IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK

MELODY DIGREGORIO, ERIC FISHON, KERRY AUSTIN, and NAFEESHA MADYUN, on behalf of themselves, all others similarly situated, and the general public, Plaintiffs, v. KELLOGG SALES COMPANY, Defendant.	Case No.: 3:19-CV-0632 (GTS/ATB) CLASS ACTION **COMPLAINT FOR VIOLATIONS OF N.Y. GEN. BUS. L. §§ 349 & 350; FRAUD; INTENTIONAL & NEGLIGENT MISREPRESENTATION; BREACH OF EXPRESS & IMPLIED WARRANTIES; UNJUST ENRICHMENT; AND RESTITUTION** DEMAND FOR JURY TRIAL

Plaintiffs Melody DiGregorio, Eric Fishon, Kerry Austin, and Nafeesha Madyun ("plaintiffs"), on behalf of themselves, all others similarly situated, and the general public, by and through their undersigned counsel, hereby bring this action against Kellogg Sales Company ("Kellogg"), and allege the following upon their own knowledge, or where they lack personal knowledge, upon information and belief, including the investigation of their counsel.

INTRODUCTION

1. The scientific evidence is compelling: Excessive consumption of added sugar is ***toxic*** to the human body. Experimentally sound, peer-reviewed studies and meta-analyses convincingly show that consuming excessive added sugar—any amount above approximately 5% of daily caloric intake—greatly increases the risk

of heart disease, diabetes, liver disease, and a wide variety of other chronic morbidity.

2. Despite the compelling evidence that sugar acts as a chronic liver toxin, detrimentally affecting health, to increase the price, market share, and sales of its products, Kellogg leverages a policy and practice of marketing high-sugar cereals and bars with health and wellness claims, which are deceptive because they are incompatible with the dangers of the excessive sugar consumption to which these foods contribute.

3. Plaintiffs bring this action against Kellogg on behalf of themselves, other New York consumers, and the general public, primarily to enjoin Kellogg from using deceptive health and wellness claims to market high-sugar foods, and to recover the Class's damages.

THE PARTIES

4. Plaintiff Melody DiGregorio is a resident of Stamford, New York.

5. Plaintiff Eric Fishon is a resident of Happauge, New York.

6. Plaintiff Kerry Austin is a resident of Rochester, New York.

7. Plaintiff Nafeesha Madyun is a resident of New York, New York.

8. Defendant Kellogg Sales Company is a Delaware corporation with its principal place of business at One Kellogg Square, Battle Creek, Michigan 49016.

JURISDICTION & VENUE

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

10. The Court has personal jurisdiction over Kellogg because Kellogg is authorized to transact business in New York. Further, Kellogg advertised, marketed, distributed, offered for sale, and sold the products at issue to consumers in New York, transacting business in Delaware County, in this Northern District of New York, including without limitation through extensive on-shelf presence in Delaware County, and online marketing intended to reach consumers in Delaware County. Moreover, Kellogg has sufficient purposeful, systematic, and continuous minimum contacts with New York, and has sufficiently availed itself of the markets of New York, so as to render the exercise of personal jurisdiction by this Court permissible.

11. Venue is proper in this judicial district because a substantial portion of the acts forming the basis for the claims occurred in this district, and because Kellogg transacts substantial business in this district.

FACTS REGARDING ADDED SUGAR CONSUMPTION

A. There Has Been a Recent Rise in Human Sugar Consumption

12. 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.

13. 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 during digestion, and glucose is the form of sugar transported around the body in the bloodstream, and used by the cells for energy.

14. 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.

15. 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.[1]

16. 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.

17. For most of that time, Americans' sugar consumption was almost exclusively table sugar, with only small amounts of glucose and fructose ingested from fruit.[2] And sugar was a condiment, added to coffee or tea, with control over the amount eaten.

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[1] 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"].

[2] *Id.*

18. In the 1960s, the food industry developed technologies to extract starch from corn, then convert it to glucose, some of which could then be converted to fructose, leading to the development of corn-derived sweeteners, most notably high-fructose corn syrup (HFCS).[3]

19. Although HFCS is comprised of both fructose and glucose, unlike with sucrose, the fructose is not chemically bound to the glucose in a new molecule. Thus the fructose in HFCS is referred to as "free" fructose.

20. HFCS can be produced with different fructose-to-glucose ratios. The most common are HFCS-42 and HFCS-55, containing 42% and 55% fructose. Some HFCS, however, can be as much as 90% fructose, *i.e.*, HFCS-90. Food manufacturers—including Kellogg—have recently begun referring to HFCS-90 on food label ingredients statements as simply "fructose."

21. 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, 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,

[3] *Id.* (citation omitted).

vegetables, and meat have essentially no fructose. Thus, until relatively recently, human beings have had little dietary exposure to fructose.[4]

22. But the low cost and long shelf-life of HFCS has contributed to a rapid increase in its consumption over the last 45 years, and thus the consumption of fructose. Between 1970 and 2000, the United States' yearly per capita HFCS consumption went from 0.292 kg per person, to 33.4 kg per person, a greater than 100-fold increase.[5]

23. Today, the majority of sugars in typical American diets are added to foods during processing, preparation, or at the table.[6] The two primary sources of added sugar in processed food are HFCS and sucrose (*i.e.*, granulated sugar used, for example, in baked goods). The link between sugar intake and obesity is mainly driven by sucrose, the type of sugar most commonly added to foods like breakfast

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

[5] 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 (2004) [hereinafter "Bray, HFCS Role in Obesity Epidemic"].

[6] 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.

cereals.[7] Added sugar is in more than 74% of processed foods,[8] under more than 60 different names.[9] Although the tendency is to associate sugar with sweets, added sugar is found in many savory processed foods, like bread, soup, and pasta sauce.

24. 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 U.S.[10] The American Heart Association found that between 1970 and 2005, sugars available for consumption increased by an average of 76 calories per

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[7] Campbell R, Tasevska N, Jackson KG, et al. Association between urinary biomarkers of total sugars intake and measures of obesity in a cross-sectional study. PLoS ONE. 2017;12(7):e0179508. [hereinafter "Campbell et al., Association between urinary biomarkers"].

[8] 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).

[9] 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, 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.

[10] Bray, How Bad is Fructose?, *supra* n.4, 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"]).

day, from 25 teaspoons (400 calories) to 29.8 teaspoons (476 calories), a 19% increase.[11] 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).[12]

25. 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

[11] 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"]. *See also* 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.").

[12] Bray, How Bad is Fructose?, *supra* n.4, at 895.

added sugar, while about 10% of adults consumed 25% or more of their calories from added sugar.[13]

26. 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 and promote saturated fat as the culprit instead . . . ."[14] 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."[15] 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

[13] 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"].

[14] Anahad O'Connor, "How the Sugar Industry Shifted Blame to Fat," *New York Times* (Sept. 12, 2016) (reporting on Cristin E. Kearns et al., "Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents," JAMA Inter. Med. 176(11) (Nov. 2016)).

[15] *Id.*; *see also* Anahad O'Connor, "Sugar Industry Long Downplayed Potential Harms," *New York Times* (Nov. 21, 2017) (reporting on Cristin E. Kearns et al., "Sugar industry sponsorship of germ-free rodent studies linking sucrose to hyperlipidemia and cancer: An historical analysis of internal documents." PLoS Biol. 15(11) (Nov. 21, 2017)).

added sugar, leading to the obesity and type 2 diabetes epidemics present in the U.S. today.

27. Today, "the vast majority of the U.S. population exceeds recommended intakes of . . . added sugars."[16] Despite some reduction in added sugar intake recently, "intakes of added sugars are still very high . . . and are well above recommended limits . . . ."[17] Approximately 90% of the population exceeds recommended daily limits.[18] Also, most studies on sugar consumption rely on self-reported data, and obese people tend to under-report their consumption of sugar-rich foods.[19] The excess body weight of the US population corresponds to about a 350-500 excess daily caloric intake on average.[20] That is just how many calories the

[16] 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.

[17] *Id.* at 38.

[18] *Id.* at 35.

[19] Campbell et al., Association between urinary biomarkers, *supra* n.7

[20] Tappy L, Lê KA. Health effects of fructose and fructose-containing caloric sweeteners: where do we stand 10 years after the initial whistle blowings?. Curr Diab Rep. 2015;15(8):54.

majority of Americans who fail to meet the 10% Dietary Guidelines limit get in added sugars every day.[21]

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

1. The Body's Response to Glucose

28. 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.

29. 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.[22]

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[21] U.S. Department of Agriculture. Added Sugars Intake Of Americans: What We Eat In America, NHANES 2013-2014.; 2017:19. https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/DBrief/18_Added_Sugars_Intake_of_Americans_2013-2014.pdf.

[22] 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).

30. During certain steps in processing glucose, the body forms fructose. However, 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.

31. 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.

32. 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.

33. 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 sugar and fiber remain

separate, and the sugar is not encased in the fiber like it is in fruit; rather, the geometry of fiber changes when it is highly processed. 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.

34. 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 5-10% of calories, or about 38 grams (9 teaspoons, 150 calories) per day for men, 25 grams (6 teaspoons, 100 calories) per day for women,[23] and 12-15 grams (3-6 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.[24]

35. 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.

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[23] AHA Scientific Statement, *supra* n.11. 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.

[24] *See* "How Much Is Too Much?," *at* http://www.sugarscience.org/the-growing-concern-of-overconsumption.

36. When excess sugar consumption overloads the liver, the glucose increases insulin secretion, while the fructose gets turned into liver fat, causing insulin resistance. This combination over time results in rapid and dramatic increases in blood glucose and insulin concentrations.[25] 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 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.

37. 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.

38. Energy deposition into fat cells by insulin stimulates them to secrete a hormone called leptin, which is a natural appetite suppressant that tells the brain the

[25] 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.").

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.[26] 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.

2. The Body's Response to Fructose

39. 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 nearly 42% or 55% fructose (and may contain up to 90% fructose), while table sugar and other sweeteners, like cane sugar, contain 50% fructose.

40. 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 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

[26] 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).

increased triglyceride levels, which are associated with insulin resistance and cardiovascular disease.[27] 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.

41. 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. One isocaloric glucose-for-fructose exchange study demonstrated a reduction of liver fat by 22% in just 10 days.[28]

42. 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

[27] 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.4; Havel, Dietary Fructose, *supra* n.10.

[28] Schwarz, J.M., Noworolski, S.M., Erkin-Cakmak, A., N.J., K., Wen, M.J., Tai, V.W., Jones, G.M., Palii, S.P., Velasco-Alin, M., Pan, K., et al. (2017) Impact of dietary fructose restriction on liver fat, de novo lipogenesis, and insulin kinetics in children with obesity. Gastroenterology 153, 743-752.

oxide, a key modulator of vascular function, and causes inflammation. Experimental human studies confirm that fructose feeding raises serum uric acid levels.[29]

43. 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.

3. The Addiction Response

44. 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.[30] These changes are linked to a heightened craving for more sugar.[31] This can create a vicious cycle leading to chronic illness.

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[29] 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).

[30] 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).

[31] 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).

45. Children may be especially vulnerable to the addiction response, since they have a stronger preference for sweet foods than adults,[32] and repeated exposures to sugary foods may accustom young children to a lifelong habit of consuming overly sweet foods.[33] In recent years, much has been learned about the reinforcing effects of sugar and how it can promote overeating.[34] We do not just overeat sugar because we like the sweet taste.[35] Innovations in brain scanning technology have shown that the pleasure-generating reward circuitry in our brain overlaps with the neurocircuitry that mediates the addictive properties of drugs such as alcohol and opiates. In fact, the drugs may be, in effect, co-opting neural pathways originally designed for seeking sweet tastes.[36]

46. Just like chewing coca leaf has relatively little addictive potential compared to consuming processed cocaine or crack cocaine, sugar cane stems have

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[32] Roberto CA, Swinburn B, Hawkes C, et al., "Patchy progress on obesity prevention: emerging examples, entrenched barriers, and new thinking." *Lancet.* 2015;385(9985):2400-9.

[33] Thow AM, Hawkes C., "Global sugar guidelines: an opportunity to strengthen nutrition policy." *Public Health Nutr.* 2014;17(10):2151-5.

[34] Kessler DA. Toward More Comprehensive Food Labeling. N Engl J Med. 2014;371:193-5.

[35] Tang DW, Fellows LK, Small DM, Dagher A., "Food and drug cues activate similar brain regions: a meta-analysis of functional MRI studies." *Physiol Behav.* 2012;106(3):317-24.

[36] Stanhope KL., "Sugar consumption, metabolic disease and obesity: The state of the controversy." *Crit Rev Clin Lab Sci.* 2016;53(1):52-67

historically been chewed for their pleasant taste, but it is only once they are highly refined into added sugars[37] that they present a supranormal reward signal with the potential to override our self-control mechanisms and thus to lead to analogous addictive behaviors.[38]

47. In fact, a sugary breakfast cereal beat out candy, cheese, soda and bacon in a study of reported addictive-like eating behaviors.[39]

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

48. 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.

49. 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

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[37] Dinicolantonio JJ, O'Keefe JH, Wilson WL., "Sugar addiction: is it real? A narrative review." *Br J Sports Med.* 2017; bjsports-2017

[38] Lenoir M, Serre F, Cantin L, Ahmed SH. "Intense sweetness surpasses cocaine reward." *PLoS ONE.* 2007;2(8):e698

[39] Schulte EM, Avena NM, Gearhardt AN., "Which foods may be addictive? The roles of processing, fat content, and glycemic load." *PLoS ONE.* 2015;10(2):e0117959

disease. And in 1988, scientists learned about the advent of adolescent type 2 diabetes.

50. 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 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.[40]

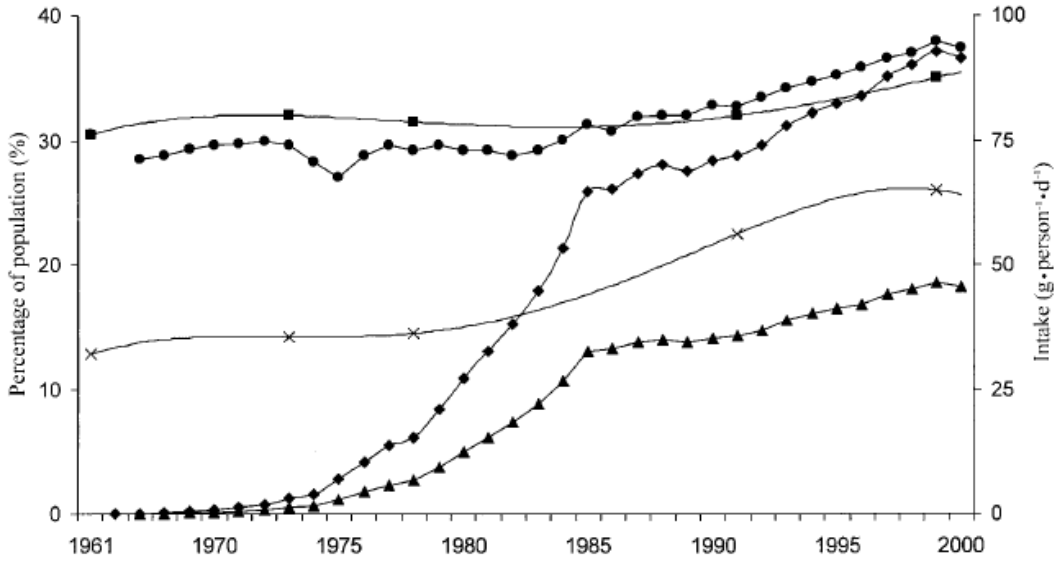

FIGURE 1. Estimated intakes of total fructose (●), free fructose (▲), and high-fructose corn syrup (HFCS, ♦) in relation to trends in the prevalence of overweight (■) and obesity (x) in the United States. Data from references 7 and 35.

[40] Bray, HFCS Role in Obesity Epidemic, *supra* n.5, at 537, 540-41 & Table 2; *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).

51. 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.

D. There is Substantial Scientific Evidence that Excess Sugar Consumption Causes Metabolic Syndrome, Type 2 Diabetes, Cardiovascular Disease, Fatty Liver Disease, and Other Morbidity

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

1. Excess Sugar Consumption Causes Metabolic Syndrome

53. 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.[41]

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

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

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

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

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

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

55. More generally, "metabolic abnormalities that are typical of the so-called metabolic syndrome . . . includ[e] insulin resistance, impaired glucose

[41] 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"].

tolerance, high concentrations of circulating triacylglycerols, low concentrations of HDLs, and high concentrations of small, dense LDLs."[42]

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

57. 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[43] 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 . . . ."[44]

58. 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

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

[43] 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, or 35 to 75 grams of sugar per day.

[44] 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"].

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.[45]

59. 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. In other words, the researchers dissociated the metabolic effects of dietary sugar from its calories and effects on weight gain.[46]

60. 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 reduction in calories or weight loss was the reason for the clinical improvement. Therefore, the researchers designed the study to be isocaloric, by giving back to subjects the same number of calories in starch that were taken away in sugar. The study involved

[45] 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"].

[46] 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).

43 children, ages 8 to 19, each obese with at least one other co-morbidity demonstrating metabolic problems. All were frequent consumers of added sugar in their diets.[47]

61. 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.

62. 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

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

team analyzed the pre- and post-data in a blinded fashion so as not to introduce bias.[48]

63. 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.[49]

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

65. A prospective analysis of the NHANES database over 18 years (1988-2006) demonstrated that while median adult consumption is 18% of calories as added sugar, those with 15% of total calories or greater confers increased risk of cardiovascular mortality. Considering median consumption of added sugar is currently at 17%, this means that over half the U.S. population has an increased risk of dying of a heart attack because of their added sugar consumption. Similarly, in

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

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

the adolescent NHANES database, even adjusting for calories or weight, increases in added sugar consumption increase risk for the diseases of metabolic syndrome.[50]

2. Excess Sugar Consumption Causes Type 2 Diabetes

66. 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.[51]

67. In 2010, Harvard researchers performed a meta-analysis of 8 studies concerning sugar-sweetened beverage consumption and risk of type 2 diabetes, involving a total of 310,819 participants. They concluded that individuals in the highest quantile of SSB intake had an average 26% greater risk of developing type 2 diabetes than those in the lowest quantile.[52] Moreover, "larger studies with longer

[50] Rodriguez LA, Madsen KA, Cotterman C, Lustig RH (2016) Added sugar intake and metabolic syndrome in US adolescents: cross-sectional analysis of NHANES 2005-2012. Public Health Nutr. 19, 2424-2434

[51] 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).

[52] Malik, 2010 Meta-Analysis, *supra* n.44 at 2477, 2480.

durations of follow-up tended to show stronger associations."[53] Thus, the meta-analysis showed "a clear link between SSB consumption and risk of . . . type 2 diabetes."[54]

68. An analysis of data for more than 50,000 women from the Nurses' Health Study,[55] during two 4-year periods (1991-1995, and 1995-1999), showed, after adjusting for 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.[56]

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[53] *Id.* at 2481.

[54] *Id.*

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

[56] 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"].

69. The result of this analysis shows a statistically significant linear trend with increasing sugar consumption.[57]

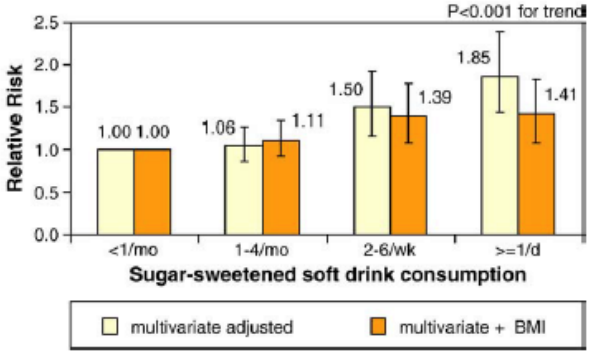

Fig. 4. Multivariate relative risks (RRs) of type 2 diabetes according to sugar-sweetened soft drink consumption in the Nurses' Health Study II 1991–1999 (Multivariate RRs were adjusted for age, alcohol (0, 0.1–4.9, 5.0–9.9, 10+ g/d), physical activity (quintiles), family history of diabetes, smoking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

70. 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.[58]

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[57] 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).

[58] 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"].

