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UNITED STATES DISTRICT COURT

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NORTHERN DISTRICT OF CALIFORNIA

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15 THE AMERICAN BEVERAGE
ASSOCIATION, CALIFORNIA
16 RETAILERS ASSOCIATION,
CALIFORNIA STATE OUTDOOR
17 ADVERTISING ASSOCIATION,

18 Plaintiffs,

19 vs.

20 THE CITY AND COUNTY OF SAN
FRANCISCO,

21 Defendant.

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Case No. 3:15-cv-03415 EMC

**BRIEF OF AMICI CURIAE AMERICAN
HEART ASSOCIATION, AMERICAN
ACADEMY OF PEDIATRICS,
ASSOCIATION OF ASIAN PACIFIC
COMMUNITY HEALTH
ORGANIZATIONS, CALIFORNIA
ACADEMY OF FAMILY PHYSICIANS,
CALIFORNIA CENTER FOR PUBLIC
HEALTH ADVOCACY, CALIFORNIA
CHAPTER OF THE AMERICAN
ASSOCIATION OF CLINICAL
ENDOCRINOLOGISTS, CALIFORNIA
MEDICAL ASSOCIATION, CENTER FOR
SCIENCE IN THE PUBLIC INTEREST,
CHANGELAB SOLUTIONS, DIABETES
COALITION OF CALIFORNIA,
NATIONAL ASSOCIATION OF CHRONIC
DISEASE DIRECTORS, NATIONAL
ASSOCIATION FOR COUNTY AND CITY
HEALTH OFFICIALS, NATIONAL
ASSOCIATION OF LOCAL BOARDS OF
HEALTH, NETWORK OF ETHNIC
PHYSICIAN ORGANIZATIONS,
PREVENTION INSTITUTE, PUBLIC
HEALTH INSTITUTE, PUBLIC HEALTH**

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**LAW CENTER, SAN FRANCISCO BAY
AREA PHYSICIANS FOR SOCIAL
RESPONSIBILITY, SAN FRANCISCO
COMMUNITY CLINIC CONSORTIUM,
SAN FRANCISCO MEDICAL SOCIETY,
STRATEGIC ALLIANCE FOR HEALTHY
FOOD AND ACTIVITY, AND THE FOOD
TRUST**

Date: April 7, 2016
Time: 1:30 p.m.
Judge: Edward M. Chen
Courtroom: 5

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STATEMENTS OF INTEREST OF *AMICI CURIAE*¹

1
2 1. The **American Heart Association** is a voluntary health organization that, since
3 1924, has been devoted to saving people from heart disease and stroke – the two leading causes of
4 death in the world. It teams with millions of volunteers to fund innovative research, fight for
5 stronger public health policies, and provide lifesaving tools and information to prevent and treat
6 these diseases. The Dallas-based association with local offices in all 50 states, as well as in
7 Washington DC and Puerto Rico, is the nation’s oldest and largest voluntary organization
8 dedicated to fighting heart disease and stroke.

9 2. The **American Academy of Pediatrics, California (AAP-CA)** is a legally
10 incorporated nonprofit member association, comprised of the four AAP California chapters
11 statewide representing approximately 5,000 board-certified primary care and subspecialty
12 pediatricians. The mission of the AAP-CA is to promote the health and well-being of all children
13 and youth living in California. One of the organization's top goals is the prevention of childhood
14 obesity; pediatricians see first-hand in their practices the devastating effects obesity can have on
15 children, too often resulting in serious and life-long health problems, and even reducing life
16 expectancy. Type 2 diabetes is increasingly being diagnosed in youth, and now accounts for 20%
17 to 50% of new-onset diabetes case patients, disproportionately affecting minority race/ethnic
18 groups. AAP-CA is active in activities and advocacy to educate patients, families and the public
19 regarding the growing evidence that links the prevalent consumption of sugar sweetened
20 beverages to the devastating obesity epidemic in children. Further, pediatricians are committed to
21 supporting strategies that reduce the incidence of dental caries (cavities), the most common
22 infectious disease of early childhood, which has been strongly linked to sugar sweetened beverage
23 consumption.

