief description of the cause. **Do not cite jurisdictional statutes unless diversity.** Example: U.S. Civil Statute: 47 USC 553 Brief Description: Unauthorized reception of cable service

VII. **Requested in Complaint.** Class Action. Place an "X" in this box if you are filing a class action under Rule 23, F.R.Cv.P.
Demand. In this space enter the actual dollar amount being demanded or indicate other demand, such as a preliminary injunction.
Jury Demand. Check the appropriate box to indicate whether or not a jury is being demanded.

VIII. **Related Cases.** This section of the JS 44 is used to reference related pending cases, if any. If there are related pending cases, insert the docket numbers and the corresponding judge names for such cases.

Date and Attorney Signature. Date and sign the civil cover sheet.

THE LAW OFFICE OF
PAUL K. JOSEPH, PC
PAUL K. JOSEPH (SBN 287057)
paul@pauljosephlaw.com
4125 W. Pt. Loma Blvd. No. 309
San Diego, CA 92110
Phone: (619) 767-0356
Fax: (619) 331-2943
Counsel for Plaintiff and the Proposed Class

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

EVLYN ANDRADE-HEYMSFIELD, on behalf of herself, all others similarly situated, and the general public,

Plaintiff,

v.

THE HAIN CELESTIAL GROUP, INC.,

Defendant.

Case No.: **'19CV433 AJB LL**

CONSUMERS LEGAL REMEDIES ACT VENUE AFFIDAVIT [Cal. Civ Code § 1780(d)]

I, Evlyn Andrade-Heymsfield, declare as follows:

1. I am the Plaintiff in this action. I make this affidavit as required by California Civil Code § 1780(d).

2. The Complaint in this action is filed in a proper place for the trial of this action because I reside in San Diego County.

3. The Complaint in this action is further filed in a proper place for the trial of this action because the transactions that are the subject of the action occurred in San Diego County, California.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed this 26th day of February, 2019, at Santee, California.

Evlyn Andrade-Heymsfield