71. 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.[59]

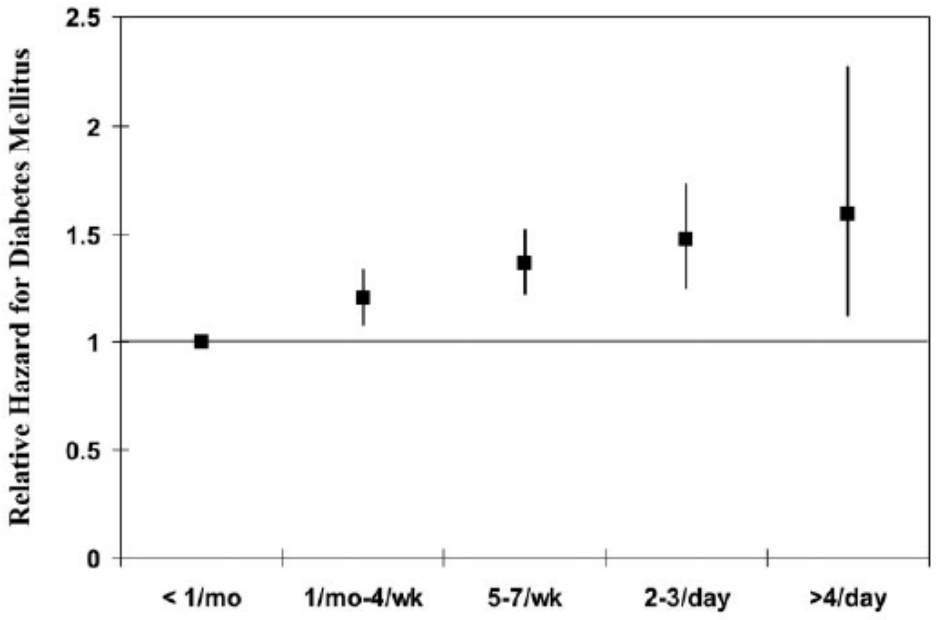

Figure 1—*Multivariate-adjusted relative hazard of diabetes by category of cumulatively updated fruit juice intake. Values were adjusted for cumulatively updated BMI, physical activity, family history of diabetes, postmenopausal hormone use, alcohol use, smoking, and total energy intake. For an increase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

72. 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

[59] 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).

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.[60]

73. Most convincingly, an econometric analysis of repeated cross-sectional data published in 2013 established a causal relationship between sugar availability and type 2 diabetes. After adjusting for a wide range of confounding factors, researchers found that an increase of 150 calories per day related to an insignificant 0.1% rise in diabetes prevalence by country, while an increase of 150 calories per day in sugar related to a 1.1% rise in diabetes prevalence by country, a statically-significant 11-fold difference.[61]

3. Excess Sugar Consumption Causes Cardiovascular Disease

74. Sixteen million Americans have heart disease, which is the number one killer in the United States.[62]

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[60] 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).

[61] 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).

[62] 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).

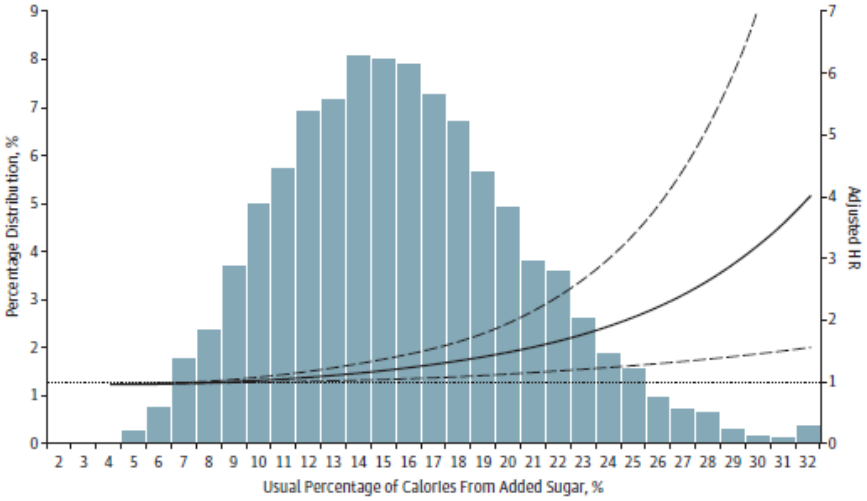
75. Data obtained from NHANES surveys during the periods of 1988-1994, 1999-2004, and 2005-2010, after adjusting for a wide variety of other factors, demonstrate that those who consumed between 10% - 24.9% of their calories from added sugars had a 30% greater risk of cardiovascular disease (CVD) mortality 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.[63]

76. 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,"[64] as demonstrated in the chart below.

[63] Yang, NHANES Analysis, *supra* n.13 at E4-5.

[64] *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.

77. 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 . . . ."[65] 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."[66]

[65] *Id.* at E6.

[66] *Id.* at E8.

78. 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 and 70 grams of sugar or more) had a 35% greater risk of coronary heart disease compared with infrequent consumers.[67]

79. The American Heart Association's recommendation to limit added sugar intake was not only based on the empty calorie displacement of healthier foods, but explicitly the associations between added sugar consumption and cardiovascular disease risk.[68]

80. The latest official Dietary Guidelines for Americans put it this way: "Strong evidence from mostly prospective cohort studies but also randomized controlled trials has shown that eating patterns that include lower intake of sources of added sugars are associated with reduced risk of CVD in adults, and moderate evidence indicates that these eating patterns are associated with reduced risk of obesity, type 2 diabetes, and some types of cancer in adults."[69]

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[67] 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).

[68] Vos MB, Kaar JL, Welsh JA, et al., "Added Sugars and Cardiovascular Disease Risk in Children: A Scientific Statement From the American Heart Association." *Circulation.* 2017;135(19):e1017-e1034.

[69] U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020, Dietary Guidelines for Americans. 8th Edition. 2015. *Available at* http://health.gov/dietaryguidelines/2015/guidelines.

4. Excess Sugar Consumption Causes Liver Disease

81. 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.[70]

82. 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.[71]

83. 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.

[70] 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).

[71] 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).

Conservative estimates are that 31% of American adults, and 13% of American children suffer from NAFLD.[72]

84. However, in one study involving children already eating large amounts of added sugar, when researchers isocalorically replaced most of the sugar with starch, within just 10 days, liver fat dropped an astounding 47%.[73]

85. A modeling simulation that included effects on fatty liver disease estimated that a 20% reduction in sugar consumption would save $10 billion in discounted direct medical costs by averting the loss of more than 750,000 years of healthy life in the United States over 20 years.

86. Some researchers recently noted that complying with the American Heart Association's recommendations to cut added sugar consumption approximately in half might prevent the loss of another 1.6 million healthy years. The researchers cited as an obstacle to population-level added sugar reduction, however, government subsidies that underprice corn, cane, and beets for

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[72] 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 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).

[73] Vos MB, Goran MI., "Sugar, Sugar, Not So Sweet for the Liver." *Gastroenterology*. 2017;153(3):642-5.

manufacturers. They also noted that, historically, another barrier was scientific uncertainty regarding the causal link between sugar and metabolic disease. "However," they conclude, "consensus on causality is now strong."[74]

87. Indeed, studies reflecting real world situations, where added sugars are consumed without strict dietary control (in other words, in the context of excess calories), show consistent evidence of harm across a range of conditions, including the infiltration of the liver with fat,[75] which is associated with diabetes,[76] metabolic syndrome,[77] and cardiovascular disease.[78]

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[74] Vreman RA, Goodell AJ, Rodriguez LA, Porco TC, Lustig RH, Kahn JG., "Health and economic benefits of reducing sugar intake in the USA, including effects via non-alcoholic fatty liver disease: a microsimulation model." *BMJ Open.* 2017;7(8):e013543.

[75] Ha V, Cozma AI, Choo VL, Mejia SB, Souza RJ, Sievenpiper., "Do Fructose-Containing Sugars Lead to Adverse Health Consequences? Results of Recent Systematic Reviews and Meta-analyses." *Advances in Nutrition.* 2015;6(4):504S–511S

[76] Mantovani A, Byrne CD, Bonora E, Targher G., "Nonalcoholic Fatty Liver Disease and Risk of Incident Type 2 Diabetes: A Meta-analysis." *Diabetes Care.* 2018;41(2):372-382.

[77] Kim D, Touros A, Kim WR., "Nonalcoholic Fatty Liver Disease and Metabolic Syndrome." *Clin Liver Dis.* 2018;22(1):133-140.

[78] Kovalic AJ, Satapathy SK., "The Role of Nonalcoholic Fatty Liver Disease on Cardiovascular Manifestations and Outcomes." *Clin Liver Dis.* 2018;22(1):141-174.

5. Excess Sugar Consumption Causes Obesity

88. 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.

89. 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.

90. 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."[79]

91. 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.[80]

92. 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.[81]

93. 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

[79] 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).

[80] 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).

[81] 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).

gain during the 2 periods), and smallest among women who decreased their consumption or maintained a low intake level (2.8 kg gain).[82]

94. 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).[83]

95. An analysis 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.[84]

96. 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.

[82] Schulze, Diabetes in Young & Middle-Aged Women, *supra* n.56.

[83] Palmer, Diabetes in African American Women, *supra* n.58.

[84] Dhingra, Cardiometabolic Risk, *supra* n.45.

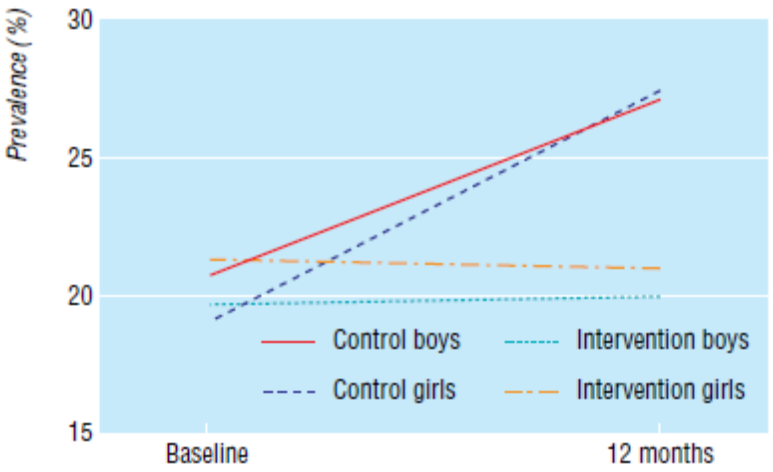

Fig 2 Mean change in prevalence of overweight and obese children from baseline to follow up at 12 months according to clusters

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.[85]

97. 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 and 1.3 kg for women, while

[85] 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)).

the group that was supplemented with artificial sweeteners lost weight—1.0 kg for men and 0.3 kg for women.[86]

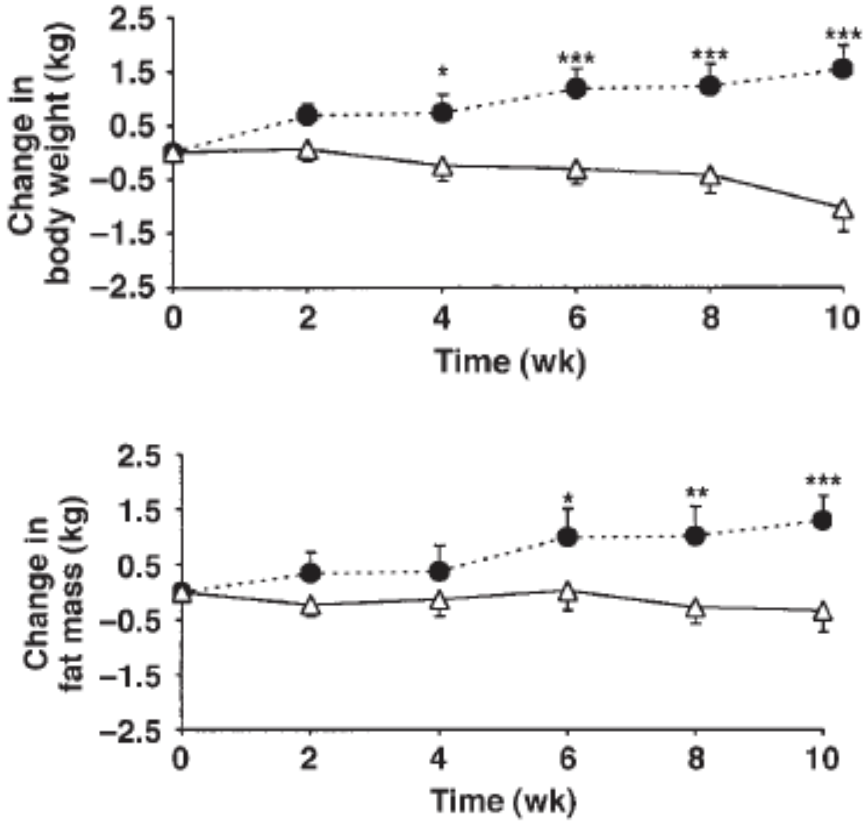

FIGURE 2. Mean (±SEM) changes in body weight, fat mass, and fat-free mass during an intervention in which overweight subjects consumed supplements containing either sucrose (●; $n = 21$) or artificial sweeteners (△; $n = 20$) daily for 10 wk. The diet × time interactions were significant for changes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

[86] 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"].

98. 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.[87]

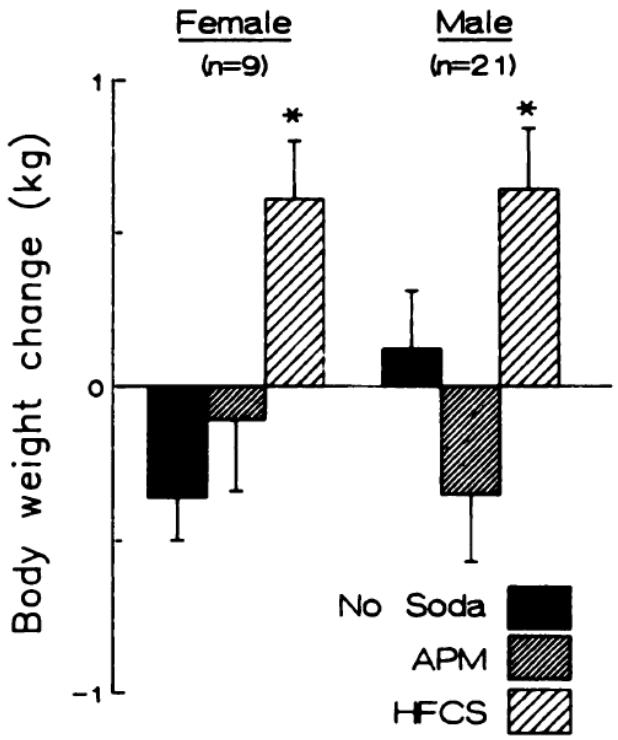

FIG 1. Changes in body weight during 3-wk periods when subjects drank 1150 g/d of soda sweetened with aspartame (APM), an equal weight of soda sweetened with high-fructose corn syrup (HFCS), or had no experimental manipulation (no soda). *$p < 0.05$ relative to weight gain in no-soda period.

[87] 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).

6. Excess Sugar Consumption Causes Inflammation

99. Inflammation has been associated with type 2 diabetes, myocardial infarction, and stroke, as well as weight gain and obesity.[88]

100. 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-reactive protein—increased by 13%, 5%, and 6%, respectively, while the later group's concentrations decreased by 16%, 2%, and 26% respectively.[89]

101. 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.

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[88] 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).

[89] Sorensen, Inflammatory Markers, *supra* n.88.

102. 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."[90]

103. 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, as seen in the graphic below.

[90] 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).

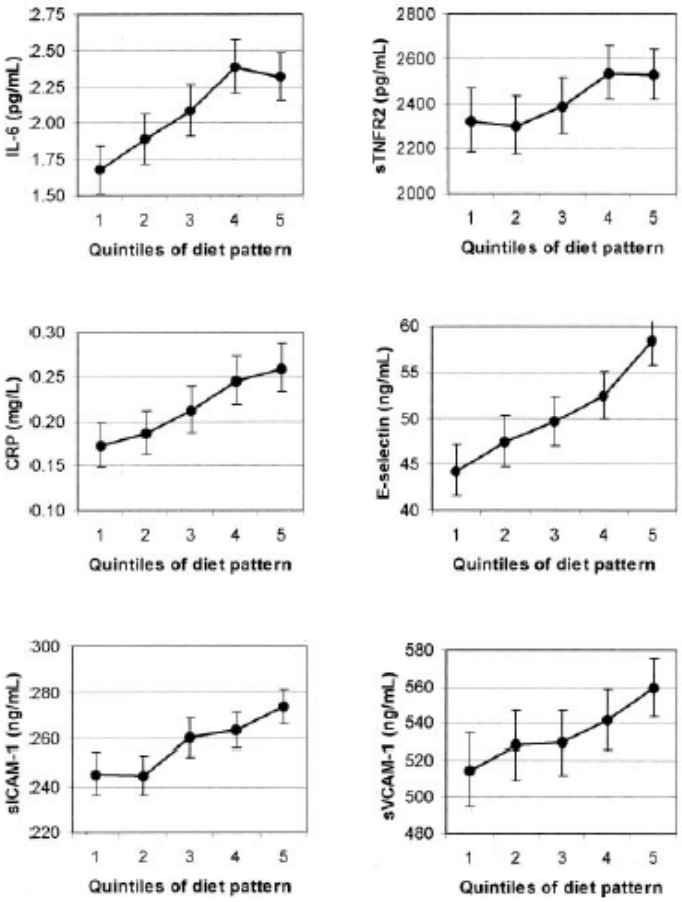

FIGURE 1. Geometric mean concentrations and 95% CIs of interleukin 6 (IL-6), soluble tumor necrosis factor α receptor 2 (sTNFR2), C-reactive protein (CRP), E-selectin, soluble intracellular cell adhesion molecule 1 (sICAM-1), and soluble vascular cell adhesion molecule 1 (sVCAM-1) by quintiles of diet 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

104. Fructose facilitates the biochemical formation of triacylglycerols more efficiently than does glucose.[91] This is because fructose metabolism in the liver converts the fructose to fructose-1-phosphate, which readily becomes a substrate for

[91] Elliot, Fructose & Insulin Resistance, *supra* n.27.

the backbone of the triglyceride molecule.[92] As compared to starches, sugars—particularly sucrose and fructose—tend to increase serum triacylglycerol concentrations by about 60%.[93]

105. 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.

106. 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

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

[93] Fried, Hypertriglyceridemia, *supra* n.42, at 873S.

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.

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

108. 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.[94]

109. An analysis 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.[95]

110. 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 LDL cholesterol.[96]

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[94] Te Morenga, Dietary Sugars & Body Weight, *supra* n.41.

[95] Dhingra, Cardiometabolic Risk, *supra* n.45.

[96] Te Morenga, L., et al., "Dietary sugars and cardiometabolic risk: systematic review and meta-analyses of randomized controlled trials on the effects on blood

111. 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.[97]

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pressure and lipids," *American Journal of Clinical Nutrition*, Vol. 100, No. 1, 65-79 (May 7, 2014).

[97] 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

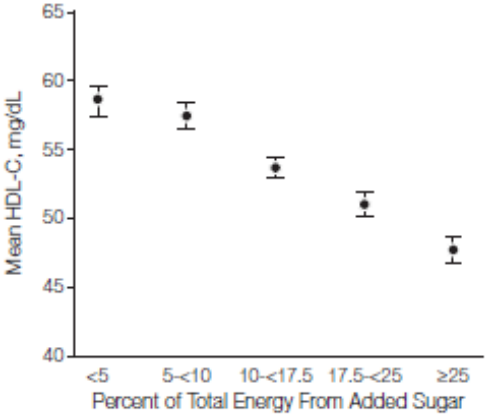


Figure 2. Multivariable-Adjusted Geometric Mean Triglyceride Levels by Level of Added Sugar Intake Among US Adults, NHANES 1999-2006

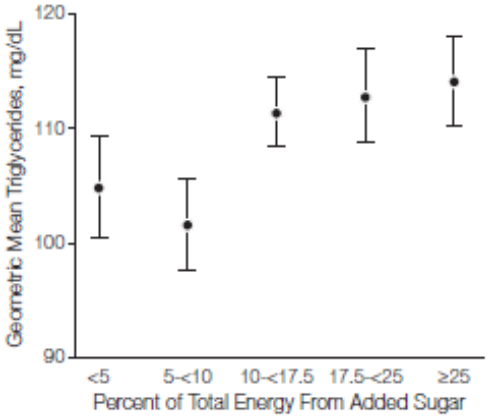
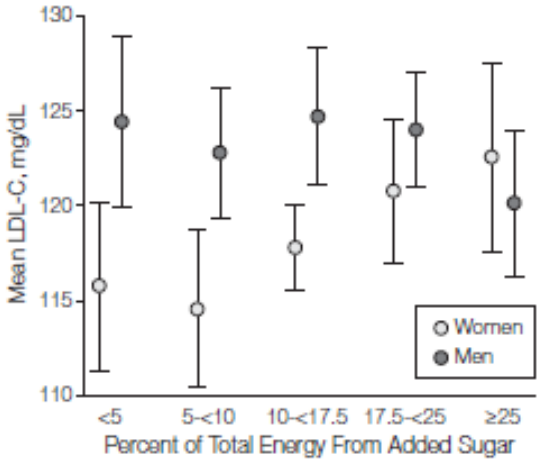


Figure 3. Multivariable-Adjusted Mean LDL-C Levels by Level of Added Sugar Intake Among US Men and Women, NHANES 1999-2006



112. 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%.[98]

[98] 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).