24 3. The **Association of Asian Pacific Community Health Organizations**
25 (“AAPCHO”) is a national association of 35 community health organizations dedicated to

26
27 ¹ None of the *amici curiae* has a publicly held parent corporation and no publicly held corporation
28 owns 10% or more of the stock in any *amicus curiae*. This Memorandum of Law is filed pursuant
to the Court’s Order on the Joint Administrative Motion to Permit Filing of Amicus Briefs,
January 22, 2016.

1 promoting advocacy, collaboration and leadership that improves the health status and access of
2 Asian Americans, Native Hawaiians and Pacific Islanders (AA&NHPIs) in the United States. For
3 nearly 30 years, AAPCHO's work has helped AA&NHPI-serving health centers and other health
4 care providers ensure that primary care services are accessible, high quality, and culturally and
5 linguistically appropriate for these and other vulnerable populations disproportionately impacted
6 by chronic diseases including obesity and type 2 diabetes. With our members and partners, we
7 have helped develop and implement policy, systems and environmental (PSE) solutions designed
8 to combat these diseases in innovative ways, such as growing community gardens and providing
9 health education to promote healthy eating, increase access to nutritious food and reduce
10 consumption of unhealthy foods, including beverages that include excessive amounts of sugar.

11 4. The **California Academy of Family Physicians** (CAFP) has championed the
12 cause of family physicians and their patients since 1948. CAFP is critically important to primary
13 care. With a strong collective voice of more than 9,000 family physician, family medicine
14 resident and medical student members, the CAFP is the largest primary care medical society in
15 California and the largest chapter of the American Academy of Family Physicians. CAFP works
16 to solve family physicians' professional challenges and health policy concerns, including the
17 effort to ensure patients are aware of the adverse health effects of consuming sugar-sweetened
18 beverages. Through advocacy and education, CAFP fights to expand access to high quality and
19 cost-effective patient care for California.

20 5. The **California Center for Public Health Advocacy** is an independent,
21 nonpartisan, nonprofit organization at the forefront of solving the obesity and diabetes epidemics
22 by advocating for groundbreaking policies that build a healthier California. CCPHA was founded
23 in 1999, by the Northern and Southern California Public Health Associations, to mobilize
24 communities and promote the establishment of effective state and local policy solutions to
25 address the leading causes of preventable illness and premature death in California: heart disease,
26 cancer, stroke, and diabetes. CCPHA was the sponsor of several of California's groundbreaking
27 public health nutrition laws, including rigorous school nutrition standards and nutrition
28 information posting requirements on menus in chain restaurants. CCPHA was the lead sponsor of

1 two attempted state bills to require health warnings on sugary drinks. Its current work centers on
2 preventing and treating Type 2 diabetes, with one of the specific aims to decrease consumption of
3 soda and other sugary drinks and to increase the consumption of water and other healthy
4 beverages.

5 6. The **California Chapter of the American Association of Clinical**
6 **Endocrinologists** (AAACE) represents over 500 clinical endocrinologists across the state of
7 California. AAACE is the largest association of clinical endocrinologists, representing over 6,500
8 endocrinologists in the United States and in 90 countries. The great majority of AAACE members
9 are certified in Endocrinology and Metabolism and concentrate on the treatment of patients with
10 diabetes, thyroid disorders, obesity, osteoporosis and other endocrine and metabolic disorders.
11 Our organization is also committed to advocacy for our patients and their family members. As an
12 organization, we feel strongly that this law warning about the health effects of sugar-sweetened
13 beverages will have a positive impact on our communities.

14 7. The **California Medical Association (CMA)** is a not-for-profit, incorporated
15 professional association for physicians with more than 41,000 members. CMA physician
16 members practice medicine in all specialties and modes of practice throughout California. For
17 more than 150 years, CMA has promoted the science and art of medicine, the care and well-being
18 of patients, the protection of public health, and the betterment of the medical profession. CMA
19 policy supports the adoption of sugar-sweetened beverage regulations that require warning labels
20 on product advertising and restrict ads on public property.

21 8. The **Center for Science in the Public Interest (CSPI)** is a leading national, non-
22 profit advocacy organization for nutrition, health, food safety, and scientific integrity. The
23 organization has worked to highlight and address the health risks of sugar-sweetened beverages
24 for decades. CSPI pushed to reduce access to sodas in schools and other settings, and filed a
25 citizen petition in 2013 questioning whether current levels of added sugars in foods and beverages
26 should be considered “generally recognized as safe” under federal law. CSPI also supports the
27 San Francisco law requiring sugar-sweetened beverage advertisements to include a warning
28 notice.

1 9. **ChangeLab Solutions** is a national nonprofit organization that creates innovative
2 laws and policies to ensure everyday health for all, whether that is providing access to affordable,
3 healthy food and beverages, creating safe opportunities for physical activity, or ensuring the
4 freedom to enjoy smoke free air and clean water. Our solutions address all aspects of a just, vital
5 and thriving community, such as food, housing, childcare, schools, transportation, public safety,
6 jobs, and the environment. ChangeLab Solutions creates and helps implement legal and policy
7 solutions designed to increase access to nutritious food while reducing consumption of unhealthy
8 foods, including sugar-sweetened beverages and other foods that include large amounts of added
9 sugars.

10 10. The **Diabetes Coalition of California** (DCC) is an independent, volunteer
11 organization consisting of individuals and agencies dedicated to the prevention, recognition, and
12 reduction of the adverse personal and public impact of diabetes in the state’s diverse
13 communities. The DCC is comprised of representatives from the general public, local health
14 departments, universities, companies, and a variety of community-based, voluntary, health and
15 professional organizations. The specific purpose of this organization is to prevent diabetes and its
16 complications in California’s diverse communities. The DCC supports evidence-based methods to
17 prevent and manage diabetes, including support of healthy lifestyles and the consumption of
18 nutritious foods and the reduction of high calorie foods and beverages, including those with
19 excessive amounts of sugar.

20 11. The **National Association of Chronic Disease Directors** (“NACDD”) is a non-
21 profit public health organization committed to serving the chronic disease directors of each state
22 and U.S. jurisdiction. Founded in 1988, NACDD connects more than 6,000 chronic disease
23 practitioners to advocate for preventive policies and programs, encourage knowledge sharing, and
24 develop partnerships for health promotion. NACDD agrees with the position taken by the World
25 Health Organization, American Heart Association, and other leading medical groups, and
26 endorses limiting sugar intake, including sugar-sweetened beverages.

27 12. The **National Association for County and City Health Officials** (“NACCHO”)
28 is the voice of the 2800 local health departments across the country. NACCHO helps local health

1 departments develop policies and create environments to ensure that everyone, no matter where
2 they live, has access to healthy affordable foods and beverages.

3 13. The **National Association of Local Boards of Health** (“NALBOH”) informs,
4 guides, and is the national voice for local boards of health. Uniquely positioned to deliver
5 technical expertise in governance, leadership and board development, NALBOH is committed to
6 strengthen good governance where public health begins – at the local level. For over 20 years,
7 NALBOH has been engaged in establishing this significant voice for local boards of health on
8 matters of national public health policy. In line with its commitment to public health, NALBOH
9 supports healthy food and beverage policies, including the reduction of overconsumption of
10 sugar-sweetened beverages.

11 14. The **Network of Ethnic Physician Organizations** (NEPO) is a coalition of more
12 than 50 ethnic physician organizations in California. NEPO and its physicians work to reduce
13 health disparities, improve access to health care, and advocates for public health issues that affect
14 their communities.

15 15. **Prevention Institute** is a national nonprofit dedicated to advancing community
16 health and well-being by building momentum for effective primary prevention and health equity.
17 Prevention Institute brings cutting-edge research, practice, and analysis to today's pressing health
18 and safety concerns. Included among its focus areas, Prevention Institute works to advance
19 strategies and policies that increase access to healthful food and limit the impact of harmful
20 marketing of unhealthy food, including sugar-sweetened beverages.