113. 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.[99]

114. 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."[100]

8. Excess Sugar Consumption is Associated with Hypertension

115. An analysis 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.[101]

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[99] 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).

[100] 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).

[101] Dhingra, Cardiometabolic Risk, *supra* n.45.

116. 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.[102]

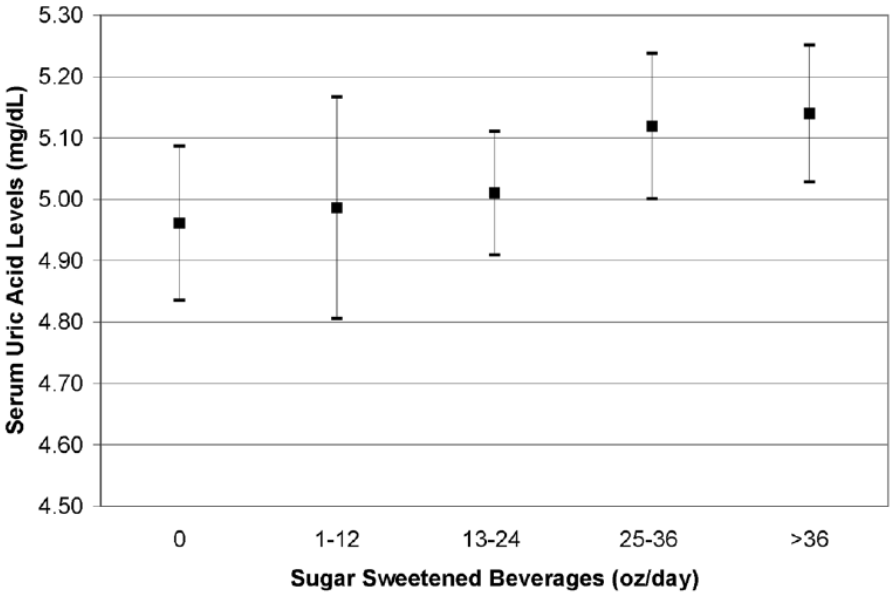

Figure 1.
Sample mean of serum uric acid with 95% confidence intervals by categories of sugar sweetened beverage consumption adjusted for age, race/ethnicity, sex, total calories, BMI z-score, alcohol, smoking, dietary fiber intake, diet beverage consumption, and milk consumption. *P* for trend = 0.01

117. 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 nervous system activity were measured for 2 hours. While the administration of fructose was associated with an increase in both systolic and

[102] Nguyen, Serum Uric Acid, *supra* n.29.

diastolic blood pressure, blood pressure did not rise in response to either water or glucose ingestion, as demonstrated in the chart below.[103]

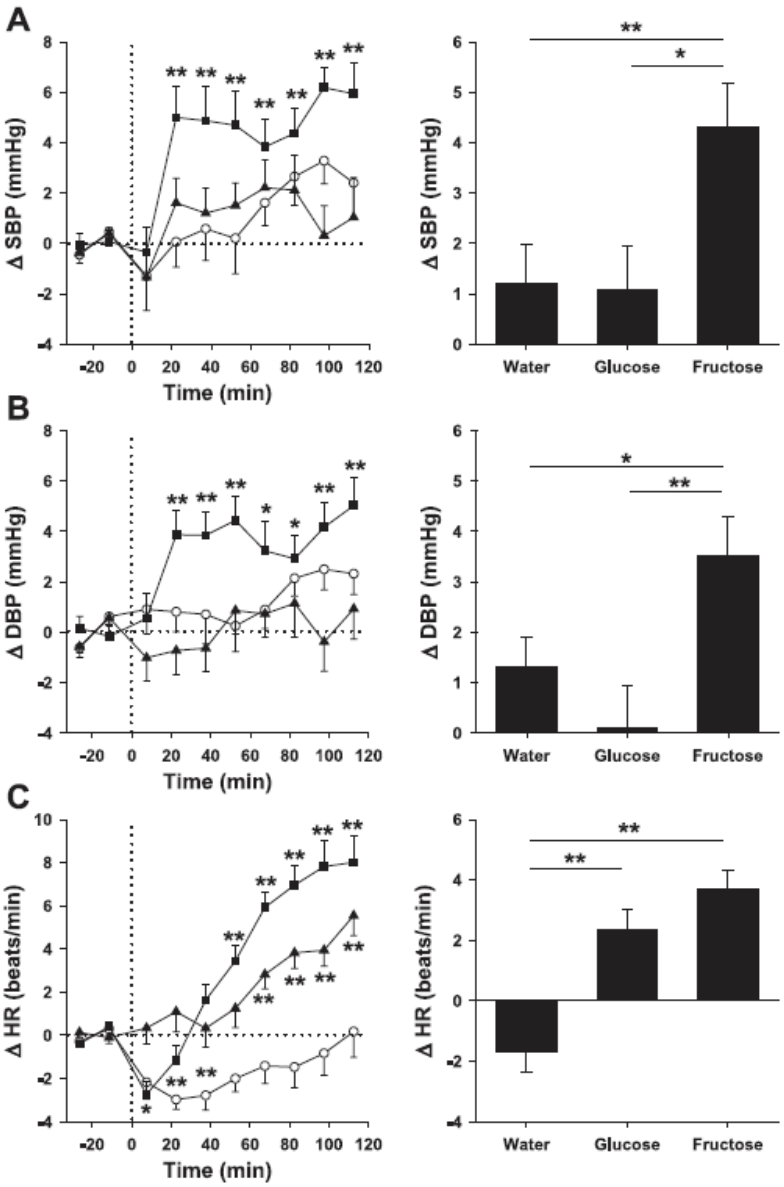

Fig. 1. Time course of the systolic blood pressure (SBP; *A*), diastolic blood pressure (DBP; *B*), and heart rate (HR; *C*) changes (*left*) and mean responses (*right*) to drinking water (○), glucose (▲), and fructose (■). $*P < 0.05$ and $**P < 0.01$, statistically significant differences over time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

[103] 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).

118. 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.[104]

119. 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.[105]

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

120. 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

[104] Raben, Sucrose vs. Artificial Sweeteners, *supra* n.86.

[105] 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).

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.[106]

121. "To evaluate a possible association between fructose mediated metabolic changes and cognitive behaviour," researchers "assessed the correlation of serum triglyceride 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 . . . ."[107]

10. Excess Sugar Consumption is Linked to Some Cancers

122. 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.[108] Similarly, in a study of patients with stage 3 colon cancer, those in the highest quintile of glycemic load experienced worsening in

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

[107] 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).

[108] 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).

disease-free survival of approximately 80% compared to those in the lowest quintile.[109]

123. 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.[110]

124. 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 esophageal adenocarcinoma; added fructose was associated with risk of small intestine cancer; and all investigated sugars were associated with increased risk of pleural cancer.[111]

[109] 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).

[110] 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).

[111] 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)

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

125. Based on the scientific research, the AHA recommends restricting added sugar to 5-10% 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 (3-6 teaspoons, 50-60 calories) for children.[112]

126. 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.[113]

127. 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

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[112] *See* AHA Scientific Statement, *supra* n.11.

[113] *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.").

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—"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 . . . ."[114]

KELLOGG'S MARKETING & SALE OF HIGH-SUGAR FOODS

128. Kellogg was founded in 1906 and is headquartered in Battle Creek, Michigan. Kellogg is a multi-billion-dollar food company that manufactures, markets, and sells a wide variety of cereals and snack bars, among other foods.

129. The U.S. market for cold cereals has been about $9-10 billion per year for many years. Kellogg is the world's leading producer of cereal, with a greater than 30% share of the U.S. cold cereal market.

130. Among Kellogg's largest brands are its cereals. Four of the top-10 U.S. cereal brands in 2017 belonged to Kellogg, including Frosted Mini-Wheats and Raisin Bran.

131. In 2014, the cereal industry used 816 million pounds of sugar, or about 2.5 lbs. for each of the 318.9 million people in the U.S. in 2014. That is 1,134 grams

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

per person, or 3 grams per person, per day, for every man, woman, and child in the U.S. That totals more than ***361 billion*** grams of sugar in one year.

132. In addition to cereals, Kellogg manufactures, markets, and sells other foods including, relevant here, snack bars under its popular brand, Nutri-Grain.

133. During the last decade, as consumer interest in healthy eating has grown, and based on sophisticated consumer research, Kellogg has intentionally positioned itself in the market as a purportedly "healthy" brand of processed food, by using various labeling statements to suggest its foods, especially its cereals and snack bars, are healthy choices.

134. Many of Kellogg's cereals and snack bars, however, contain high amounts of added sugar, such that their regular consumption is likely to contribute to excess added sugar consumption and, thereby, increased risk for and contraction of chronic disease.

135. As with any company the size of Kellogg, and with as many products, Kellogg makes occasional changes in product offerings (for example, discontinuing or introducing new products or varieties), product formulations, and product labeling and packaging. Regardless of such changes, however, during the previous six years and dating back even further into at least the mid-2000s, Kellogg has maintained, and to this day actively maintains a policy and practice of labeling high-sugar cereals and bars—those that contribute significantly more than 5% of calories from sugar,

and thus whose regular or excessive consumption is likely to contribute to increased risk of illness—with various health and wellness claims that suggest the cereals and snack bars are healthy, when they are not.

136. Kellogg bolsters this practice with websites dedicated to the products that repeat and in some instances state even more aggressive health and wellness claims.

137. This policy and practice is apparent in Kellogg's consistent use of certain words and phrases across many cereals and snack bars, including different flavors, varieties, and packaging.

138. Although Plaintiffs were the victims of Kellogg's longtime and general policy and practice with respect to the cereals and snack bars they purchased and the labels they saw, this Complaint and their claims are not so limited; rather, plaintiffs seek through this lawsuit to enjoin Kellogg's *policy and practice generally*, including but not necessarily limited to the products, labels, and label claims challenged herein.

139. In fact, plaintiffs have enjoyed Kellogg products in the past. If they could be assured through prospective injunctive relief that, if a Kellogg product's label sets forth health and wellness claims, the product does *not* contain excess sugar, they would consider purchasing Kellogg products bearing such claims in the future.

140. The cereals and bars that are the subject of this Complaint and examples of Kellogg's policy and practice of marketing high-sugar foods with misleading health and wellness claims, are as follows:

a. Kellogg's Raisin Bran
   1. *Original*
   2. *Crunch*
   3. *Cinnamon Almond*
   4. *Omega-3 250mg ALA From Flaxseed*
   5. *With Cranberries*

b. Kellogg's Frosted Mini-Wheats
   1. *Bite Size - Original*
   2. *Bite Size - Maple Brown Sugar*
   3. *Bite Size - Strawberry*
   4. *Bite Size – Strawberry Delight*
   5. *Bite Size - Blueberry*
   6. *Bite Size – Blueberry Muffin*
   7. *Bite Size – Cinnamon Streusel*
   8. *Big Bite – Original*
   9. *Little Bites Original*
   10. *Little Bites Cinnamon Roll*
   11. *Little Bites Chocolate*
   12. *Touch of Fruit in the Middle: Raspberry*
   13. *Touch of Fruit in the Middle: Raisin*
   14. *Touch of Fruit in the Middle: Mixed Berry*
   15. *Harvest Delights – Blueberry with Vanilla Drizzle*
   16. *Harvest Delights – Cranberry with Yogurt Drizzle*

c. Kellogg's Smart Start – Original Antioxidants

141. Other products that are the subject of this Complaint and examples of Kellogg's policy and practice of marketing high-sugar foods with misleading health and wellness claims as detailed below, are the following bars:

a. Nutri-Grain Cereal Bars
   1. *Apple Cinnamon*
   2. *Blueberry*
   3. *Mixed Berry*
   4. *Cherry*
   5. *Strawberry*
   6. *Strawberry Greek Yogurt*

b. Nutri-Grain Soft-Baked Breakfast Bars
   1. *Blueberry*
   2. *Strawberry*
   3. *Cherry*
   4. *Raspberry*
   5. *Mixed Berry*
   6. *Apple Cinnamon*
   7. *Strawberry Greek Yogurt*

c. Nutri-Grain Oat & Harvest Bars
   1. *Blueberry Bliss*
   2. *Country Strawberry*

d. Nutri-Grain Harvest Hearty Breakfast Bars
   1. *Blueberry Bliss*
   2. *Country Strawberry*
   3. *Apple Cinnamon*

e. Nutri-Grain Fruit Crunch Granola Bars
   1. *Apple Cobbler*
   2. *Strawberry Parfait*

f. Nutri-Grain Crunch Crunchy Breakfast Bars
   1. *Apple Cobbler*
   2. *Strawberry Parfait*

g. Nutri-Grain Fruit & Nut Chewy Breakfast Bars
   1. *Blueberry Almond*
   2. *Cherry Almond*

A. Kellogg's Raisin Bran Cereals

142. Kellogg first introduced Raisin Bran in 1942 and has sold the cereal continually ever since, at times expanding the line by adding new varieties, including Raisin Bran Crunch (introduced in 1999), Raisin Bran Crunch Apple Strawberry Clusters, Raisin Bran Cinnamon Almond (2012), Raisin Bran Omega-3 250mg ALA From Flaxseed (2013), Raisin Bran with Cranberries (2015), and Raisin Bran with Bananas (2018).

143. Regardless of the variety, during at least the past six years and continuing today, Kellogg maintained and maintains a policy and practice of labeling Raisin Bran cereals with health and wellness claims.

144. Specifically, at times during the past six years and continuing today, the packaging of each variety of Kellogg's Raisin Bran cereal has made at least one, and in most cases, several of the following health and wellness claims suggesting, both individually and especially in the context of the label as a whole, that the product is healthy:

a. "HEART HEALTHY / Whole grains can help support a healthy lifestyle."

b. "+ HEART HEALTH + / Kellogg's Raisin Bran / With crispy bran flakes made from whole grain wheat, all three varieties of Kellogg's Raisin Bran are good sources of fiber."

c. "Start with a healthy Spoonful"

d. "Invest in your health invest in yourself"

e. "Get health & nutrition tips at **Kelloggs.com/HealthyInvestments**"

f. "Kellogg's offers a full breakfast portfolio that features essential nutrients to help you start right and make the most of every day."

g. "**NUTRIENTS** FOR EVERY DAY / **Kellogg's** breakfasts offer the nutrients our bodies want to work and feel their best."

h. "A serving of Kellogg's cereals with one cup of low-fat milk offers a tasty combination of carbs and protein that helps recharge your body. Protein helps you rebuild and carbs help you refuel."

i. "A great way to **START THE DAY** / A breakfast of Kellogg's cereal and milk is nutritious at its most delicious. Every spoonful has grains to help recharge your body. So go ahead, pour your favorite bowl of crunchy goodness. It just fuels right!"

j. "Goodness of Simple Grain"

k. Whole Grains Council Stamp

l. "FIBER / Fiber, like bran fiber, plays a very important part in your digestive health and overall well-being."

m. "MADE WITH REAL FRUIT"

n. "REAL FRUIT / Delicious raisins add a sweetness you'll love to every morning"

o. "with a Touch of Golden Honey"

p. "Touch of Sweetness"

q. "Made with healthy whole-grain wheat and bran flakes"

r. "delivers the fuel your family needs to stay energized and focused throughout the day"

s. "enjoy great-tasting nutrition from simple ingredients"

t. "The Benefits of Breakfast: a Healthy Way to Begin the Day / Starting the day with a balanced, great-tasting breakfast can put you on the fast track to good nutrition and better overall healthy. While many kids and adults forget this important first meal, research has shown that sitting down for a nutritious breakfast can decrease the risk of obesity, heart disease, and other nutritionally related conditions in kids and adults. Kids who eat breakfast: - Are more alert in school, with better concentration, memory and grades; - Get more fiber, calcium, vitamins A and C, riboflavin, zinc, and iron to help build stronger bodies; - Have more energy to pursue healthy and active lifestyles"

u. "Fill Up on Fiber / The studies are clear—fiber can help promote weight loss and healthier eating patterns, while increasing overall health: - Fiber takes longer to chew and slows down the rate at which we eat—giving our bodies a chance to let us know when we are full; - With fewer calories and greater bulk, high-fiber foods help us feel fuller for longer; - Fiber helps keep the digestive tract clean and healthy decreasing the risk of intestinal disease; - Fiber-rich diets can help lower 'bad' cholesterol, lower blood pressure, and help control blood sugar levels."

v. "Enjoy the **healthy benefits** of flaxseed in **Kellogg's Raisin Bran**."

w. "REAL FRUIT / Delicious raisins add a sweetness you'll love to every morning"

x. "Love your cereal / A balanced breakfast with Kellogg's cereal an 8 oz. serving of milk provides nutrients like iron, B Vitamins, and Vitamins A & D."

B. Kellogg's Frosted Mini-Wheats Cereals

145. Kellogg's first introduced Frosted Mini-Wheats cereal in 1978, and has developed several varieties since. For example, in the regular "bite size" variety, Kellogg has offered Original, Maple Brown Sugar, Strawberry, Strawberry Delight, Blueberry, Blueberry Muffin, and Cinnamon Streusel flavors. In the "little bites" version, it has offered Original, Chocolate, and Cinnamon Roll flavors. It has an Original "big bite" variety. It has offered two flavors of "Touch of Fruit in the Middle" Frosted Mini-Wheats (Raspberry and Mixed Berry). And it has offered two flavors of "Harvest Delight" Frosted Mini-Wheats, Blueberry with Vanilla Drizle and Cranberry with Yogurt Drizzle.

146. Regardless of the variety, during at least the past six years and continuing today, Kellogg maintained and maintains a policy and practice of labeling Frosted Mini-Wheats cereals with health and wellness claims.

147. Specifically, during the past six years and continuing today, the packaging of each variety of Kellogg's Frosted Mini-Wheats cereal has made at least one, and in some cases several of the following health and wellness claims suggesting, both individually and especially in the context of the label as a whole, that the product is healthy:

a. "LIGHTLY SWEETENED"

b. "***nutritious & delicious*** / You <u>*can*</u> have it both ways! / [. . .] you get a delightfully sweet, satisfying crunch that'll make you feel like a kid

again. One serving of **Frosted Mini-Wheats** cereal plus 1/2 cup of skim milk is full of important grown-up stuff like protein and whole grain fiber. So grab a spoon and dig in to your day!"

c. "8 LAYERS Nutritious Wheat & 1 LAYER Delicious Sweet"

d. Whole Grains Council Stamp

e. "**Frosted Mini-Wheats cereal** fills you up without dragging you down. Each serving . . . contains whole grain fiber to help keep you full and focused all morning."

f. "UNBELIEVABLY NUTRITIOUS"

g. "Kellogg's Cereal and Milk / Protein to help rebuild. Grains to help recharge."

h. "Foods high in fiber help support good health."

i. "The FIELD TO BISCUIT Story / IT'S JUST A FEW SIMPLE STEPS FROM THE FIELD TO YOUR BOWL / Each Mini-Wheat begins as a seed planted in the farms of North America. After the whole grain is harvested, it's cooked, shredded and layered 8 times to form a little business. Then, while it's still warm from being baked to a perfect crunch, it's lightly frosted."

j. "Delicious and Nutritious"

k. "The Whole Truth / Keeps 'em full, keeps 'em focused! / High-fiber foods are great for helping you feel full, not hungry. And with eight delicious layers of 100% whole wheat, Frosted Mini-Wheats cereal is packed with fiber to help you keep full and focused throughout the morning."

l. "Cereal & Milk / The Dynamic Duo / A serving of cereal with milk is a great way to get essential nutrients that are important to growing bodies including [. . .] Fiber / to help you stay full and focused"

m. "**Tasty Fact**: Every piece has a tasty filling **made with Real Fruit**, making each bite perfectly **Sweet and Delicious**."

n. "You've heard it before and it's true! **Breakfast is the most important meal of the day**. **A balanced breakfast** not only kick-starts the metabolism, it **sets us up to do our best**. Researchers revealed that people who skip breakfast don't make up for the missed nutrients later in the day. **Breakfast has the power to bring out the best in your day**, from the great taste to the essential nutrients it provides. And yet, one in five children lives in a household where breakfast is hard to come by."

o. "It's just a few simple steps from the field to your bowl. Each Frosted Mini Wheat begins as a seed planted in the rolling hills of North America. After the whole grain is harvested, it is cooked, shredded and layered 8 times to form a little biscuit. It's baked to a perfect crunch and while still warm each biscuit is lightly frosted."

p. "Enjoy What's Good for You! / Kellogg's Frosted Mini-Wheats Touch of Fruit in the Middle cereal is full of morning must haves! Every serving contains 10 essential vitamins and minerals, and it's packed with whole grain fiber to help keep you full and focused all morning long."

q. "each spoonful starts your day with tasty, wholesome goodness"

r. "Positively Nutritious"

s. "BITS MADE WITH REAL FRUIT"

t. "real fruit baked in every biscuit"

u. "Just the right amount of sweetness"

C. Kellogg's Smart Start – Original Antioxidant Cereal

148. During the previous six years, the packaging of Kellogg's Smart Start – Original Antioxidant cereal has made at least the following health and wellness

claims suggesting, both individually and especially in the context of the label as a whole, that the product is healthy:

a. "SMART START" (i.e., the cereal brand name)

b. "Start with a healthy Spoonful"

c. "Invest in your health invest in yourself"

d. Whole Grains Council Stamp

e. "Original Antioxidants"

f. "Lightly sweetened"

g. "Kellogg's offers a full breakfast portfolio that features essential nutrients to help you start right and make the most of every day."

h. "**NUTRIENTS** FOR EVERY DAY / **Kellogg's** breakfasts offer the nutrients our bodies want to work and feel their best."

i. "**ANTIOXIDANTS** / Vitamin A from beta carotene and vitamins C and E help support healthy cells throughout the body. **Kellogg's Smart Start** is a good source of these important antioxidants."

j. "**CARBOHYDRATES & PROTEIN** / A serving of Kellogg's cereals with one cup of low-fat milk offers a tasty combination of carbs and protein that helps recharge your body. Protein helps you rebuild and carbs help you refuel."

k. "Get health & nutrition tips at **Kelloggs.com/HealthyInvestments**"

D. Nutri-Grain Cereal Bars

149. Kellogg's Nutri-Grain bars first became popular in the U.S. in the 1990s. During the past six years, Kellogg has occasionally refreshed the packaging

and product name, creating "continuation" products. Each such product comes in a variety of flavors.

150. For example, during the past six years, Kellogg has sold at least the following Nutri-Grain product and flavors (as well as variety packs that include bars of multiple different flavors): (a) Nutri-Grain Cereal Bars (Apple Cinnamon, Blueberry, Strawberry, Cherry, Mixed Berry, and Strawberry Greek Yogurt flavors); (b) Nutri-Grain Soft-Baked Breakfast Bars (Apple Cinnamon, Blueberry, Strawberry, Cherry, Raspberry, Mixed Berry, Strawberry Greek Yogurt flavors); (c) Nutri-Grain Oat & Harvest Bars (Blueberry Bliss and Country Strawberry flavors); (d) Nutri-Grain Harvest Hearty Breakfast Bars (Blueberry Bliss, Country Strawberry, and Apple Cinnamon flavors); (e) Nutri-Grain Fruit Crunch Granola Bars (Apple Cobbler & Strawberry Parfait flavors); (f) Nutri-Grain Fruit Crunch Crunchy Breakfast Bars (Apple Cobbler & Strawberry Parfait flavors); and (g) Nutri-Grain Fruit & Nut Chewy Breakfast Bars – Blueberry Almond & Cherry Almond.

151. Regardless of the variety, during at least the past six years and continuing today, Kellogg maintained and maintains a policy and practice of labeling Nutri-Grain bars with health and wellness claims.

152. Specifically, at times during the past six years and continuing today, packaging of Kellogg's Nutri-Grain Cereal Bars has made at least one, and in most

cases, several of the following health and wellness claims suggesting, both individually and especially in the context of the label as a whole, that the product is healthy

a. "MORE of the WHOLE GRAINS Your Body Needs"

b. "ONE GOOD DECISION CAN LEAD TO ANOTHER / Nutri-Grain / 100% Whole Grains"

c. "Whole Grains / Wholesome Fiber"

d. "Whole Grains | Wholesome Fiber | Real Fruit / Take care of *you*"

e. Whole Grains Council Stamp

f. "No High Fructose Corn Syrup"

g. "MADE WITH REAL FRUIT & WHOLE GRAINS"

h. "Nutri-Grain / Eat Better All Day"

a. "Rise & Thrive / WITH NUTRI-GRAIN SOFT-BAKED BREAKFAST BARS, THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"

a. "WHOLESOME SATISFACTION / Mornings can be unpredictable. You don't have time to do everything you want, let alone eat something wholesome, so that's why we crated *Nutri-Grain Fruit & Oat Harvest*. It's the perfect combination of tasty real fruit and whole grains to

give you a satisfying way to make the most of your morning."

a. "MADE WITH Sun-ripened fruit"

KELLOGG'S UNLAWFUL ACTS & PRACTICES

A. Kellogg Marketed and Continues to Market Its Cereals and Bars with Health and Wellness Claims that are Deceptive in Light of the Products' High Sugar Content

1. Kellogg Affirmatively Misrepresents that Some High-Sugar Cereals are "Healthy," "Nutritious," or "Wholesome"

153. Consumers interpret the words "nutritious" and "wholesome" to mean the same thing as, or to be euphemisms for, "healthy."

154. In using these words in the manner described herein, Kellogg also intends consumers to interpret "nutritious" and "wholesome" to mean healthy.

155. Although in some cases, Kellogg's labeling claims for its cereals are suggestive that they are healthy, in other cases, Kellogg directly represents this is true by calling at least the following cereals "healthy," "nutritious," or "wholesome":

a. Kellogg's Raisin Bran

- "support a healthy lifestyle"
- "Start with a healthy Spoonful"
- "Invest in your health invest in yourself"

- "Fiber . . . plays a very important part in your digestive health and overall well-being"
- "essential nutrients"
- "NUTRIENTS FOR EVERY DAY / Kellogg's breakfasts offer the nutrients our bodies want to work and feel their best,"
- "nutritious at its most delicious"
- "Made with healthy whole-grain wheat and bran flakes"
- "a Healthy Way to Begin the Day"
- "better overall health"
- "more energy to pursue healthy and active lifestyles"
- "fiber can help promote weight loss and healthier eating patterns while increasing overall health"
- "great-tasting nutrition from simple ingredients"
- "Starting the day with a balanced, great-tasting breakfast can put you on the fast track to good nutrition and better overall health"
- "research has shown that sitting down for a nutritious breakfast can decrease the risk of obesity, heart disease, and other nutritionally related conditions in kids and adults
- "healthy benefits of flaxseed in Kellogg's Raisin Bran"

b. <u>Kellogg's Frosted Mini-Wheats</u>

- "nutritious & delicious / You *can* have it both ways"
- "8 LAYERS OF NUTRITIOUS Wheat & 1 LAYER Delicious Sweet"

- "UNBELIEVABLY NUTRITIOUS"
- "Foods high in fiber help support good health."
- "Delicious and Nutritious"
- "A full serving of milk (one cup) brings a good source of Protein to the table to help maintain muscle health."
- "a great way to get essential nutrients that are important to growing bodies"
- "Researchers revealed that people who skip breakfast don't make up for the missed nutrients later in the day."
- "essential nutrients"
- "each spoonful starts your day with tasty, wholesome goodness"
- "Positively Nutritious"

c. Kellogg's Smart Start – Original Antioxidants

- "Start with a healthy Spoonful"
- "Invest in your health invest in yourself"
- "help support healthy cells throughout the body"
- "essential nutrients"
- "NUTRIENTS FOR EVERY DAY / Kellogg's breakfasts offer the nutrients our bodies want to work and feel their best."

d. Nutri-Grain

- "Wholesome Fiber"

- "THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"
- "Wholesome Fiber"
- "WHOLESOME SATISFACTION"
- "You don't have time to . . . eat something wholesome, so that's why we created *Nutri-Grain Fruit & Oat Harvest*."
- "THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"

156. Statements that these cereals and bars are "healthy," "nutritious," and "wholesome" are false, or at least highly misleading, because, due to their high sugar content, consumption of these foods is decidedly *unhealthy*, and the consequences of consuming the products—increased risk for, and in some cases contraction of chronic disease—are incompatible with Kellogg's representations that the products are "healthy," "nutritious," and "wholesome."

157. For example, Kellogg's Raisin Bran cereals contain between 9 and 13 grams of sugar per serving depending on the variety, accounting for between about 19% and 27% of their calories, which is 378% to 548% of the AHA's recommended maximum of 5%. In addition, the added sugar in a single serving contributes between 23.7% and 108.3% of the AHA's maximum recommended daily added sugar intake (23.7-34.2% of men's, 36-52% of women's, and 60-108.3% of children's).

158. Kellogg's Frosted Mini-Wheats cereals represented to be "healthy," "nutritious," and "wholesome" also contain high levels of added sugar, 10 grams to 12 grams per serving, accounting for between 21.1% and 25.3% of their calories, or 422-506% of the AHA's recommended maximum. In addition, the added sugar in the Frosted Mini-Wheats contributes between 26.3% and 100% of the AHA's maximum recommended daily added sugar intake.

159. Similarly, although Kellogg represents that Smart Start – Original Antioxidant cereal is "healthy," and "Lightly Sweetened," one serving of the product contained 14g of added sugar through January 2017, and currently contains 18g of added sugar, comprising 28-36% of the product's weight, and contributing to 29.5% - 37.9% of its calories, or 5.9 to 7.6 times the AHA's recommendation, and accounting for between 36.8% and 150% of the AHA's maximum daily recommended intake.

160. Kellogg's Nutri-Grain bars represented to be "wholesome" also contain very high levels of added sugar, 11g - 15g per serving, with about 40% of the products' calories coming from their added sugar (averaging over 37%), and contributing between 28.9% and 125% of the AHA's maximum daily recommended intake.

161. Because the foregoing products affirmatively and expressly represented by Kellogg to be "healthy," "nutritious," and "wholesome" contain high amounts of

added sugar, their regular consumption is likely to contribute to excess sugar consumption, and thereby increased risk for, and actual contraction of, chronic disease. Accordingly, these labeling claims are false and misleading.

2. Kellogg Affirmatively Misrepresents that Consuming Some of its High-Sugar Cereals and Bars Will Promote Bodily Health, Prevention of Disease, or Weight Loss

162. In some cases, Kellogg falsely represents that its high-sugar cereals are effective in promoting bodily health and preventing disease.

163. Specifically, Kellogg represents that Raisin Bran is "heart healthy" due to its whole grains or fiber.

164. Contrary to Kellogg's representations, the science demonstrates that because these cereals contain between 9g and 13g of added sugar per serving, providing 19-27% of their calories, their regular consumption is likely to contribute to cardiovascular and metabolic disease, thereby harming health.

165. For example, just a single serving of Kellogg's Raisin Bran Crunch contributes more than a third of the AHA's recommendation for men's daily sugar intake, more than half of women's, and up to 108% of children's. Thus consumers, by eating just a single serving of this cereal, would either exceed the safe daily amount of added sugar, or virtually ensure they do so shortly later in the day. In doing so, such consumers are likely to see—rather than benefits to heart and

digestive health—increased risk of both CHD and metabolic disease. This effect is compounded, however, because, as alleged further below, the data shows people tend to eat 2 or more servings of cereal in a single sitting, thus at least doubling their exposure.

166. Kellogg also represents that the fiber in Raisin Bran "plays a very important part in your digestive health and overall well-being." These claims are false and misleading due to the cereals' high sugar content, which harm metabolic health and overall well-being.

167. With respect to Raisin Bran Cinnamon Almond, Kellogg similarly suggests the cereal is heart-healthy—as well as beneficial to general metabolic health—by associating its consumption with scientific research showing the benefits of eating breakfast generally, stating that "research has shown that sitting down for a nutritious breakfast can decrease the risk of obesity, heart disease, and other nutritionally related conditions in kids and adults." Reasonable consumers would and do understand—and it is Kellogg's intention that consumers understand—that the reference in this statement to "a nutritious breakfast," though not expressly so, is a reference to Raisin Bran Cinnamon Almond cereal, as this is the only reason it would make sense to make the statement on the product's packaging. Kellogg certainly does not disclaim that the cereal on whose packaging the statement is made is supposedly "a nutritious breakfast."

168. Using a similar strategy, Kellogg also states on the packaging of Raisin Bran Cinnamon Almond cereal that "The studies are clear—fiber can help promote weight loss and healthier eating patterns, while increasing overall health." Kellogg even goes on to say that "Fiber-rich diets can help lower 'bad' cholesterol, lower blood pressure, and help control blood sugar levels."

169. Although it may be literally true that research exists supporting these propositions, that research has no relation to Kellogg's Raisin Bran Cinnamon Almond cereal. Rather, these statements are false and misleading because the 9g of sugar per serving in Raisin Bran Cinnamon Almond cereal provide 18% of its calories, and contribute to nearly a quarter of the AHA's recommendation for men's daily sugar intake of 38 grams, 36% of women's recommended daily intake of 25 grams, and 60% - 75% of children's recommended daily intake of 12-15 grams. Thus, regular consumers of Kellogg's Raisin Bran Cinnamon Almond cereal are likely to see increased risk of CHD, increased body weight, increased blood sugar levels (and decreased sensitivity), and increased LDL cholesterol.

170. Accordingly, Kellogg's statements regarding the contribution of Raisin Bran Cinnamon Almond to human health are false.

171. Relying on general research regarding the benefits of eating breakfast, Kellogg suggests its Frosted Mini-Wheats Touch of Fruit: Mixed Berry cereal is a healthy choice by stating that "A balanced breakfast . . . kick-starts the metabolism,"

that "Researchers revealed that people who skip breakfast don't make up for the missed nutrients later," and that "Breakfast has the power to bring out the best in your day, from the great taste to the essential nutrients it provides."

172. Reasonable consumers would and do understand—and it is Kellogg's intention that consumers understand—that the reference in these statements to a "balanced breakfast," that has "great taste" and "essential nutrients," though not expressly so, is a reference to Frosted Mini-Wheats Touch of Fruit: Mixed Berry cereal, as this is the only reason it would make sense to make the statement on the product's packaging.

173. Kellogg's suggestion that Frosted Mini-Wheats Touch of Fruit: Mixed Berry cereal can help "kick-start[] the metabolism," and contribute to health in the same ways that eating breakfast generally contributes to health, are false and misleading because the product is high in sugar that is likely to detriment, not benefit, health.

174. Kellogg also represents that Smart Start – Original Antioxidant cereal is "heart healthy," but the cereal contained 14g or 18g of sugar per serving, contributing 29.5-37.9% of its calories, an amount of added sugar that is unhealthy to the heart.

175. Sometimes Kellogg is more general in its statements that its products will promote bodily health, but it nevertheless makes such affirmative representations.

176. For example, Kellogg represents that Smart Start – Original Antioxidant cereal will "help support healthy cells throughout the body."

177. Kellogg also represents that Raisin Bran, Raisin Bran Crunch, and Raisin Bran with Cranberry cereals, some Frosted Mini-Wheats cereals, and Smart Start – Original Antioxidant cereal will "help recharge your body," "help[] you rebuild," and "help you refuel," and that some of these cereals "offer the nutrients our bodies want to work and feel their best."

178. The theme that Kellogg cereals will help "fuel" a consumer is a common one in Kellogg's marketing, with such claims on Raisin Bran cereals, Frosted Mini-Wheats cereals, and Smart Start – Original Antioxidants cereal.

179. For example, on Raisin Bran Cinnamon Almond, Kellogg states that "Kids who eat breakfast: [. . .] Have more energy to pursue healthy and active lifestyles," and that the cereal "delivers the fuel your family needs to stay energized and focused throughout the day."

180. Similarly, Kellogg represents that Frosted Mini-Wheats – Maple Brown Sugar, Strawberry, and Blueberry, Frosted Mini-Wheats Big Bite – Original, Frosted Mini-Wheats Little Bites – Chocolate, and Frosted Mini-Wheats Touch of

Fruit in the Middle – Mixed Berry and Raspberry will "help keep you full and focused all morning," or "help you stay full and focused."

181. The packaging of Frosted Mini-Wheats Little Bites – Chocolate also states along the same lines, "Keeps 'em full, keeps 'em focused," and that "[h]igh-fiber foods are great for helping you feel full, not hungry."

182. This practice is misleading because Kellogg suggests that "recharging" is good, desirable, and beneficial, while "charging" on added sugars should in fact be zealously avoided to promote cardiovascular, metabolic, and overall bodily health.

183. In addition, Kellogg's representation that its high-sugar cereals will promote satiety and focus is contradicted by the science demonstrating that sugar consumption may increase hunger, and that consumption of sugary foods interferes with the brain's satiety signals and thus may result in overeating.

3. Even When Not Stating So Expressly, Kellogg Deceptively Suggests Its High-Sugar Cereals and Bars are Healthy

184. Besides direct, express claims that some of its cereals are "healthy," "nutritious," and "wholesome," Kellogg also conveys this same idea through suggestion.

a. Kellogg Touts Its Products' Whole Grain, Fiber, and Fruit Content to Distract from Their High Added Sugar Content

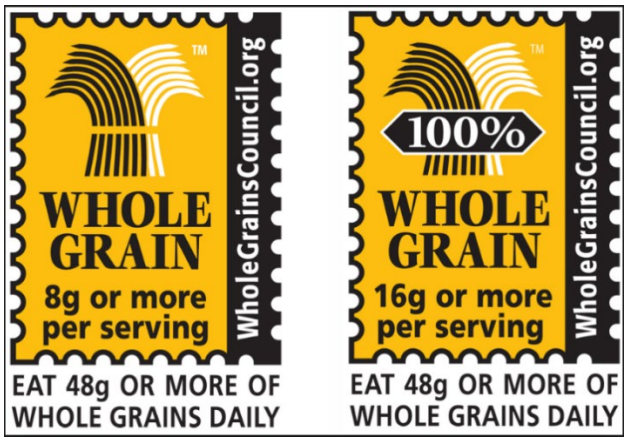
185. A major strategy Kellogg employs is "calling out" the supposedly beneficial aspects of its cereals and bars, and particularly their whole grain, fiber, or "real fruit" content.

186. Other aspects of Kellogg's marketing, such as its online marketing, also focus on fiber, whole grain, and real fruit, including their supposed contribution to general health and wellness, as well as to the prevention of, or reduction of risk for chronic disease, including the very diseases caused by consuming the high amounts of sugar in its foods marketed as healthy.

187. In emphasizing the supposedly beneficial ingredients or other aspects of its cereals, in derogation of its duty to consumers, Kellogg necessarily and intentionally also minimizes, de-emphasizes, hides, obscures, and otherwise omits contrary and highly-material information regarding the products' high sugar content, and the detrimental effects of regular excessive added sugar consumption.

b. Kellogg Leverages a Deceptive Industry "Certification" Program—the Whole Grains Council Stamp—to Make its High-Sugar Cereals and Snack Bars Seem Healthy

188. Many Kellogg cereals and snack bars bear a Whole Grains Council stamp, as pictured below.



189. The Whole Grains Council was formed in 2003 and holds itself out as a purported "nonprofit consumer advocacy group."[115]

190. Its membership, however, is comprised not of consumers or their advocates, but primarily of hundreds of the largest food manufacturers, like Cargill, ConAgra, Domino's Pizza, Frito-Lay, General Mills, Heinz, Hostess, Kraft, McDonald's, Nestle, Post, Quaker, Smucker, and of course, Kellogg.

191. The Whole Grain's Council stamp is frequently misused by food manufacturer-members—including by Kellogg—to bolster claims that foods are supposedly healthy, by suggesting that an independent, perhaps governmental authority has determined a food is healthy or otherwise sanctioned its health and wellness claims due to its whole grain content.

192. In order to use a Whole Grains Council stamp, though, a food need only contain a minimum of 8g whole grain, and there are no disqualifying criteria.

[115] See http://wholegrainscouncil.org/about-us

Accordingly, high-sugar foods can, and frequently do display the Whole Grains Council stamp.

193. This is true of many of Kellogg's cereals and snack bars; the use of the stamp is deceptive because it implies independent verification that the cereals are healthy, despite that the Whole Grains Council is an industry group, and that Kellogg cereals and bars bearing the stamp contain such high amounts of sugar that they remain unhealthy choices notwithstanding their whole grain content.

c. In Representing that Many of Its High-Sugar Bars Contain "No High Fructose Corn Syrup" Kellogg Leverages Consumer Confusion to Obscure the Dangers of the Products' Added Sugars

194. Kellogg has capitalized on consumer aversion toward HFCS by touting the absence of that ingredient, deceptively suggesting that some varieties of its Nutri-Grain snack bars are healthier because HFCS is absent.