21 16. The **Public Health Institute** (PHI) is a nonprofit organization working across the
22 globe to promote health, well-being and quality of life for all people. PHI programs, including
23 Cultiva La Salud, Project LEAN and Roots of Change, work to ensure that all Californians have
24 access to healthier, affordable foods and beverages and to reduce consumption of unhealthy foods
25 and beverages. The knowledge and experience of our programs and work in California and
26 overseas has given us a deep understanding of the devastation caused by the obesity and diabetes
27 epidemic that is wreaking havoc on the public’s health and healthcare costs and the
28 incontrovertible link to consumption of sugar-sweetened beverages. Furthermore, PHI’s Alcohol

1 Research Group pioneered research on the effectiveness of alcoholic beverage warning labels,
2 which like tobacco warnings have helped to raise awareness and inform consumers of product
3 related risks.

4 17. The **Public Health Law Center** uses the law to improve America's health. A
5 public interest, nonprofit affiliate of the Mitchell Hamline School of Law in Saint Paul,
6 Minnesota, the Center is home to the nation's largest team of attorneys and law students helping
7 community leaders reduce tobacco use, improve the nation's diet, and encourage physical
8 activity. The Center has prepared publications on policy options for regulating sugar drinks,
9 worked to remove sugar drinks from hospitals, provided technical assistance and training to
10 communities considering taxation of sugar drinks, and studied the ineffectiveness of self-
11 regulation of food and beverage advertising. The Center has filed more than forty briefs as amicus
12 curiae in the highest courts of the land, including ten briefs addressing the regulation of
13 commercial speech harmful to public health.

14 18. **San Francisco Bay Area Physicians for Social Responsibility** (SF Bay Area
15 PSR), representing over 2,500 health professionals and supporters, is the local chapter of
16 Physicians for Social Responsibility (PSR), a non-profit advocacy and educational organization
17 that, guided by the expertise of medicine and public health, works to protect human life from the
18 gravest threats to health and survival. A key part of our ongoing programmatic work includes
19 promoting ecologically sound health care by working with healthcare professionals and
20 institutions to promote "green" energy choices, safer chemicals, and healthy food produced in an
21 environmentally and socially responsible way. As part of our "healthy food" work, we continue to
22 support the implementation of public policy solutions created to increase access to nutritious food
23 while reducing consumption of unhealthy foods, including beverages that include excessive
24 amounts of sugar, and which have been strongly implicated in the development of childhood
25 diabetes, obesity and tooth decay, with associated serious and negative lifelong health impacts.

26 19. The **San Francisco Community Clinic Consortium** develops innovative
27 programs and advocates for policies that increase access to quality community-based primary
28 health care. We work to ensure that people of all income levels have access to health care that is:

1 comprehensive, coordinated, and efficient and culturally and linguistically appropriate. Focused
2 on patient needs The SFCCC provides primary care services to more than 10% of San Francisco’s
3 population. We work with providers citywide to coordinate primary care with specialists,
4 hospitals, and other services. We serve overlooked populations such as homeless San Franciscans,
5 immigrant communities and seniors. Many of our partner clinics have a significant number of
6 patients with diabetes and see first hand the impact on low income communities of the
7 consumption of sugar sweetened beverages. We support evidenced based practices to reduce
8 sugary beverage consumption.

9 20. The **San Francisco Medical Society (SFMS)** is the professional association for
10 physicians in San Francisco, and has been active since 1868, working for the betterment of health
11 for everyone in our city. With more than 1,800 members—including practicing physicians,
12 residents, and medical students—SFMS champions quality health care and innovation for our
13 patients and community and serves the professional needs of all San Francisco physicians. We
14 have spearheaded many community health issues in San Francisco including the co-sponsorship
15 of Hep B Free, anti-tobacco legislation and education, formation and continuation of the Healthy
16 San Francisco program, advocacy on reproductive and end-of-life issues, in addition to advocacy
17 for the California Soda Warning Label Bill (SB 203) and the 2014 San Francisco soda tax
18 initiative. The local ordinance for warnings on sugary drink ads is thus very much in support of
19 our goals of a healthier San Francisco.

20 21. The **Strategic Alliance for Healthy Food and Activity** is a network of
21 organizations and individuals dedicated to advancing healthier food and physical activity
22 environments across California. The Strategic Alliance focuses on supporting government
23 policies and organizational practices that improve Californians’ opportunities to engage in healthy
24 eating and active living. Since 2001, the Strategic Alliance has been at the forefront of developing
25 strategies, tools, and policies that have helped make California a leader in promoting health,
26 equity, and well-being. The Strategic Alliance has consistently prioritized policy approaches that
27 help to reduce consumption of unhealthy foods, including sugar-sweetened beverages.

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1 22. **The Food Trust** is a national nonprofit organization working to ensure that
2 everyone has access to affordable, nutritious food and information to make healthy decisions.
3 Working with neighborhoods, schools, grocers, farmers and policymakers since 1992, we have
4 developed a comprehensive approach to improved food access that combines nutrition education
5 and greater availability of affordable, healthy food and beverage options.

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INTRODUCTION

1
2 Faced with triple epidemics of chronic disease – obesity, type 2 diabetes, and dental caries
3 – San Francisco has taken a measured step to provide information to its residents about a
4 significant driver of each of those conditions: sugary drinks. The warning labels required by
5 Ordinance No. 100-15 state a simple truth: Drinking beverages with added sugar(s) contributes to
6 obesity, diabetes, and tooth decay. That concise statement provides San Franciscans immediate and
7 accurate information about choices they can make to protect their health, information supported by
8 extensive scientific evidence.

9 The First Amendment poses no obstacle to the warning label ordinance. To the contrary,
10 “[b]ecause the extension of First Amendment protection to commercial speech” – like advertising
11 – “is justified principally by the value to consumers of the information such speech provides,” the
12 interest of the American Beverage Association (ABA) and other plaintiffs “in *not* providing any
13 particular factual information in [their] advertising is minimal.” *Zauderer v. Office of Disciplinary*
14 *Counsel of Supreme Court of Ohio*, 471 U.S. 626, 651 (1985). That minimal interest must be
15 placed against the acute interest that San Franciscans have in being informed about the detrimental
16 effects of beverages that form an unhealthily large part of their diet – especially the City’s African-
17 American and Latino residents, who consume greater amounts of sugar-sweetened beverages
18 (SSBs) and suffer in greater proportion from all three chronic diseases addressed by the Ordinance.

19 In order to establish that the Ordinance is subject to more stringent First Amendment
20 review, the ABA must show that the statement in the warning label is not “factual and
21 uncontroversial.” *Zauderer*, 471 U.S. at 651. But that is an exceedingly difficult thing to do in this
22 case. There is no question that the statement is “factual”: it sets forth facts – things that can be
23 proved or disproved – rather than opinions. And the statement rests on a foundation of
24 “compelling”¹ scientific evidence, making it uncontroversial. In the words of the 2015 Dietary
25 Guidelines for Americans Committee (DGAC), the body that develops the “cornerstone of Federal
26

27 ¹ Frank Hu, *Resolved: There Is Sufficient Scientific Evidence That Decreasing Sugar-Sweetened*
28 *Beverage Consumption Will Reduce the Prevalence of Obesity and Obesity-Related Diseases*, 14
OBESITY REVIEWS 606, 606 (2013), at <https://www.sfdph.org/dph/files/hc/HCCCommPubHlth/Agendas/2013/2013/December/review%20of%20evidence%20ssb.pdf>

1 nutrition policy”² (the Dietary Guidelines for Americans): “Obesity, type 2 diabetes, ... and dental
 2 caries are major public health concerns. Added sugars intake negatively impacts all of these
 3 conditions, and strong evidence supports reducing added sugars intake to reduce health risks.”³
 4 That is a view endorsed by every pertinent agency of the federal government and a constellation of
 5 prominent local, national and international public health organizations.

6 Because the warning label is factual and uncontroversial, the Ordinance must be reviewed
 7 under a lenient standard. It readily survives that review.

8 **I. SAN FRANCISCO HAS RESPONDED APPROPRIATELY TO A PUBLIC HEALTH**
 9 **CRISIS.**

10 San Francisco, like the United States and indeed much of the world, is afflicted by
 11 epidemics of chronic disease. The harms of obesity and type 2 diabetes may be the gravest public
 12 health issue facing the City. Tooth decay remains the most widespread chronic disease among
 13 children and is even more pervasive in adults. The City has determined that all three epidemics are
 14 fostered in part by the consumption of SSBs, and that SSB consumption is fueled in part by soda
 15 company advertising, targeted in particular at the populations suffering most from these diseases.
 16 The Ordinance is a measured, sensible, and effective⁴ response.