195. This strategy leverages consumer confusion over the relative dangers of different forms of added sugar, inasmuch as many consumers incorrectly believe that HFCS is a substantially more dangerous form of added sugar than other forms.

196. In reality, Nutri-Grain snack bars also contain sugar, dextrose, fructose, invert sugar, corn syrup, maltodextrin, and glycerin in addition to fruit puree concentrates.

197. Conversely, many consumers are not even aware that some more obscure ingredients *are* added sugars, such as glycerin, brown rice syrup, dextrose, maltodextrin, and fruit juice "concentrates."

198. Many consumers also have no idea what invert sugar is, or that it is sucrose that has been broken into free glucose and free fructose, and thus is extremely similar to HFCS, even referred to sometimes as "artificial honey"; or how dangerous fructose is. But both substances are used in many Kellogg products.

199. Similarly, Kellogg sweetens some foods with a combination of corn syrup, which is made from glucose, and fructose—the exact combination in HFCS, with their constituent parts merely separated in the ingredient list. Yet Kellogg touts the absence of HFCS in its products because it knows that consumers do not understand this distinction, and actively avoid HFCS more than any other sweetener because they believe it be unhealthier than its constituent parts.

200. In reality, added sugar in virtually any form—and certainly in the forms used to sweeten the Kellogg cereals and snack bars—contains toxic fructose, and thus has essentially the same detrimental health effects, with typically only minor differences in the ratio of fructose to glucose in a given form of added sugar. Thus, even if literally true, Kellogg's "no high fructose corn syrup" representations are highly misleading.

d. Kellogg Deceptively Markets Some of its High-Sugar Cereals as "Simple," Less Processed Foods

201. To capitalize on increasing consumer preference for fresh, unprocessed, "whole" foods, Kellogg states or suggests that certain products are less processed, including Raisin Bran, Raisin Bran Cinnamon Almond, Frosted Mini-Wheats Big Bite – Original, and Frosted Mini-Wheats Touch of Fruit in the Middle – Raspberry. For example, Kellogg states "it's just a few simple steps from the field to your bowl," and encourages consumers to "enjoy great-tasting nutrition from simple ingredients."

202. These statements are false or at least highly misleading because these products contain highly-processed forms of sugar and other ingredients. And because these statements suggest these Kellogg cereals are healthy food options, the statements are also false, or at least highly misleading, due to the cereals' high added sugar content.

e. Kellogg Deceptively Omits, Intentionally Distracts From, and Otherwise Downplays the Cereals' High Added Sugar Content

203. In marketing its cereals with health and wellness claims, Kellogg regularly and intentionally omits material information regarding the amount and dangers of the added sugars in its products. Kellogg is under a duty to disclose this

information to consumers because (a) Kellogg is revealing some information about its products—enough to suggest they are healthy—without revealing additional material information, (b) Kellogg's deceptive omissions concern human health, and specifically the detrimental health consequences of consuming its products, (c) Kellogg was in a superior position to know of the dangers presented by the sugars in its cereals, as it is a global food company whose business depends upon food science and policy, and (d) Kellogg actively concealed material facts not known to plaintiffs and the class.

204. Moreover, in marketing its cereals, Kellogg regularly affirmatively uses certain words and phrases to falsely suggest that their sugar content is low.

205. Most prevalent, Kellogg states that its Frosted Mini-Wheats and Smart Start – Original Antioxidant cereals are "lightly sweetened."

206. Kellogg similarly represents that its Raisin Bran Crunch is "with a Touch of Golden Honey," and that its Raisin Bran Omega-3 and Frosted Mini-Wheats Touch of Fruit in the Middle – Raspberry cereals each provide just a "Touch of Sweetness."

207. Kellogg also downplays the sugar content of Frosted Mini-Wheats – Original when it claims the product is "8 LAYERS Nutritious Wheat & 1 Layer Delicious Sweet."

208. These claims are false and misleading because the products' sugar content is high, not low. Such statements are likely to confuse even consumers aware of health issues regarding sugar, because they suggest any such health issues, in any event, do not pertain to these only "lightly" sweetened cereals, which in reality contain between 10g – 18g of added sugar per serving, typically contributing 20% - 38% of the products' calories.

4. Kellogg Immorally Marketed Raisin Bran Cinnamon Almond to Parents for their Children's Consumption, Despite that Children are the Most Vulnerable to the Dangers of Excess Sugar Consumption

209. Kellogg marketed Raisin Bran Cinnamon Almond to parents, as for their children, particularly to help promote growth, attention, and good health, despite that this cereal is among the highest in added sugar that Kellogg offers.

210. The packaging of Raisin Bran Cinnamon Almond states that, "While many kids and adults forget this important first meal . . . a nutritious breakfast can decrease the risk of obesity, heart disease, and other nutritionally related conditions in kids and adults." Kellogg goes on to state that "Kids who eat breakfast:" "Are more alert in school, with better concentration, memory and grades," get "iron to help build stronger bodies," and "Have more energy to pursue healthy and active lifestyles."

211. Yet, Raisin Bran Cinnamon Almond contains 9g of sugar per serving, contributing 18% of its calories. A single serving thus contributes between 60% and 75% of a child's AHA-recommended maximum daily sugar intake, thus guaranteeing its consumption creates an unhealthy condition of excess sugar intake.

212. These statements were malicious, immoral, and oppressive because there are currently obesity and type 2 diabetes epidemics among American children, who are thus among the most vulnerable to misleading health and wellness marketing that results in substantially increased added sugar consumption.

213. Marketing high-sugar cereals to children, or to parents for children's consumption, is itself an unfair and immoral business practice, but it is especially harmful when the marketing suggests the high-sugar cereals are healthy options for children.

214. Thus, marketing Raisin Bran Cinnamon Almond cereal as a healthy option for children to promote bone and teeth health—even if true, which is dubious—while obscuring the detrimental effect of the cereal's consumption in promoting obesity, metabolic disease, cardiovascular disease, liver disease, and other morbidity, is immoral, malicious, and oppressive.

215. In other modes of advertising, such as through its website, Kellogg frequently discusses the purported contribution of its cereals to children's health,

while similarly obscuring, ignoring, or minimizing the dangers presented by the cereals' added sugars.

5. Kellogg Egregiously Markets Some High-Sugar Bars with Health and Wellness Claims Even Though They Contain Artificial Trans Fat

216. Kellogg marketed Nutri-Grain Fruit Crunch Granola Bars and Nutri-Grain Crunch Crunchy Breakfast Bars with health and wellness claims despite that they are made with partially hydrogenated vegetable oil containing toxic artificial trans fat, a substance that is so deadly the FDA has banned it from the U.S. food system.

217. These claims are false and misleading because, in addition to the health dangers of consuming the products' high sugar content, artificial trans fat is the single worst nutrient (the only nutrient worse than sugar) in terms of its effect on bodily health, and particularly heart health.

6. Kellogg Violates FDA and State Food Labeling Regulations

218. Several of Kellogg's cereals contain statements that violate FDA food labeling regulations, which have been adopted as New York's labeling regulations pursuant to Section 201(1) of New York's Agriculture and Marketing Law. *See also* N.Y. Comp. Codes R. & Regs. tit. 1, § 259.1.

a. In Violation of State and Federal Regulations, Kellogg's Health and Wellness Statements are False, Misleading, and Incomplete

219. Kellogg's health and wellness statements challenged herein were false and misleading for the reasons described herein, in violation of 21 U.S.C. § 343(a), which deems misbranded any food whose "label is false or misleading in any particular."

220. Kellogg's health and wellness statements challenged herein also "fail[ed] to reveal facts that are material in light of other representations made or suggested by the statement[s], word[s], design[s], device[s], or any combination thereof," in violation of 21 C.F.R. § 1.21(a)(1). Such facts include the detrimental health consequences of consuming added sugars in amounts present in the challenged products.

221. Kellogg's 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, Kellogg's failed to disclose the increased risk of serious chronic disease likely to result from the usual consumption of its cereals in the customary manner (including wherein people typically consume multiple servings of the cereals in one sitting).

b. Kellogg Violated Regulations Governing Health Claims

222. A health claim "expressly or by implication . . . characterizes the relationship of any substance to a disease or health-related condition." 21 C.F.R. § 101.14(a)(1). Foods may not contain such claims "unless: (1) The claim is specifically provided for in subpart E of this part; and (2) The claim conforms to all general provisions of this section as well as to all specific provisions in the appropriate section of subpart E of this part," *id.* § 101.14(e). As set forth below, Kellogg made unauthorized health claims.

223. The statement that *Raisin Bran* is "HEART HEALTHY / Whole grains can help support a healthy lifestyle," is a health claim because it links whole grains to heart health, but no such claim is authorized by subpart E of 21 C.F.R. §§ 101 *et seq.* Even to the extent the reference to whole grains implies the presence of fiber, making any statement linking "[d]ietary fiber and cardiovascular disease" is "not authorized," *id.* § 101.71(a). Other violations of §§ 101.71(a) and 101.14(e)(1) include (a) *Raisin Bran*, *Raisin Bran Crunch* ("+ HEART HEALTH + / Kellogg's Raisin Bran / With crispy bran flakes made form whole grain wheat, all three varieties of Kellogg's Raisin Bran are good sources of fiber."); (b) *Raisin Bran* ("FIBER / Fiber, like bran fiber, plays an important part in your digestive health and overall well-being."); and (c) *Raisin Bran Cinnamon Almond* ("Fiber-rich diets can

help lower 'bad' cholesterol, lower blood pressure, and help control blood sugar levels").

224. Kellogg also violates this regulation with information on its website associating the fiber in Raisin Bran with heart health,[116] including by linking to an article, also maintained on Kellogg's website, titled, "Fill Up on Fiber to Support Heart Health."[117] Kellogg has made similar statements, claiming that the fiber in its cereals will "help[] to address a number of health issues, including obesity, digestive health, diabetes, heart disease, and certain cancers."[118]

225. Some of Kellogg's health claims challenged herein also violate 21 C.F.R. §§ 101.14(d)(2)(iv) & (e) because the claims do not appear on the principal display panel, yet there is intervening material between "[a]ll information required to be included in the claim[.]" For example, the back of certain Kellogg's Raisin Bran and Smart Start – Original Antioxidants cereals violate this regulation because the claim, "Heart Healthy," is separated from the specific health claim set forth in § 101.75, as depicted below.

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[116] At http://www.kelloggs.com/en_US/scoop-on-heart-health.html.

[117] At http://www.kelloggs.com/en_US/healthy-investments/heart-health/fill-up-on-fiber-to-support-heart-health.html.

[118] *See*, *e.g.*, video, "Cereal: The Complete Story – A Nutritious Start to the Day," at https://www.youtube.com/watch?v=LcZwXPOnwPE.

B. Kellogg Knows or Reasonably Should Know of the Strong Scientific Evidence Demonstrating Its High-Sugar Cereals are Unhealthy to Consume, But Fails to Warn Consumers of the Known Dangers

226. As a longtime and major national food manufacturer, Kellogg is well-positioned to know the most current food science.

227. For example, scientific evidence of the dangers of sugar was available to Kellogg as a result of its membership in the Whole Grains Council, whose website

notes Harvard research finding that replacing sugar with whole grains lowers heart disease risk.[119]

228. In fact, Kellogg often claims to communicate the latest food science to its consumers. In doing so, however, Kellogg cherry-picks information, sometimes from industry-funded or other dubious sources, while failing to communicate more rigorous scientific evidence of the type discussed herein.

229. For example, in a particularly egregious example of leveraging bad science to support its marketing goals, a Kellogg pamphlet available for download on its website titled, "Cereal: The Complete Story," Kellogg claims that "Numerous studies have shown that the consumption of cereal for breakfast is associated with lower levels of BMI in children, a relationship that holds regardless of the amount of sugar in the cereal." Kellogg refers to this same concept in other marketing avenues as well, such as in certain videos it maintains on its own YouTube channel.

230. In support of this proposition, Kellogg cites two publications, but when critically analyzed, neither validly supports the proposition.

231. First, Kellogg cites Albertson AM, et al., "Ready-to-eat cereal consumption: its relationship with BMI and nutrient intake of children aged 4 to 12 years," J. Am. Diet. Assoc., Vol. 103, 1613-1619 (2003). This study was designed,

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[119] *See* http://wholegrainscouncil.org/replacing-butter-sugar-or-refined-grains-with-whole-grains-cuts-heart-disease-risk.

however, by sister cereal-giant General Mills, and was based on a 14-day food diary, where foods eaten, as well as physical attributes like height and body weight, were self-reported, and where portion sizes were later just estimated. Such studies are notoriously unreliable. Worse, to be counted in the data, children needed to only report on 7 of the 14 days. Then, the General Mills-sponsored researchers only considered children overweight if they were at or above the 95th percentile of BMI—rather than using an absolute value—which is absurd, as it would be equivalent to saying only 5% of children are overweight. Moreover, the data came from that collected by The NPD Group from February 1998 through January 1999, almost 20 years ago when foods, food labeling, and food policy were all much different than today. And, of the 603 children included, only about half came from households that were employed, suggesting a confounding factor (such children might eat less, accounting for their lower weight). This study has been criticized on a number of bases (other than the obvious criticism: bias), for example that its outcomes were not clearly defined nor its measurements valid and reliable, especially based on data collection techniques.

232. Second, Kellogg cites O'Neal, C.E., et al., "Presweetened and Nonpresweetened Ready-to-Eat Cereals at Breakfast Are Associated With Improved Nutrient Intake but Not With Increased Body Weight of Children and Adolescents: NHANES 1999-2002," Am. J. Lifestyle Med., Vol. 6, No. 1, pp. 63-74 (2012). First,

this analysis of NHANES data is not cereal-specific, but rather looked only at whole grain consumption (from all sources). Second, the analysis has nothing to do with BMI or body weight at all, but rather only asks whether those who consumed the most whole grain also consumed the most other beneficial nutrients (as measured by "Healthy Eating Index" standard). The data actually showed that increased whole grain consumption did not decrease sugar consumption.

233. Kellogg also frequently relies on old information that does not reflect the most current and accurate science, and also often provides ambiguous or incomplete citations that frustrate the ability to verify its claims.

234. Moreover, in the decades before the turn of the century, Kellogg participated with the Sugar Research Foundation to focus attention away from the dangers of consuming added sugars. In particularly, Kellogg "generously" funded Frederick Stare, the "point man" on the sugar industry's Nutrition Advisory Panel, which published an 88-page white paper in 1975, edited by Stare, called "Sugar in the Diet of Man," whose stated purpose was to "organize existing facts concerning sugar." The paper failed to state that it was funded by the sugar industry, but 25,000 copies were sent to reporters along with a press release titled, "Scientists dispel Sugar fears."

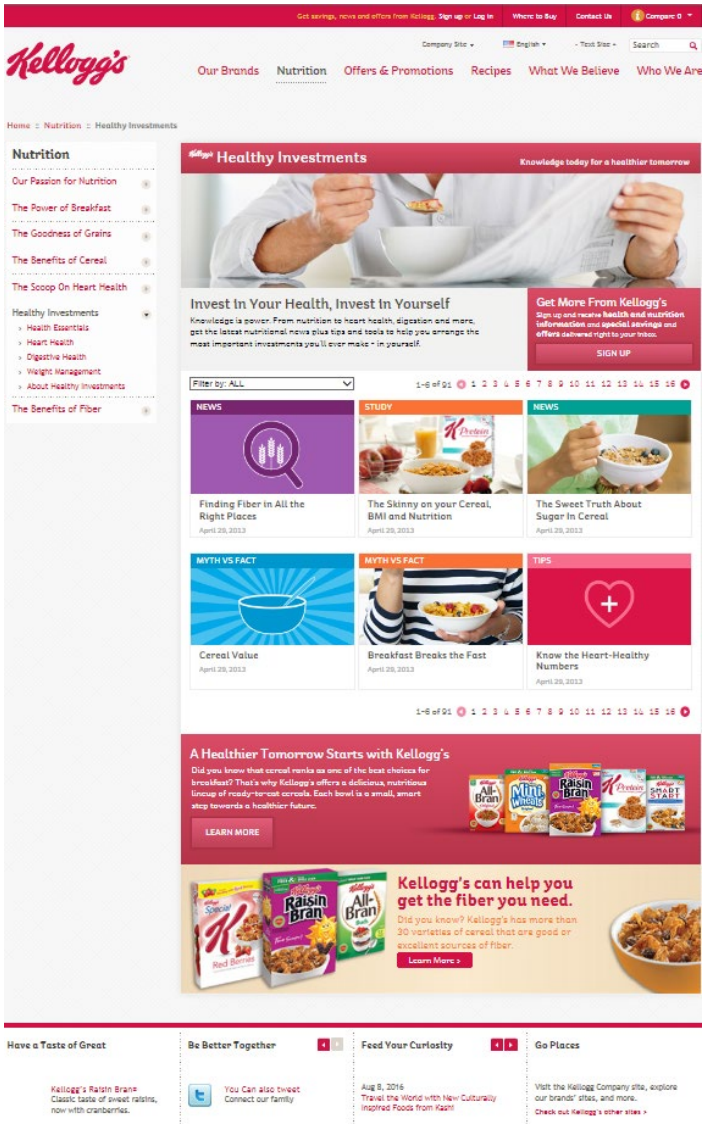
235. This was around the same time the FDA first began reviewing whether sugar should be generally recognized as safe. But the FDA subcontracted its task to

a committee headed by the Sugar Research Foundation's former chairman of the scientific advisory board, and containing other members with ties to the sugar industry. Relying on Sugar in the Diet of Man, the panel concluded that, while sugar probably contributed to tooth decay, it was not a "hazard to the public." This work formed the basis for subsequent USDA and FDA decisions and statements in the 1980s that understated the detriments of added sugar consumption. Stare was even on the Dietary Advisory Committee when it updated its dietary guidelines in 1985, promulgating guidelines stating that "too much sugar in your diet does not cause diabetes," despite that the USDA's own Carbohydrate Nutrition Laboratory was generating evidence to the contrary and supporting the notion that even low sucrose intake might be contributing to heart disease in 10 percent of Americans.

236. Despite knowing of the dangers of the added sugar in its cereals, Kellogg has failed to, and continues to refuse to adequately warn consumers, but instead induced and continues to induce them to consume the Kellogg cereals and bars through affirmative health and wellness misrepresentations, which also distract consumers from the dangers presented by the high amounts of added sugar in the Kellogg products.

C. Kellogg Used its Website, as Referenced on Some Labels, and Other Online Fora, to Spread Misinformation About the Dangers of Consuming the Added Sugar in its Products

237. Kellogg's Raisin Bran and Smart Start – Original Antioxidants cereals both include on the packaging the statement, "Get health & nutrition tips at **Kelloggs.com/HealthyInvestments**." Kellogg maintains at this URL a webpage titled "Healthy Investments," which is depicted below.



238. As further depicted below, Kellogg's Healthy Investments page states:

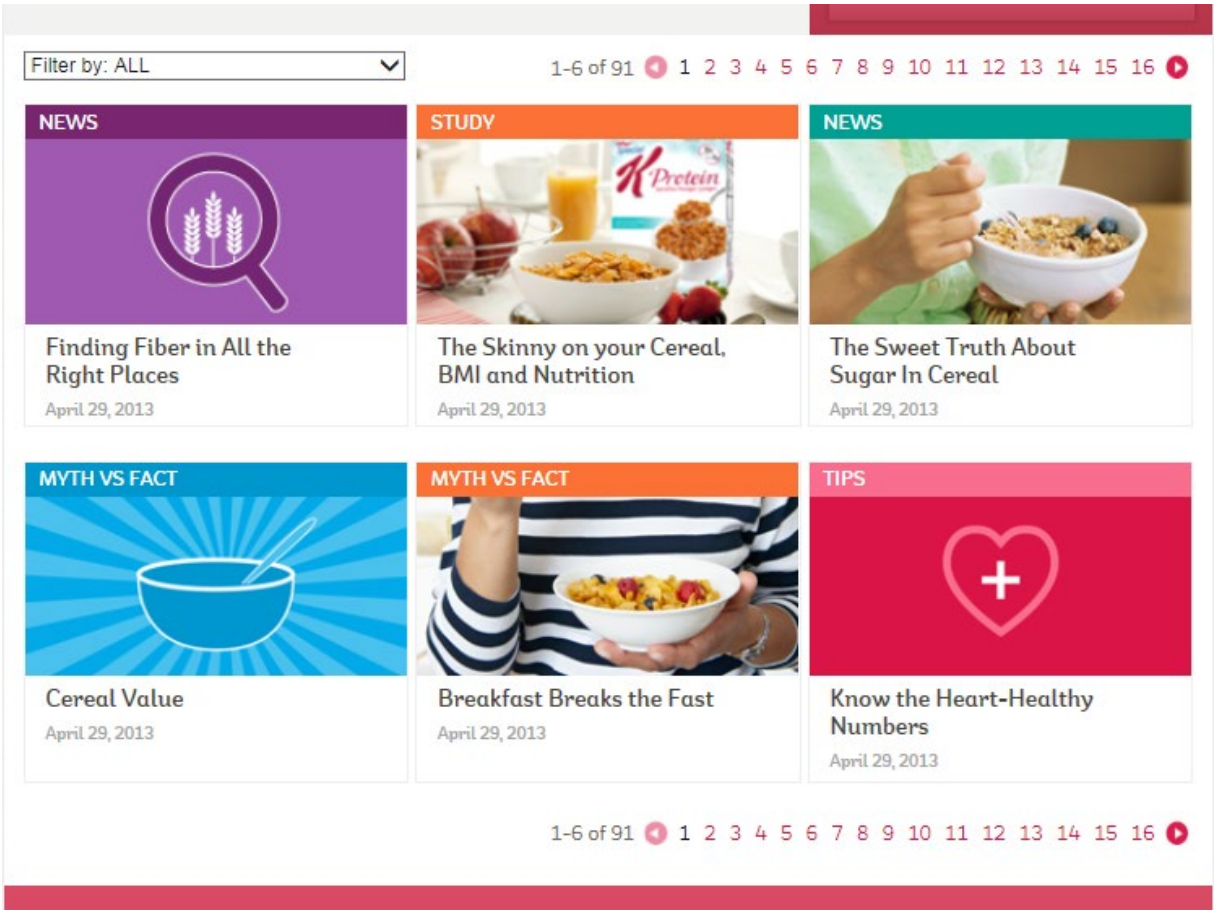
> Invest in Your Health, Invest in Yourself
>
> Knowledge is power. From nutrition to heart health, digestion and more, get the latest nutritional news plus tips and tools to help you arrange the most important investments you'll ever make – in yourself.