17 **A. The Warnings Address Three Widespread Conditions With Serious**
 18 **Consequences for Public Health.**

19 The first health crisis addressed by the label is vast in scope. Healthcare costs attributable
 20 to obesity in the United States exceed \$147 billion every year.⁵ More than a third of adults in the
 21 United States – over 78 million people – are obese; another third are overweight.⁶ Rates of obesity

22 ² USDA, DIETARY GUIDELINES 2015-2020, at <http://www.cnpp.usda.gov/dietaryguidelines>

23 ³ Scientific Report of the 2015 Dietary Guidelines Advisory Committee, Part D, Ch. 6: Cross-Cutting Topics, at 26, at <http://health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>

24 ⁴ See Christina Roberto et al., *The Influence of Sugar-Sweetened Beverage Health Warning Labels on Parents' Choices*, 137(2) PEDIATRICS (Feb. 2016) (showing parents are less likely to choose a sugary drink for their child if those drinks have health warning labels), at <http://pediatrics.aappublications.org/content/pediatrics/early/2016/01/13/peds.2015-3185.full.pdf>

25 ⁵ Eric Finkelstein et al, *Annual Medical Spending Attributable to Obesity*, 28 HEALTH AFF. w822 (2009), at <http://content.healthaffairs.org/content/28/5/w822.full.pdf>

26 ⁶ Katherine Flegal, *Prevalence of Obesity and Trends in the Distribution of Body Mass Index Among US Adults, 1999-2010*, 307 J. AM. MED. ASS'N 491 (2012), at http://www.foodpolitics.com/wp-content/uploads/ObesityRates_JAMA_12.pdf; Cynthia Ogden et al., *Prevalence of Obesity Among Adults and Youth: United States, 2011-14*, 219 NCHS DATA BRIEF (Nov. 2015), at <http://www.cdc.gov/nchs/data/databriefs/db219.pdf>

1 among young children and adolescents have more than tripled in the past thirty years.⁷ More than
 2 a sixth of American youth are obese.⁸ Obese children are more likely to have type 2 diabetes,
 3 asthma, and even early signs of heart disease; they are also more likely to be obese adults and to
 4 have shortened life expectancy.⁹ Indeed, today's young people may be the first generation in the
 5 history of the United States to live sicker and die younger than their parents' generation.¹⁰

6 In San Francisco, nearly half of all adults are now overweight or obese.¹¹ Of three- to
 7 four-year-olds enrolled in San Francisco Head Start, 18 percent – nearly 1 in 5 – are obese.¹²
 8 The second health crisis that the warning label addresses, type 2 diabetes (T2D), imposes direct
 9 medical costs of \$176 billion a year nationally.¹³ T2D – which was once known as “adult-onset
 10 diabetes” but now affects children as well – is epidemic. T2D now affects about one in every ten
 11 Americans; its prevalence in the United States has nearly doubled over the last thirty years.¹⁴ The
 12 impact can be profound. To pick a single statistic: as of 2012, the total number of United States
 13 military personnel who had to undergo amputations as a result of the wars in Iraq and Afghanistan
 14 was 1,572.¹⁵ The number of Americans with diabetes who had to undergo amputations in just the
 15 year 2006 was 65,700.¹⁶ Even though new cases of diabetes have fallen in recent years, the
 16 projected impact of T2D in future decades is still sobering. An American today has an estimated 2
 17 in 5 chance of developing diabetes in her lifetime; if she is Hispanic or African-American, the

19 ⁷ Cynthia Ogden & Margaret Carroll, *Prevalence of Obesity Among Children and Adolescents: United States*, NCHS Health E-Stat (June 4, 2010), at http://www.cdc.gov/nchs/data/hestat/obesity_adult_07_08/obesity_adult_07_08.pdf

20 ⁸ Cynthia Ogden et al., *Prevalence of Childhood and Adult Obesity in the United States, 2011-2012*, 311 JAMA 806 (2014).