239. Kellogg's Healthy Investments page further states that it provides "Knowledge today for a healthier tomorrow."

240. As further depicted below, the Healthy Investments page, in close proximity to depictions of some high-sugar cereals like *Raisin Bran*, *Frosted Mini-Wheats – Original*, and *Smart Start – Antioxidants*, further states:

> A Healthier Tomorrow Starts with Kellogg's
>
> Did you know that cereal ranks as one of the best choices for breakfast? That's why Kellogg's offers a delicious, nutritious lineup of ready-to-eat cereals, each bowl is a small, smart step towards a healthier future.

241. Available on the same page are 91 pages of articles, organized under the headings "NEWS," "STUDY," "MYTH VS. FACT," AND "TIPS."



242. These articles are full of misleading information concerning the high amounts of added sugar in Kellogg's cereals.

243. For example, an April 29, 2013 "NEWS" story featured on the front page (despite that it is dated before many articles not so featured) is titled, "The Sweet Truth About Sugar In Cereal." This "news" story begins, "Sugar often gets a bad rap when it comes to breakfast cereals." Kellogg then asserts, "But the sweet truth is," that "Breakfast cereal accounts for just 4% of daily, added sugar intake in the U.S.," that "Eating cereal is linked to a higher consumption of micronutrients and to lower fat, and cholesterol intake," and that "[t]aking sugar out of cereals does not typically reduce its calories."

244. The same story, after explaining that cereal supposedly must have sugar for its structure, also claims, "Remember, if there is any fruit in the cereal such as raisins, dates, or berries, the sugar count will be amplified due to the naturally occurring sugars in the fruit," but that "Those fruits do come with added benefits: they are carriers for other nutrients," which is supposedly "Yet another reason for making cereal part of your daily routine!"

245. This "NEWS" "story" is not attributed to any author and does not provide any citation for any supposed statistics cited in the article.

246. The article is false and misleading, significantly downplaying the dangers of the added sugars in the cereal, pretending that they come from "good" sources, like fruit, and pretending that it is impractical or impossible to reduce the sugar in cereal.

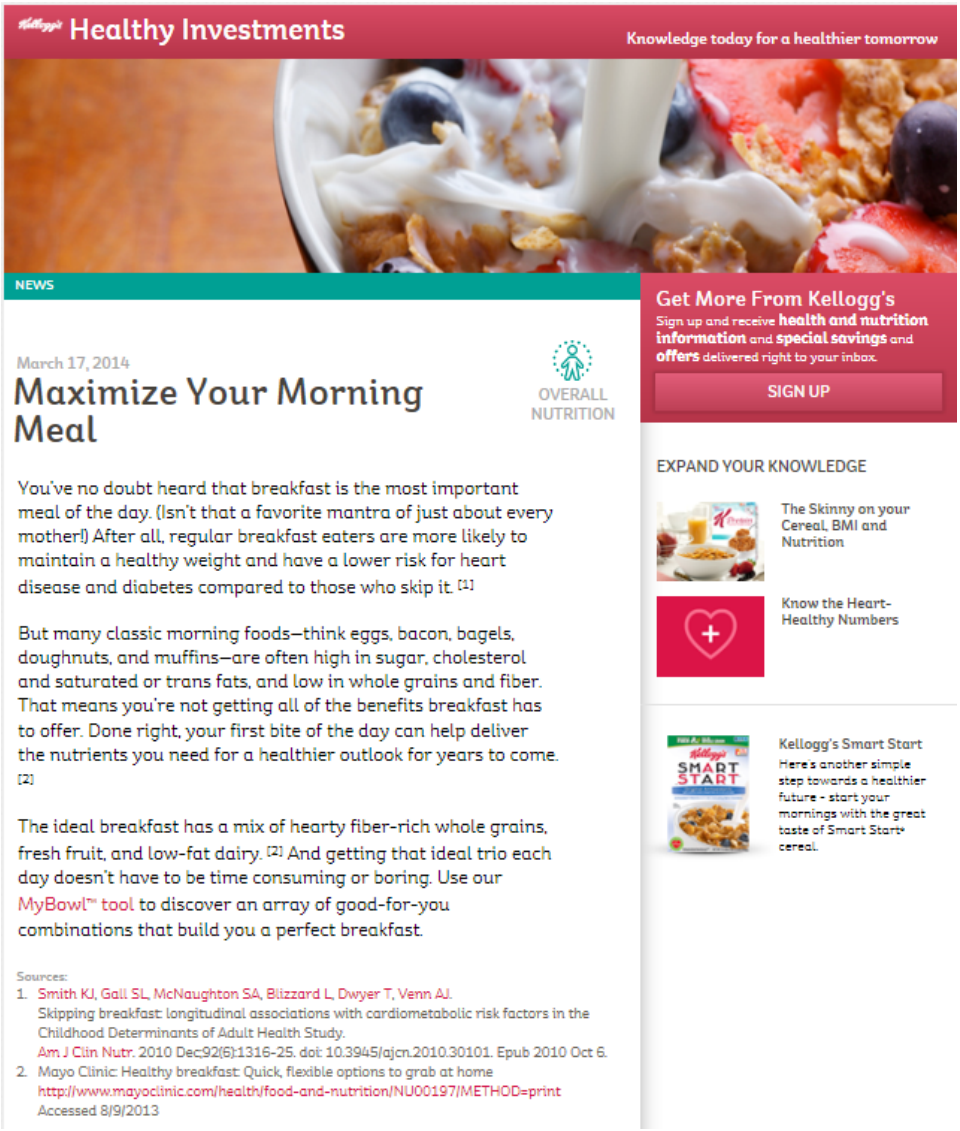
247. Another misleading article comes in the form of a November 4, 2013 "TIPS" piece titled, "The Sugar Lover's Guide to Heart Health." The article begins by citing an Institute of Medicine recommendation that "no more than 25 percent of your total daily calories" come from added sugar. That comes, however, from an IOM recommendation last made in 2006, at which time IOM noted that "Data are mixed on potential adverse effects of overconsuming carbohydrate (i.e., sugars and starches) . . . ."

248. Accordingly, Kellogg is deceptively providing consumers with information about sugar that is a decade old, which itself was based on even older information. The article then goes on to provide "tips," like swapping canned fruit with no-sugar-added frozen fruit, using less barbeque sauce and ketchup, and eating healthier desserts, but in no way addresses the very high amounts of added sugar in Kellogg's cereals and bars.

249. Other articles featured in this section leverage Kellogg's policy and practice of discussing or suggesting the supposedly beneficial aspects of its foods, while obscuring, ignoring, and otherwise minimizing the detrimental impact of consuming its foods on consumer health.

250. A good example is a March 17, 2014 "NEWS" "story" titled "Maximize Your Morning Meal." After touting the health benefits of eating breakfast generally, Kellogg purports to warn that, "many classic morning foods—

think eggs, bacon, bagels, doughnuts, and muffins—are often ***high in sugar***, cholesterol and saturated or trans fats, and low in whole grains and fiber," which supposedly "means you're not getting all the benefits breakfast has to offer."



251. Kellogg goes on to claim that "The ideal breakfast has a mix of hearty fiber-rich whole grains, fresh fruit, and low-fat dairy," citing an article authored by the Mayo Clinic. Kellogg then encourages readers to "Use our MyBowl tool to discover an array of good-for-you combinations that build you a perfect breakfast."

252. The article is highly deceptive. For example, it omits this advice from the Mayo Clinic article cited: "Sugar. After you find fiber-rich cereals that you like, look for the one with the lowest amount of sugar. Focus on cereals marketed to adults. They're usually lower in sugar than cereals aimed at children. . . . Avoid cereals that list sugar at or near the top of the ingredient list, or that list multiple types of added sugar, such as high-fructose corn syrup, honey, brown sugar and dextrose." That description of cereals to avoid matches every cereal complained of herein.

253. A March 17, 2014 article available on Kellogg's Healthy Investments webpage, titled simply "Myth v. Fact," states:

> **Myth or Fact: Carbohydrates make you gain weight.**
>
> Answer: Myth. They may get a bad rap in the media, but carbs aren't the cause of weight gain. Overdoing it with any type of food may raise the number on the scale, as well as your risk of developing health problems.

254. This statement downplays the significant dangers of consuming the sugars in the Kellogg high-sugar foods.

255. Other examples of misleading articles available through Kellogg's Healthy Investments webpage include:

a. NEWS
   1. "Finding Fiber in All the Right Places" (April 29, 2013)
   2. "Grains: The Whole Story" (May 9, 2013)

b. STUDY
   1. "The Skinny on your Cereal, BMI and Nutrition (April 29, 2013)
   2. "The Most Important Meal of the Day" (October 1, 2013)

c. MYTH VS FACT
   1. "Diabetes Myths – Busted" (March 17, 2014)

d. TIPS
   1. "Know the Heart-Healthy Numbers" (April 29, 2013)
   2. "How to Spot a Wholesome Food" (August 1, 2013)
   3. "Fight Cholesterol with Healthy Fats" (August 1, 2013)
   4. "Fill Up on Fiber to Support Heart Health" (August 9, 2013)
   5. "Heart-Helping Grains We Love" (August 1, 2013)
   6. "Adding Fiber to Your Diet" (August 8, 2013)
   7. "Fill Up With Fiber" (August 9, 2013)
   8. "The Power of Protein" (August 23, 2013)
   9. "Eat for All Day Energy" (July 23, 2013)
   10. "The 'Whole' Story on Whole Grains" (October 1, 2013)
   11. "Good Morning, Heart Health!" (November 12, 2013)
   12. "Deciphering Food Labels for Diabetes" (November 12, 2013)
   13. "Make Your Whole Grains Work Harder for You" (October 1, 2013)
   14. "Fiber 101" (November 19, 2013)
   15. "Smarter Choices for Digestive Comfort" (November 20, 2013)
   16. "Managing Your Weight After 50" (November 20, 2013)
   17. "Smart Way to Snack" (November 19, 2013)
   18. "The Art of a Balanced Diet" (November 25, 2013)
   19. "Eat Less, Feel Satisfied" (November 19, 2013)
   20. "5 Heart-Healthy New Year's Resolutions You Haven't Considered" (March 17, 2014)
   21. "Six Surprising Ways to Be Heart Healthy" (March 17, 2014)

256. Kellogg's Healthy Investments webpage is actually a subpage under a broader "Nutrition" page.[120] Kellogg's Nutrition page includes several other subpages that are also misleading, as follows.

a. **"Our Passion for Nutrition."** On this page,[121] Kellogg claims it is "a company of dedicated people making quality products for a healthier world." Kellogg says "Nutrition is not just something you need, but something you enjoy, share and live," and so the company "make[s] it easy[.]" Kellogg claims its founder was "Motivated by a passion to help people improve their health . . . ." More specifically, Kellogg states:

> Today our cereals still begin with the wholesome simplicity of wheat, corn, oats or rice. Next we add quality ingredients to boost the flavor and potential of our grains. Then we share it all with you—in the Kellogg's cereals that you know, trust and love. And because every grain promises nutrition and taste, we're able to create cereals that best cater to you and your nutritional needs. We make a wide selection of great-tasting start-the-day right cereals specifically with you and your family in mind—so everyone can head out the door smiling. That way, from grains to greatness, dawn to done, you and your family are better prepared to be at your best every day. That's our passion, and our promise.

In addition to obscuring the dangerous amounts of added sugar in its cereals,

[120] At http://www.kelloggs.com/en_US/nutrition.html

[121] At http://www.kelloggs.com/en_US/our-commitment-to-nutrition.html

these representations are false and misleading because Kellogg's marketing of high-sugar cereals in a manner designed to induce consumers to purchase and regularly consume them, to the detriment of consumers' health, demonstrates that Kellogg cares more about profit and less about being a socially-responsible food manufacturer.

b. **"The Power of Breakfast."**[122] On this page, Kellogg extols the virtue of eating breakfast in general, including things like "kick-starting your metabolism," and enjoying "mental alertness," but deceptively omits material information about the negative impacts that consumption of the high levels of added sugar in the Kellogg high-sugar cereals has on consumers' health, including their metabolic and brain health.

c. **"The Goodness of Grains."**[123] On this page, Kellogg links to two other pages that extol the virtues of consuming whole grain, but deceptively omits material information about the negative impacts that consumption of the high levels of added sugar in the Kellogg high-sugar cereals and bars has on consumers' health, including their metabolic and brain health.

[122] At http://www.kelloggs.com/en_US/the-power-of-breakfast.html

[123] At http://www.kelloggs.com/en_US/the-goodness-of-grains.html

d. **"The Benefits of Cereal."**[124] On this page, Kellogg claims all of its cereals provide vital nutrients, especially for children, while asserting that "cereal is also lower in sodium and sugar than many popular breakfast options," and that "sugar in cereals—including kids cereals—contributes less than 5 percent of daily sugar intake, yet it adds taste, texture and enjoyment that help the consumption of important nutrients." These statements are false and misleading because, while they may be true for *unsweetened* cereals, the statements do not accurately describe the high-sugar cereals challenged herein, and otherwise attempt to justify the presence of high amounts of sugar in cereals marketed as healthy.

e. **"The Scoop on Heart Health."**[125] This page begins with a prominent graphic stating that "Kellogg's Raisin Bran is the deliciously heart healthy way to start your day." It continues with several more such statements, including ones unlawfully associating dietary fiber with cardiovascular disease. The statements include, "More than 1/4 of your recommended daily fiber is right here in this bowl! Your heart [LOVE]'s Raisin Bran" (where [LOVE] is a vignette of a beating heart), and "Sweet, tart, and healthy for the heart." Given that Raisin Bran is one of Kellogg's

[124] At http://www.kelloggs.com/en_US/the-benefits-of-cereal.html

[125] At http://www.kelloggs.com/en_US/scoop-on-heart-health.html

most sugary cereals, with 18g of sugar per serving contributing nearly 40% of its calories, this statement is false and highly misleading.

f. **"The Benefits of Fiber."**[126] This webpage extols the virtue of fiber to various aspects of health and wellness, including through a quiz and other demonstratives purporting to demonstrate that Raisin Bran cereal is healthier than salad, multi-grain toast, and blueberries because it contains more fiber. But the page and Kellogg's statements are false and misleading because they deceptively omit the negative impacts from the high levels of sugar in the cereals.

257. Kellogg also maintains a YouTube channel[127] that includes, among other things, a four-part video series, created in 2012, called "Cereal: The Complete Story," in which it purports to "explore the advantages of ready-to-eat cereals, address common misconceptions about them, and provide the latest scientific research about cereals and the benefits of breakfast."

258. The first video is titled "Cereal: The Complete Story – Misunderstood," and purports to "clear up" "myths" about cereal. For example, Kellogg claims its cereals are not highly-processed foods, but rather result from a simple process of merely cooking grain.

[126] At http://www.kelloggs.com/en_US/the-benefits-of-fiber.html

[127] At https://www.youtube.com/channel/UCbaL7tpH-Q0b_5z71cqGDPw

259. In the same video, Kellogg represents it is a "myth" perpetuated by "some critics," that "some cereals are high in sugar and contribute to obesity." Citing only, "Journal of the American Dietetic Association, 2003," Kellogg claims:

> in fact, cereal eaters, including those who eat kid's cereals, have healthier body weights. The criticism surrounding sugar includes the concern that it displaces nutrients with calorie-rich, nutrient-poor foods. It's important to keep things in perspective. Kid's cereals contribute fewer calories to the diet than you might think. Sugar in ready-to-eat cereals is actually a small percentage of daily sugar intake. Cereal's ability to deliver nutrients is so important that the 2005 U.S. Dietary Guidelines recognized that the consumption of sweetened cereal and other nutrient-dense foods is positively associated with children's and adolescent's nutrient intake. An average serving of Kellogg's kid's cereal with skim milk contains approximately 150 calories. And that's 9% of the recommended daily amount for U.S. kids ages 6-11. It's not cereal or any single food that causes obesity. Obesity results from an imbalance of calories in versus calories out. It's interesting to note that while the number of calories consumed by kids age 6-11 has increased over the years only slightly, the incidence of obesity has climbed sharply. Kids today live significantly more sedentary lifestyles than children did 10, 20, or even 30 years ago. Healthy eating combined with exercise is essential for good health. It's not simply about avoiding any one single food.

260. The video then shows a pediatrics professor, James O. Hill, PhD, stating that parents should do things to make their kids more active and, "on the food side what you want to concentrate on is not having your kid overeat and providing a nutritionally-balanced array of foods during the day."

261. Next, the video states that "A 10-year study found that adolescent girls who eat cereal regularly are less likely to become overweight," but in the next frame mentions that only 41% of the cereals in the study were "pre-sweetened."

262. From all of this, Kellogg concludes, "when it comes to health, consumers have a role to play in their own lives and the lives of their families. That's why food companies worldwide help educate people on nutrition, and the importance of breakfast, and a healthy lifestyle." Kellogg claims it "takes these responsibilities seriously, and is involved in a number of organizations across the globe that support good food habits and a balanced lifestyle."

263. These statements are highly-deceptive, as the science demonstrates that calories from different sources are not equivalent, and obesity is not merely a question of "calories in, calories out," as Kellogg misrepresents.[128] Moreover, while noting the obesity epidemic among children, Kellogg falsely blames this on the lack of a "balanced lifestyle," claiming that "Kids today live significantly more sedentary lifestyles than children did" years ago—a specious blame tactic that intentionally shifts focus away from the negative impacts its foods have on health—while ignoring the strong correlation seen in the data between the rise in added sugar consumption and childhood obesity.

264. The video is also misleading in that it suggests Kellogg high-sugar cereals will contribute to children not overeating, but the science demonstrates the opposite—that their high sugar is likely to cause overeating.

[128] *See supra* n.46 and related discussion.

265. In fact, a recent study by Yale University's Rudd Center for Food Policy and Obesity found that children 5 to 12 years old ate an average of 35 grams of low-sugar cereals, but an average of 61 grams of high-sugar cereals.[129]

266. Another Kellogg video is titled, "Cereal: The Complete Story – a Nutritious Start to the Day."[130] It begins by touting the science demonstrating that breakfast is an important meal, especially for children. Citing only "British Nutrition Foundation Nutrition Bulletin, 2007," Kellogg claims, "Breakfast eaters—specifically breakfast cereal eaters—including children also have lower body mass indices and also tend to be overweight less than those who eat cereal less frequently."

267. The article to which Kellogg refers, however, does not support this statement. Rather, in reviewing nine references looking at the relationship between the consumption of breakfast cereals and BMI, the authors concluded that while "[t]here is consistent evidence of an association between cereal consumption and a healthy weight," there was "limited evidence for any proposed mechanism that would point to it being a causal relationship."[131] The authors even point out that

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[129] Jennifer L. Harris, et al., "Effects of Serving High-Sugar Cereals on Children's Breakfast-Eating Behavior," *Pediatrics*, Vol. 127, Issue 1 (Jan. 2011) [hereinafter "Harris, Children's High-Sugar Cereal Eating Behavior"].