21 ⁹ CDC, *Basics About Childhood Obesity* (Apr. 27, 2012), at <http://www.cdc.gov/obesity/childhood/basics.html>

22 ¹⁰ S. Jay Olshansky et al, *A Potential Decline in Life Expectancy in the U.S. in the 21st Century*, 352 NEJM 1138, 1141 (2005), at <http://www.nejm.org/doi/pdf/10.1056/NEJMSr043743>

23 ¹¹ San Francisco Health Improvement Partnership, *Adults Who Are Overweight or Obese* (Nov. 2015), at <http://www.sfhip.org/modules.php?op=modload&name=NS-Indicator&file=indicator&iid=19192667>

24 ¹² S.F. Health Code § 4201, Findings.

25 ¹³ CDC, Nat'l DIABETES STATISTICS REP., 2014 (2014), at <http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf>

26 ¹⁴ *Id.*

27 ¹⁵ David Wood, *U.S. Wounded In Iraq, Afghanistan*, HUFF. POST (Nov. 7, 2012), at http://www.huffingtonpost.com/2012/11/07/iraq-afghanistan-amputees_n_2089911.html

28 ¹⁶ Nat'l Diabetes Statistics Clearinghouse, National Diabetes Statistics, Nat'l Inst. of Health (2011), at <http://diabetes.niddk.nih.gov/dm/pubs/statistics/#Amputations>

1 odds are 1 in 2.¹⁷ In other words, almost half the people in this country face a future in which
 2 likely health outcomes include foot ulceration, with a lifetime risk up to 25 percent and the threat
 3 of amputation,¹⁸ and diabetic retinopathy, with a prevalence rate near 30 percent and the threat of
 4 vision loss.¹⁹

5 The third health concern that the label addresses – dental caries – is the single most
 6 prevalent chronic disease in the United States, affecting 42% of children, 59% of adolescents, and
 7 92% of adults. The rates of disease among Hispanics and African Americans are even higher.²⁰
 8 Recent studies show that “despite the wide-scale availability of fluoride in water or toothpaste, ...
 9 caries remains a major burden in older ages.”²¹ “[P]rogressive increases” in caries throughout life
 10 underscore “the importance of considering the adult burden of dental disease when assessing
 11 optimum intakes of sugars.”²² 27% of U.S. adults aged 20-44 have untreated dental caries,²³ which
 12 “must now be seen as a chronic, cumulative lifelong disease.”²⁴

13 **B. Sugar-Sweetened Beverages Are Easily The Largest Source Of Added Sugars In 14 The American Diet.**

15 Sugar-sweetened beverages by themselves comprise almost 50% of all added sugar intake
 16 in the American diet²⁵; they are “the largest source of calories and added sugars” in the U.S. diet of
 17 any food group.²⁶ Half of the population of the United States consumes SSBs on a given day, and
 “[c]onsumption is particularly high among African-Americans, Hispanics and low-income

18 ¹⁷ CDC, at <http://www.cdc.gov/diabetes/pdfs/newsroom/now-2-out-of-every-5-americans-expected-to-develop-type-2-diabetes-during-their-lifetime.pdf>

19 ¹⁸ Manish Khanolkar et al., *The Diabetic Foot*, 101 QJM 685 (2008), at <http://qjmed.oxfordjournals.org/content/101/9/685.full>

20 ¹⁹ CDC, Nat’l Diabetes Statistics Rep., 2014, *supra* n.13.

21 ²⁰ Nat’l INST. OF HEALTH, Dental Caries (Tooth Decay), at <http://www.nidcr.nih.gov/datastatistics/finddatabytopic/dentalcaries>

22 ²¹ Aubrey Sheiham & W. Phillip James, *Diet and Dental Caries: The Pivotal Role of Free Sugars Reemphasized*, 94 J. DENT. RES. 1341, 1341 (2015), at https://www.researchgate.net/profile/Aubrey_Sheiham/publication/280906772_Diet_and_Dental_Caries_The_Pivotal_Role_of_Free_Sugars_Reemphasized/links/55e570b208aecb1a7ccba1fd.pdf

23 ²² *Id.* at 4.

24 ²³ CDC, *Oral and Dental Health*, FASTSTATS, <http://www.cdc.gov/nchs/fastats/dental.htm>.