[130] At https://www.youtube.com/watch?v=LcZwXPOnwPE

[131] De La Hunty, A., et al., "Are people who regularly eat breakfast cereals slimmer than those who don't? A systematic review of the evidence," *Nutrition Bulletin*, Vol. 32, Issue 2, pp. 118-28 (June 2007).

some of the associations seen in the nine references were not statistically significant, and that it is likely the associations in others come from "confounding factors."[132] Moreover, neither the authors, nor Kellogg in its video, draw a distinction between the unsweetened cereals that at least some subjects of the nine studies likely consumed, and the high-sugar Kellogg cereals at issue here.

268. Continuing this deceptive omission, while showing video of Kellogg's Raisin Bran, Raisin Bran Crunch, and Frosted Mini-Wheats, Kellogg states, "Cereal has many valuable benefits. It's a quick and easy way to get the nutrition you need at breakfast, and it's a typically nutrient-dense, low-fat, low-cholesterol food, meaning it provides lots of nutrients for relatively few calories."

269. Showing video of Frosted Mini-Wheats, Kellogg states that "cereal also promotes the consumption of milk, a nutrient-packed beverage that is often lacking in women's and children's diets."

270. Kellogg continues, "Many experts agree that fruits, vegetables, and grains are the foundation of a balanced diet. With wheat, rice, oats and corn as main ingredients, breakfast cereals deliver the goodness of grain."

271. And Kellogg claims that "cereal often contributes fiber, a nutrient many adults and children around the world do not get enough of. In addition to playing an important role in overall health, there is consistent strong evidence for the role of

[132] *Id.*

fiber-containing foods in helping to address a number of health issues, including obesity, digestive health, diabetes, heart disease, and certain cancers."

272. The video then presents an interview with "Dr. David Jenkins, MD, PhD: World-Renowned Fiber Researcher, Canada," who states: "Cereals are excellent foods because they provide both the carbohydrate, they provide fiber, they're low in saturated fat, and their profile for risk reduction of chronic diseases, in terms of diabetes and heart disease, is excellent."

273. These statements are highly-deceptive, especially inasmuch as they are being stated while showing video of some of Kellogg's most sugary cereals because, even if literally true, any such potential benefits that might come from, for example, fiber consumption, are outweighed by the harms of consuming the high amounts of sugar in Kellogg's cereals. Moreover, the science demonstrates that regular consumption of these cereals, contrary to *reducing* risk of diabetes and heart disease, *increases* risk of this and other morbidity.

274. Other online locations where Kellogg disseminates misleading information about its cereals—typically touting their contribution to a healthy breakfast or lifestyle while ignoring the dangers presented by the sugars in the high-

sugar cereals—include, without limitation, its "Love Your Cereal" page[133] and its "Choose My Bowl" tool.[134]

D. The Foregoing Behaviors are Part of Kellogg's Longstanding General Policy, Practice and Strategy of Marketing its High-Sugar Cereals and Snack Bars as Healthy in Order to Increase Sales and Profit

275. The practices complained of herein, while specific to certain cereal and snack bar lines, flavors, and varieties, and to certain packaging claims, are exemplary of, and consistent with, Kellogg's longtime practice of intentionally and strategically marketing high-sugar cereals, bars, and other foods with health and wellness claims that both deceptively suggest the products are healthy, and deceptively omit the dangers of consuming the products.

276. These practices have been consistent notwithstanding Kellogg's occasional discontinuation or introduction of new products or product lines, reformulation of products, or labeling or packaging changes.

277. This strategy is based on sophisticated consumer marketing research, and has been undertaken by Kellogg with the purpose of increasing the prices, sales, and market share of its cereals, bars, and other food products.

[133] At http://www.kelloggs.com/en_US/love-your-cereal.html

[134] At http://www.kelloggs.com/en_US/choose-my-bowl.html

278. Unless enjoined from using in the marketing of high-sugar cereals, bars and other foods the health and wellness marketing statements, representations, strategies, and tactics complained of herein, Kellogg will continue to employ this strategy, as the consumer preference for healthier-seeming foods is strong.

E. Kellogg's Policy and Practice of Marketing High-Sugar Cereals as Healthy is Especially Harmful Because Consumers Generally Eat More than One Serving of Cereal at a Time, Which Kellogg Knows or Reasonably Should Know

279. The serving size for Kellogg's cereals is generally either around 30g or 60g per serving.

280. In 2014, the FDA analyzed food consumption data between 2003 and 2008, from the National Health and Nutrition Examination Survey (NHANES, discussed previously above), finding that at least 10% of Americans eat at one sitting 2 to 2.6 times the amount of cereal as the labeled serving size. Federal regulations thus provide that the reference amount customarily consumed (RACC) for cereal is 110 grams. 21 C.F.R. § 101.12(b).

281. A study conducted by General Mills found that children and adolescents 6 to 18 years old typically eat about twice as much cereal in a single meal compared to the suggested serving size.

282. And as mentioned above, a study by Yale University's Rudd Center for Food Policy and Obesity, found that children 5 to 12 years old ate an average of 35 grams of low-sugar cereals, but an average of 61 grams of high-sugar cereals.[135]

283. As a result of consumers' actual eating habits, Kellogg's high-sugar cereals in reality contribute significantly more sugar to their consumers' diets than even the high amount that is in a single serving suggests.

284. For example, doubling a serving of most Kellogg cereals would cause men, women, and children all to consume near or in excess (sometimes well in excess) of their AHA-recommended maximum daily added sugar intake in just the single breakfast serving.

285. For this reason, the Kellogg high-sugar cereals are especially dangerous to the health of those who regularly consume them, and therefore its deceptive health and wellness messaging for these products is particularly insidious.

PLAINTIFFS' PURCHASES & INJURIES

A. Plaintiff Melody DiGregorio

286. Plaintiff Melody DiGregorio has been a frequent cereal eater for many years. Ms. DiGregorio is relatively health-conscious. During the past several years and prior, in seeking out cereals to eat, Ms. DiGregorio has generally tried to choose

[135] *See* Harris, Children's High-Sugar Eating Behavior, *supra* n.129

healthy options, and has been willing to pay more for cereals she believes are healthy.

287. Over the past several years, Ms. DiGregorio has purchased Kellogg's Frosted Mini-Wheats cereal, and Nutri-Grain Soft-Baked Breakfast bars, on multiple occasions.

288. *Kellogg's Frosted Mini-Wheats Cereals*. As best she can recall, over the past several years, Ms. DiGregorio has purchased at least the following varieties of Kellogg's Frosted Mini-Wheats cereals: Original, Maple Brown Sugar, Blueberry, and Strawberry. Given Ms. DiGregorio's habits, she believes she purchased one variety or another with a frequency of approximately eight packages a month. Ms. DiGregorio believes she purchased Kellogg's Frosted Mini-Wheats cereal from locations including the BJ's Wholesale located at 756 NY-28 in Oneonta, NY 13820, and the Walmart located at 5054 NY-23, Oneonta, NY 13820.

289. For each Kellogg's Frosted Mini-Wheats cereal purchased, Ms. DiGregorio read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like healthy food choices to Ms. DiGregorio.

290. *Kellogg's Nutri-Grain Soft Baked Breakfast bars*. As best she can recall, over the past several years, Ms. DiGregorio has purchased Kellogg's Nutri-Grain Soft Baked Breakfast bars in at least Apple Cinnamon and Cherry varieties. Given Ms. DiGregorio's habits, she believes she purchased one variety or another with a frequency of at least three or four packages per month. Ms. DiGregorio believes she purchased Kellogg's Nutri-Grain Soft Baked Breakfast bars from locations including the BJ's Wholesale located at 756 NY-28 in Oneonta, NY 13820, and the Walmart located at 5054 NY-23, Oneonta, NY 13820.

291. In purchasing Kellogg's Nutri-Grain bars, Ms. DiGregorio read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like a healthy food choice to Ms. DiGregorio.

B. Plaintiff Eric Fishon

292. Plaintiff Eric Fishon has been a frequent cereal eater for many years. Mr. Fishon is relatively health-conscious. During the past several years and prior, in seeking out cereals to eat, Mr. Fishon has generally tried to choose healthy options, and has been willing to pay more for cereals he believes are healthy.

293. Over the past several years, Mr. Fishon has purchased Kellogg cereals on multiple occasions, including Raisin Bran cereals, Frosted Mini-Wheats cereals, and Smart Start – Original Antioxidants cereal.

294. Over the past several years, Mr. Fishon has also purchased Kellogg's Nutri-Grain bars on multiple occasions, including Nutri-Grain Cereal Bars, Nutri-Grain Soft-Baked Breakfast Bars, Nutri-Grain Oat & Harvest Bars, Nutri-Grain Harvest Hearty Breakfast Bars, Nutri-Grain Fruit Crunch Crunchy Breakfast Bars, and Nutri-Grain Fruit & Nut Chewy Breakfast Bars.

295. *Kellogg's Raisin Bran Cereals*. As best he can recall, over the past several years, Mr. Fishon has purchased at least original Raisin Bran, Raisin Bran Omega-3, and Raisin Bran with Cranberries cereals. To the best of his recollection, Mr. Fishon began purchasing Kellogg's Raisin Bran cereals in 2012, and continued through at least 2015. Given plaintiff's habits, he believes he purchased approximately three to four packages of Raisin Bran per month. Plaintiff believes he purchased Kellogg's Raisin Bran cereals from locations including the Target located at 255 Pond Path, in South Setauket, New York 11720; the BJ's Wholesale Club located at 1000 Old Nichols Road, in Islandia, New York 11749; the Stop & Shop located at 2350 N Ocean Avenue in Farmingville, New York 11738; and the Shop Rite located at 335 Nesconset Highway, Hauppauge New York, 11788.

296. For each Kellogg's Raisin Bran cereal purchased, Mr. Fishon read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like healthy food choices to Mr. Fishon.

297. *Kellogg's Frosted Mini-Wheats Cereals*. As best he can recall, over the past several years, Mr. Fishon has purchased at least the following varieties of Kellogg's Frosted Mini-Wheats cereals: Original, Maple Brown Sugar, Blueberry, Bite Size – Blueberry Muffin, Bite Size – Cinnamon Streusel, Little Bites – Chocolate, and Harvest Delights – Blueberry. To the best of his recollection, Mr. Fishon began purchasing Kellogg's Frosted Mini-Wheats cereals in 2010, and continued through at least 2015. Given plaintiff's habits, he believes he purchased one variety or another with a frequency of approximately five packages per month. Plaintiff believes he purchased Kellogg's Frosted Mini-Wheats cereal from locations including the Target located at 255 Pond Path, in South Setauket, New York 11720; the BJ's Wholesale Club located at 1000 Old Nichols Road, in Islandia, New York 11749; the Stop & Shop located at 2350 N Ocean Avenue in Farmingville, New York 11738; and the Shop Rite located at 335 Nesconset Highway, Hauppauge New York, 11788.

298. For each Kellogg's Frosted Mini-Wheats cereal he purchased, Mr. Fishon read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like healthy food choices to Mr. Fishon.

299. *Kellogg's Smart Start – Original Antioxidant Cereal*. As best he can recall, over the past several years, Mr. Fishon has purchased Kellogg's Smart Start – Original Antioxidant cereal on multiple occasions, beginning in approximately 2012 and continuing until recently. Given Plaintiff's habits, he believes he purchased at least three to four packages of Kellogg's Smart Start – Original Antioxidant cereal per month. Plaintiff believes he purchased Kellogg's Smart Start cereal from locations including the Target located at 255 Pond Path, in South Setauket, New York 11720; the BJ's Wholesale Club located at 1000 Old Nichols Road, in Islandia, New York 11749; the Stop & Shop located at 2350 N Ocean Avenue in Farmingville, New York 11738; and the Shop Rite located at 335 Nesconset Highway, Hauppauge New York, 11788.

300. In purchasing Kellogg's Smart Start – Original Antioxidant cereal, Mr. Fishon read and decided to purchase the product in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth

above, which statements—individually, and especially in the context of the packaging as a whole—made the product seem like a healthy food choice to Mr. Fishon.

301. *Kellogg's Nutri-Grain bars*. As best he can recall, over the past several years, Mr. Fishon has purchased several varieties and flavors of Kellogg's Nutri-Grain bars. To the best of his recollection, Mr. Fishon began purchasing Kellogg's Nutri-Grain bars in 2012. Given plaintiff's habits, he believes he purchased one variety or another with a frequency of approximately four to five packages per month. Plaintiff believes he purchased Nutri-Grain bars from locations including the Target located at 255 Pond Path, in South Setauket, New York 11720; the BJ's Wholesale Club located at 1000 Old Nichols Road, in Islandia, New York 11749; the Shop Rite located at 335 Nesconset Highway, Hauppauge New York, 11788; various 7-Eleven locations; and various Bolla Market locations.

302. In purchasing Kellogg's Nutri-Grain bars, Mr. Fishon read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like a healthy food choice to Mr. Fishon.

C. Plaintiff Kerry Austin

303. Plaintiff Kerry Austin has been a frequent cereal eater for many years and considers cereal a staple in her household. Ms. Austin is relatively health-conscious and tries to make healthy purchasing decisions for herself and her family. During the past several years and prior, in seeking out cereals to eat, Ms. Austin has generally tried to choose healthy options, and has been willing to pay more for cereals she believes are healthy.

304. Over the past several years, Ms. Austin has purchased Kellogg cereals on multiple occasions, including Raisin Bran cereals and Frosted Mini-Wheats cereals.

305. Over the past several years, Ms. Austin has also purchased Kellogg's Nutri-Grain bars on multiple occasions, including Nutri-Grain Cereal Bars and Nutri-Grain Soft-Baked Breakfast Bars.

306. *Kellogg's Raisin Bran Cereals*. As best she can recall, over the past several years, Ms. Austin has purchased Raisin Bran and Raisin Bran Crunch. Given plaintiff's habits, she believes she purchased approximately four packages of Raisin Bran and two boxes of Raisin Bran Crunch per month. Plaintiff believes she purchased Kellogg's Raisin Bran cereals from locations including the Wegmans located at 3701 Mt. Read Boulevard in Rochester, New York 14616; the Wegmans located at 525 Titus Avenue in Irondequoit, New York 14617; the Walmart located

at 3800 Dewey Avenue in Rochester, New York 14616; the Walmart located at 1490 Hudson Avenue in Rochester, New York 14621; the Gates Big M located at 1520 Spencerport Road, Ste. #1 in Rochester, New York 14606; the Rank's IGA located at 201 West Ave, Canandaigua, New York, 14424; the 7-Eleven located at 436 Monroe Ave in Rochester, New York 14607; and the Herrema's Food Market located at 125 Pattonwood Drive in Rochester, New York 14617.

307. For each Kellogg's Raisin Bran cereal purchased, Ms. Austin read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like healthy food choices to Ms. Austin.

308. *Kellogg's Frosted Mini-Wheats Cereals*. As best she can recall Ms. Austin has purchased Frosted Mini-Wheats over the past several years. Given plaintiff's habits, she believes she purchased approximately 2 packages of Frosted Mini-Wheats per month. Plaintiff believes she purchased Kellogg's Frosted Mini-Wheats cereals from locations including the Wegmans located at 3701 Mt. Read Boulevard in Rochester, New York 14616; the Wegmans located at 525 Titus Avenue in Irondequoit, New York 14617; the Walmart located at 3800 Dewey Avenue in Rochester, New York 14616; the Walmart located at 1490 Hudson Avenue in Rochester, New York 14621; the Gates Big M located at 1520

Spencerport Road, Ste. #1 in Rochester, New York 14606; the Rank's IGA located at 201 West Ave, Canandaigua, New York, 14424; the 7-Eleven located at 436 Monroe Ave in Rochester, New York 14607; and the Herrema's Food Market located at 125 Pattonwood Drive in Rochester, New York 14617.

309. For each Kellogg's Frosted Mini-Wheats cereal purchased, Ms. Austin read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like healthy food choices to Ms. Austin.

310. *Kellogg's Nutri-Grain bars*. As best she can recall, Ms. Austin purchased Kellogg's Nutri-Grain Cereal Bars and Nutri-Grain Soft Baked Breakfast Bars over the past several years. Given plaintiff's habits, she believes she purchased each type of bars with a frequency of approximately four packages per month during the time the product was in the market. Plaintiff believes she purchased Nutri-Grain bars from locations including the Wegmans located at 3701 Mt. Read Boulevard in Rochester, New York 14616; the Wegmans located at 525 Titus Avenue in Irondequoit, New York 14617; the Walmart located at 3800 Dewey Avenue in Rochester, New York 14616; the Walmart located at 1490 Hudson Avenue in Rochester, New York 14621; the Gates Big M located at 1520 Spencerport Road, Ste. #1 in Rochester, New York 14606; the Rank's IGA located at 201 West Ave,

Canandaigua, New York, 14424; the 7-Eleven located at 436 Monroe Ave in Rochester, New York 14607; and the Herrema's Food Market located at 125 Pattonwood Drive in Rochester, New York 14617.

311. In purchasing Kellogg's Nutri-Grain bars, Ms. Austin read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like a healthy food choice to Ms. Austin.

D. Plaintiff Nafeesha Madyun

312. Plaintiff Nafeesha Madyun has been a frequent cereal eater for many years. Ms. Madyun is relatively health conscious. During the past several years and prior, in seeking out cereals to eat, Ms. Madyun has generally tried to choose healthy options for herself and her family, and has been willing to pay more for cereals she believes are healthy.

313. Over the past several years, Ms. Madyun has purchased Kellogg's Raisin Bran and Frosted Mini-Wheats cereals on multiple occasions.

314. *Kellogg's Raisin Bran Cereals*. As best she can recall, Ms. Madyun has purchased Raisin Bran cereal over the last several years. To the best of her recollection, Ms. Madyun believes she began purchasing Raisin Bran in around 2010. Given plaintiff's habits, she believes she purchased approximately 2 packages

of Raisin Bran per month. Ms. Madyun believes she purchased Kellogg's Raisin Bran cereals from locations including the Associated Supermarkets located at 448 Malcom X Blvd. in New York, NY, 10037; the Pioneer Supermarkets located at 380 Lenox Ave in New York, NY, 10027; and the Wal-Mart located at 1 Teterboro Landing Drive in Teterboro, NJ 07608.

315. For each Kellogg's Raisin Bran cereal purchased, Ms. Madyun read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like healthy food choices to Ms. Madyun.

316. *Kellogg's Frosted Mini-Wheats Cereals*. As best she can recall, Ms. Madyun has purchased Frosted Mini-Wheats over the last several years. To the best of her recollection, Ms. Madyun began purchasing Frosted Mini-Wheats in 2010. Given Ms. Madyun's habits, she believes she purchased approximately two packages of Frosted Mini-Wheats per month. Ms. Madyun believes she purchased Kellogg's Frosted Mini-Wheats cereals from locations including the Associated Supermarkets located at 448 Malcom X Blvd. in New York, NY, 10037; the Pioneer Supermarkets located at 380 Lenox Ave in New York, NY, 10027; and the Wal-Mart located at 1 Teterboro Landing Drive in Teterboro, NJ 07608.

317. For each Kellogg's Frosted Mini-Wheats cereal purchased, Ms. Madyun read and decided to purchase the products in substantial part based upon Kellogg's health and wellness labeling statements discussed herein and set forth above, which statements—individually, and especially in the context of the packaging as a whole—made the products seem like healthy food choices to Ms. Madyun.

* * *

318. When purchasing Kellogg cereals and bars, plaintiffs were seeking products that were healthy to consume, that is, whose regular consumption would not increase their risk of CHD, stroke, and other morbidity.

319. The health and wellness representations on the Kellogg cereals' and snack bars' packaging, however, were misleading, and had the capacity, tendency, and likelihood to confuse or confound plaintiffs and other consumers acting reasonably (including the putative class) because, as described herein, the products are not healthy but instead their consumption increases the risk of CHD, stroke, type 2 diabetes, liver disease, metabolic disease, and other morbidity.

320. Plaintiffs are not nutritionists or food scientists, but rather lay consumers who did not have the specialized knowledge that Kellogg had regarding the nutrients present in the Kellogg cereals and bars. At the time of purchase, plaintiffs were unaware of the extent to which consuming high amounts of added

sugar in any form adversely affects blood cholesterol levels and increases risk of CHD, stroke, type 2 diabetes, liver disease, metabolic disease, and other morbidity, or what amount of sugar might have such an effect.

321. Plaintiffs acted reasonably in relying on Kellogg's health and wellness marketing, which Kellogg intentionally placed on the products' labels with the intent to induce average and reasonable consumers into purchasing the products.

322. Plaintiffs would not have purchased Kellogg cereals and bars if they knew that their labeling claims were false and misleading in that the products were not as healthy as represented.

323. The Kellogg cereals and bars cost more than similar products without misleading labeling, and would have cost less absent the misleading health and wellness claims. The market demand for Kellogg's cereals and bars has been inflated as a result of Kellogg's practices. If Kellogg were enjoined from making the misleading claims, the market demand and price for its cereals and bars would drop, as it has been artificially and fraudulently inflated due to Kellogg's use of deceptive health and wellness labeling.

324. Plaintiffs paid more for the Kellogg cereals and bars, and would only have been willing to pay less, or unwilling to purchase them at all, absent the misleading labeling statements complained of herein.

325. For these reasons, the Kellogg cereals and bars were worth less than what plaintiffs paid for them, and may have been worth nothing at all.

326. Instead of receiving products that had actual healthful qualities, the products plaintiffs received were not healthy, but rather their consumption causes increased risk of CHD, stroke, and other morbidity.

327. Plaintiffs lost money as a result of Kellogg's deceptive claims and practices in that they did not receive what they paid for when purchasing the Kellogg cereals and bars.

328. Plaintiffs detrimentally altered their position and suffered damages in an amount equal to the amount they paid for the products.

CLASS ACTION ALLEGATIONS

329. Pursuant to Fed. R. Civ. P. 23, plaintiffs seek to represent a class comprised of all persons who, at any time from six years preceding the date of this Complaint to the time the class is notified, purchased in New York, for their own personal, family, or household use and not for resale, high-sugar Kellogg cereals or snack bars bearing health and wellness claims.

330. Plaintiffs nevertheless reserve the right to divide into subclasses, expand, narrow, more precisely define, or otherwise modify the class definition prior to (or as part of) filing a motion for class certification.

331. The members in the proposed class and subclass 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. Fed. R. Civ. P. 23(a)(1).

332. Questions of law and fact common to plaintiffs and the class, Fed. R. Civ. P. 23(a)(2), include, without limitation:

a. Whether certain Kellogg cereals and bars contain sufficient added sugar to contribute substantially to the excessive consumption of added sugar;

b. Whether the excessive consumption of added sugar presents significant health risks;

c. Whether, if the former questions of fact are answered in the affirmative, this renders misleading to the reasonable consumer Kellogg's use of health and wellness claims on the packaging of the certain high-sugar cereals and snack bars;

d. Whether the challenged Kellogg health and wellness claims were material;

e. Whether Kellogg made any statement it knew or should have known was false or misleading;

f. Whether Kellogg maintained a longstanding marketing policy,

practice, and strategy of selling high-sugar cereals and snack bars with health and wellness claims;

g. Whether Kellogg's conduct or any of its acts or practices violated the Federal Food, Drug, and Cosmetic Act, 28 U.S.C. §§ 301 *et seq.*, and its implementing regulations, 21 C.F.R. §§ 101 *et seq.*, the New York Agriculture and Marketing Law, or any other regulation, statute, or law;

h. The proper equitable and injunctive relief;

i. The proper amount of restitution or disgorgement;

j. The proper amount of reasonable litigation expenses and attorneys' fees.

333. Plaintiffs' claims are typical of class members' claims in that they are based on the same underlying facts, events, and circumstances relating to Kellogg's conduct. Fed. R. Civ. P. 23(a)(3).

334. Plaintiffs will fairly and adequately represent and protect the interests of the class, have no interests incompatible with the interests of the class, and have retained counsel competent and experienced in class action, consumer protection, and false advertising litigation, including within the food industry.

335. 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.

336. Questions of law and fact common to the class predominate over any questions affecting only individual class members.

337. As a result of the foregoing, class treatment is appropriate under Fed. R. Civ. P. 23(a), (b)(2), and (b)(3), and may be appropriate for certification "with respect to particular issues" under Rule 23(b)(4).

CAUSES OF ACTION

FIRST CAUSE OF ACTION

Unfair & Deceptive Business Practices in Violation of N.Y. Gen. Bus. L. § 349

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

339. Kellogg's conduct constitutes deceptive acts or practices or false advertising in the conduct of business, trade or commerce or on the furnishing of services in New York which affects the public interest under N.Y. Gen. Bus. L. § 349.

340. As alleged herein, Kellogg's use of health and wellness advertising for cereal and snack bar products that contain substantial amounts of added sugar is deceptive in light of the strong evidence that excessive sugar consumption greatly increases risk of chronic disease.

341. As alleged herein, by misbranding the high-sugar products bearing health and wellness claims, Kellogg engaged in, and continues to engage in, deceptive acts and practices.

342. Kellogg's conduct was materially misleading to plaintiffs and the class.

343. During the class period, Kellogg carried out a plan, scheme and course of conduct which was consumer oriented.

344. As a direct and proximate result of Kellogg's violation of N.Y. Gen. Bus. L. § 349, plaintiffs and the class were injured and suffered damages.

345. The injuries to plaintiffs and the class were foreseeable to Kellogg and, thus Kellogg's actions were unconscionable and unreasonable.

346. Kellogg is liable for damages sustained by plaintiffs and the class to the maximum extent allowable under N.Y. Gen. Bus. L. § 349.

SECOND CAUSE OF ACTION

False Advertising in Violation of N.Y. Gen. Bus. L. § 350

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

348. Kellogg has engaged and is engaging in consumer-oriented conduct which is deceptive or misleading in a material way, constituting false advertising in the conduct of any business, trade, or commerce, in violation of N.Y. Gen. Bus. L. § 350.

349. As a result of Kellogg's false advertising, plaintiffs and the class have suffered and continue to suffer substantial injury, including damages, which would not have occurred but for the false and deceptive advertising, and which will continue to occur unless Kellogg is permanently enjoined by this Court.

350. Plaintiffs, on behalf of themselves and other class members, seek an Order enjoining Kellogg's fraudulent acts and practices, and awarding damages to the maximum extent allowable under N.Y. Gen. Bus. L. § 350.

THIRD CAUSE OF ACTION

Fraud

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

352. Kellogg made material false representations of fact to plaintiffs and class members through the health and wellness advertising it used for its high-sugar cereal and bar products.

353. Kellogg also made material false representations of fact through omission, including for example by not disclosing that excessive sugar consumption greatly increases risk of chronic disease, and that the amount of sugar in the cereals and snack bars at issue is high.

354. Kellogg made such material factual false representations with knowledge of their falsity and with the intent to induce plaintiffs' and class members' reliance thereon.

355. Plaintiffs and class members justifiably relied on the truthfulness of Kellogg's material factual representations, which they did not know were false.

356. As a result of Kellogg's material factual misrepresentations, plaintiffs and class members suffered injury, and continue to suffer injury, including damages.

357. Plaintiffs, on behalf of themselves and other class members, seek an Order enjoining Kellogg's fraudulent acts and practices, and awarding actual damages.

FOURTH CAUSE OF ACTION

Intentional Misrepresentation & Fraud in Violation of N.Y. C.P.L.R. 213

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

359. Kellogg has engaged in and is engaging in intentional misrepresentation resulting in fraud in violation of N.Y. C.P.L.R. 213.

360. Kellogg represented to the public, including to plaintiffs and the class, that the health and wellness claims made on its high-sugar cereal and bar products were true.

361. Kellogg's representations were false and misleading.

362. At the time Kellogg made statements or representations regarding the health and wellness qualities of its high-sugar cereal and bar products, Kellogg knew that the statements and representations were false and misleading.

363. Kellogg made the misrepresentations alleged herein with the intention of inducing and persuading plaintiffs and the class to purchase its high-sugar cereals and snack bars.

364. Kellogg further withheld and omitted material information about its high-sugar cereals and snack bars with the intention of inducing and persuading plaintiffs and the class to purchase the products.

365. Plaintiffs and the class, by purchasing Kellogg's high-sugar cereals and bars, reasonably relied on Kellogg's false and misleading statements and misrepresentations, and on the absence of the material information that Kellogg deceptively omitted.

366. As a direct and proximate result of Kellogg's intentional misrepresentations and deceptive omissions, plaintiffs and the class were induced to pay a premium for the high-sugar cereal and bar products.

367. Plaintiffs and the class were damaged through their purchase and use of the high-sugar cereal and bar products.

368. Plaintiffs' and the class members' reliance on Kellogg's statements and representations of the nature and characteristics of the high-sugar cereal and bar

products was reasonable. As a result, Kellogg is guilty of malice, oppression, and fraud, and plaintiffs and the class are therefore entitled to recover exemplary or punitive damages.

FIFTH CAUSE OF ACTION

Negligent Misrepresentation

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

370. Kellogg misrepresented to plaintiffs and the class the health and wellness benefits of its high-sugar products, and omitted material facts concerning the strong evidence that excessive sugar consumption greatly increases risk of chronic disease.

371. Kellogg owed a duty to plaintiffs and the class to exercise reasonable care when issuing statements or disclosures regarding its high-sugar cereals and snack bars' health and wellness benefits.

372. Kellogg's statements and disclosures regarding the health and wellness benefits of its high-sugar cereals and snack bars products were likely to deceive plaintiffs and the class.

373. Kellogg's omissions of material information were likely to deceive plaintiffs and the class in that, had Kellogg not omitted such material information,

the disclosure of that information would have resulted in plaintiffs and the class acting differently, for example, not purchasing the high-sugar cereals and snack bars.

374. Kellogg's claims have influenced or are likely to influence future decisions of consumers and the buying public. Plaintiffs and the class, by purchasing the Kellogg cereals and snack bars, reasonably acted in reliance on the truth of Kellogg's representations, and the absence of the material information that Kellogg deceptively omitted.

375. As a direct and proximate result of plaintiffs' and the class members' reliance upon the representations made by Kellogg, plaintiffs and the class have sustained damages and ascertainable loss.

SIXTH CAUSE OF ACTION

Breach of Express Warranty

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

377. In selling the high-sugar cereals and snack bars to plaintiffs and the class, Kellogg made affirmations of fact or promises, which formed part of the basis of the bargain. Kellogg thus expressly warranted the goods sold. These affirmations and descriptions include, for each challenged product:

a. *Raisin Bran*

- "HEART HEALTHY"
- "Whole grains can support a healthy lifestyle"

- "Start with a healthy spoonful"
- "Invest in your health invest in yourself"
- "Fiber, like brand fiber, plays a very important part in your digestive health and overall well-being"

b. *Raisin Bran Crunch*

- "HEART HEALTHY"
- "Start with a healthy spoonful"
- "Invest in your health invest in yourself"
- "with a Touch of Golden Honey"

c. *Frosted Mini-Wheats – Original*

- "nutritious"
- "LIGHTLY SWEETENED"

d. *Frosted Mini-Wheats – Maple Brown Sugar*

- "LIGHTLY SWEETENED"
- "help[s] keep you full and focused all morning"

e. *Frosted Mini-Wheats – Strawberry*

- "LIGHTLY SWEETENED"
- "help[s] keep you full and focused all morning"

f. *Frosted Mini-Wheats – Blueberry*

- "UNBELIEVABLY NUTRITIOUS"
- "LIGHTLY SWEETENED"
- "help[s] keep you full and focused all morning"

g. *Frosted Mini-Wheats Big Bite – Original*

- "UNBELIEVABLY NUTRITIOUS"
- "Foods high in fiber help support good health."
- "LIGHTLY SWEETENED"
- "help[s] keep you full and focused all morning"

h. *Frosted Mini-Wheats Little Bites – Chocolate*

- "Nutritious"
- "LIGHTLY SWEETENED"
- "help[s] keep you full and focused all morning"

i. *Frosted Mini-Wheats Little Bites – Cinnamon Roll*

- "LIGHTLY SWEETENED"
- "keeps 'em full. Keeps 'em focused."

j. *Frosted Mini-Wheats Touch of Fruit in the Middle – Mixed Berry*

- "LIGHTLY SWEETENED"
- "help you stay full and focused"
- "keep you full all morning"

k. *Frosted Mini-Wheats Touch of Fruit in the Middle – Raspberry*

- "LIGHTLY SWEETENED"
- "Lightly Frosted"
- "Good for You!"
- "help[s] keep you full and focused all morning"

l. *Frosted Mini-Wheats Harvest Delights – Blueberry with Vanilla Drizzle*

- "Positively Nutritious"
- "Just the right amount of sweetness"

m. *Frosted Mini-Wheats Harvest Delights – Cranberry with Yogurt Drizzle*

- "Positively Nutritious"
- "Just the right amount of sweetness"

n. *Smart Start – Original Antioxidants*

- "SMART START"
- "Start with a healthy spoonful"
- "Invest in your health invest in yourself"
- "Lightly sweetened"
- "NUTRIENTS FOR EVERY DAY"
- "nutrients our bodies want"

o. *Crunchy Nut*

- "Drizzled with Honey"
- "nutritious"

p. *Nutri-Grain Cereal Bars – Apple Cinnamon*

- "MORE of the WHOLE GRAINS Your Body Needs"
- "ONE GOOD DECISION CAN LEAD TO ANOTHER"
- "Wholesome Fiber"

- "Whole Grains | Wholesome Fiber | Real Fruit / Take care of *you*"
- "No High Fructose Corn Syrup"
- "Nutri-Grain / Eat Better All Day"

q. *Nutri-Grain Cereal Bars – Blueberry*

- "No High Fructose Corn Syrup"
- "Wholesome Fiber"
- "Whole Grains | Wholesome Fiber | Real Fruit / Take care of *you*"

r. *Nutri-Grain Cereal Bars – Strawberry*

- "No High Fructose Corn Syrup"
- "Wholesome Fiber"

s. *Nutri-Grain Cereal Bars – Cherry*

- "No High Fructose Corn Syrup"
- "Wholesome Fiber"

t. *Nutri-Grain Cereal Bars – Mixed Berry*

- "MORE of the WHOLE GRAINS Your Body Needs"
- "ONE GOOD DECISION CAN LEAD TO ANOTHER"
- "Wholesome Fiber"
- "Whole Grains | Wholesome Fiber | Real Fruit / Take care of *you*"
- "No High Fructose Corn Syrup"
- "Nutri-Grain / Eat Better All Day"

u. *Nutri-Grain Cereal Bars – Strawberry Greek Yogurt*

- "Wholesome Fiber"

v. *Nutri-Grain Soft-Baked Breakfast Bars – Blueberry*

- "Rise & Thrive / WITH NUTRI-GRAIN SOFT-BAKED BREAKFAST BAR, THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"
- "No High Fructose Corn Syrup"

w. *Nutri-Grain Soft-Baked Breakfast Bars – Strawberry*

- "Rise & Thrive / WITH NUTRI-GRAIN SOFT-BAKED BREAKFAST BAR, THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"
- "No High Fructose Corn Syrup"

x. *Nutri-Grain Soft-Baked Breakfast Bars – Cherry*

- "Rise & Thrive / WITH NUTRI-GRAIN SOFT-BAKED BREAKFAST BAR, THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"

y. *Nutri-Grain Soft-Baked Breakfast Bars – Raspberry*

- "Whole Grains | Wholesome Fiber | Real Fruit / Take care of *you*"

z. *Nutri-Grain Soft-Baked Breakfast Bars – Variety Pack*

- "Rise & Thrive / WITH NUTRI-GRAIN SOFT-BAKED BREAKFAST BAR, THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"
- "No High Fructose Corn Syrup"

aa. *Nutri-Grain Fruit & Oat Harvest Bars – Blueberry*

- "WHOLESOME SATISFACITON / Mornings can be unpredictable. You don't have time to do everything you want, let alone eat something wholesome, so that's why we crated *Nutri-Grain Fruit & Oat Harvest*"

- "No High Fructose Corn Syrup"

bb. *Nutri-Grain Fruit & Oat Harvest Bars – Country Strawberry*

- "WHOLESOME SATISFACITON / Mornings can be unpredictable. You don't have time to do everything you want, let alone eat something wholesome, so that's why we crated *Nutri-Grain Fruit & Oat Harvest*"
- "No High Fructose Corn Syrup"

cc. *Nutri-Grain Harvest Hearty Breakfast Bars – Blueberry Bliss*

- "Rise & Thrive / WITH NUTRI-GRAIN SOFT-BAKED BREAKFAST BAR, THE WHOLESOME GOODNESS YOU NEED TO SHINE YOUR BRIGHTEST!"
- "No High Fructose Corn Syrup"

378. Kellogg breached its express warranties by selling products that do not live up to these affirmations of fact, promises, and descriptions, causing the breach of warranty when plaintiffs and other consumers purchased them.

379. That breach actually and proximately caused injury in the form of the lost purchase price that plaintiffs and class members paid for the high-sugar Kellogg products bearing health and wellness claims.

SEVENTH CAUSE OF ACTION

Breach of Implied Warranty of Merchantability

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

381. Kellogg, through its acts and omissions set forth herein, in the sale, marketing, and promotion of high-sugar Kellogg products bearing health and

wellness claims, made representations to plaintiffs and the class that, among other things, the products are healthy. Plaintiffs and the class bought high-sugar products bearing health and wellness claims manufactured, advertised, and sold by Kellogg as described herein.

382. Kellogg is a merchant with respect to the goods of this kind which were sold to plaintiffs and the class, and there was, in the sale to plaintiffs and other consumers, an implied warranty that those goods were merchantable.

383. However, Kellogg breached that implied warranty in that Kellogg high-sugar products bearing health and wellness claims are not healthy, as set forth in detail herein.

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

385. Plaintiffs and the class suffered injury as a result of Kellogg's breach in that they paid money for a product that does not provide the benefits advertised.

EIGHTH CAUSE OF ACTION

Unjust Enrichment

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

387. By means of its material misconduct as set forth herein, Kellogg induced plaintiffs and the class to purchase the high-sugar cereal and bar products at a premium to their actual value, and to similar products that do not make the same health and wellness claims.

388. As a consequence of this misconduct, plaintiffs and the class spent money they would not otherwise have been willing to spend absent the misrepresentations and misconduct by Kellogg.

389. By virtue of the foregoing, Kellogg has been unjustly enriched in an amount to be determined with respect to plaintiffs and the class, to the extent that Kellogg has received and kept revenues collected from the sale of the cereals and snack bars, which Kellogg would not have received absent its misconduct.

NINTH CAUSE OF ACTION

Restitution

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

391. By virtue of deceptive and unlawful business practices, Kellogg charged and received payment for the high-sugar cereals and snack bars. Kellogg should not be permitted to retain those payments in equity and good conscience, as those payments were obtained in contravention of the law. To permit Kellogg to

retain those payments would wrongfully confer a benefit upon Kellogg at the expense of plaintiffs and the class.

392. Under the circumstances, it would be inequitable for Kellogg to retain these ill-gotten benefits, and therefore restitution to plaintiffs and the class is warranted.

PRAYER FOR RELIEF

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

a. An Order certifying this as a class action, appointing plaintiffs and their counsel to represent the class, and requiring Kellogg to pay the costs of class notice;

b. An Order enjoining Kellogg from labeling, advertising, or packaging its high-sugar cereals and bars identified herein with the challenged health and wellness statements identified herein;

c. An Order compelling Kellogg to conduct a corrective advertising campaign to inform the public that its high-sugar cereals and bars were deceptively marketed;

d. An Order enjoining Kellogg's longstanding policy, practice, and strategy of marketing high-sugar cereals, bars, and other foods with

misleading health and wellness claims;

e. An Order requiring Kellogg to pay restitution to restore funds acquired by means of any act or practice declared by this Court to be an unlawful, unfair, or fraudulent business act or practice, untrue or misleading advertising, or a violation of sections 349 or 350 of the New York General Business Law;

f. Pre- and post-judgment interest;

g. Costs, expenses, and reasonable attorneys' fees; and

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

JURY DEMAND

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

Dated: May 28, 2019

/s/ Jack Fitzgerald

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Fax: (619) 362-9555

Counsel for Plaintiffs

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

Melody DiGregorio, Eric Fishon, Kerry Austin, and Nafeesha Madyun on behalf of themselves, all others similarly situated, and the general public

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

(c) Attorneys *(Firm Name, Address, and Telephone Number)*
The Law Office of Jack Fitzgerald, PC; 3636 Fourth Ave., Suite 202, San Diego, CA 92103; 619-692-3840

DEFENDANTS

Kellogg Sales Company

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)*

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. § 1332

Brief description of cause:
Diversity Action; Class Action Fairness Act

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 Hon. Lucy H. Koh DOCKET NUMBER 5:16-cv-04955

DATE 05/28/2019

SIGNATURE OF ATTORNEY OF RECORD /s/ Jack Fitzgerald

FOR OFFICE USE ONLY

RECEIPT # ANYNDC-4754111 AMOUNT $400.00 APPLYING IFP JUDGE GTS MAG. JUDGE ATB