25 ²⁴ Aubrey Sheiham & W. Phillip James, *A New Understanding of the Relationship Between Sugars, Dental Caries and Fluoride Use: Implications for Limits on Sugars Consumption*, 17 PUB. HEALTH NUTR. 2176, 2176, at http://journals.cambridge.org/download.php?file=%2FFPHN%2FFPHN17_10%2FS136898001400113Xa.pdf&code=9e62a67d03921633d69390f92ddf4fcd

26 ²⁵ USDA and HHS, 2015–2020 Dietary Guidelines for Americans (2015), Ch. 2, *Shifts Needed to Align with Healthy Eating Patterns*, Fig. 2-10 at <http://health.gov/dietaryguidelines/2015/guidelines/chapter-2/a-closer-look-at-current-intakes-and-recommended-shifts/>

27 ²⁶ Hu, *Resolved*, *supra* n.1, at 606.

1 individuals –population groups with disproportionately high prevalence of obesity and obesity-
2 related chronic diseases.”²⁷

3 **C. Marketing Of SSBs Is Higher In Communities Where Obesity, Type 2 Diabetes,
4 And Tooth Decay Are Disproportionately Prevalent.**

5 One reason SSB consumption is more prevalent among communities of color is that
6 beverage companies disproportionately market their products in those communities. Marketing
7 campaigns specifically targeting African-American and Hispanic youth are prevalent²⁸ and
8 successful: on English-language TV in 2013, African-American children and teens saw more than
9 twice as many ads for sugary drinks and energy drinks compared with Caucasian children and
10 teens.²⁹ Hispanic preschoolers and children saw 23% and 32% more Spanish-language TV ads for
11 sugary drinks and energy shots in 2013 than in 2010, even as the number of ads seen by children
12 overall declined. Hispanic youth were 93% more likely than other youth to visit beverage
13 company websites, and African-American youth were 34% more likely to visit.³⁰

14 African-Americans and Hispanics are, as noted, disproportionately affected by obesity,
15 diabetes, and tooth decay.

16 **II. THE ACCURACY OF THE REQUIRED WARNINGS IS SCIENTIFICALLY WELL
17 ESTABLISHED.**

18 The city has determined that sugary drinks contribute to obesity, diabetes, and tooth decay.
19 That determination rests on a foundation of solid scientific evidence.

20 **A. Consuming SSBs Contributes To Obesity.**

21 The contribution of added sugars to obesity is widely recognized. The DGAC, the federal
22 government’s foremost advisory body on nutrition, gave its highest grade, “Strong,” to a
23 recommendation to limit added sugar intake to below 10 percent of total calories, because “Strong
24 and consistent evidence shows that intake of added sugars from food and/or sugar-sweetened

25 ²⁷ *Id.* at 608 (citing National Health and Nutrition Examination Survey (NHANES) 2009-10).

26 ²⁸ Federal Trade Commission, *Marketing Food to Children and Adolescents: A Review of Industry Expenditures, Activities, and Self-Regulation* (2008) (\$28.6 million annually spent on campaigns targeting ethnic youth), at www.ftc.gov/sites/default/files/documents/reports/marketing-food-children-and-adolescents-review-industry-expenditures-activities-and-self-regulation/p064504foodmktngreport.pdf

27 ²⁹ Jennifer Harris, et al., *Sugary Drink FACTS 2014: Some Progress but Much Room to Improve*, RUDD CTR. FOR FOOD POLICY AND OBESITY (2014) at 11, at <http://www.rwjf.org/content/dam/farm/reports/reports/2014/rwjf416417>

28 ³⁰ *Id.*

1 beverages [is] associated with excess body weight in children and adults.”³¹ The DGAC’s
 2 conclusion has had a considerable impact. Even the Food & Drug Administration – whose
 3 previous pronouncements are heavily relied upon by the ABA, *e.g.*, PI Mot. at 6, 12 – recently
 4 “considered the evidence that the DGAC relied upon,” as well as the “excess intake of added
 5 sugars in the U.S.,” and proposed “to require the mandatory declaration of added sugars” on
 6 nutrition facts panels and set a Daily Value for added sugars of 10% of calories.³² In the words of
 7 one researcher, “All lines of evidence consistently support the conclusion that the consumption of
 8 sweetened beverages has contributed to the obesity epidemic.”³³

9 **1. The Connection Between Consumption of SSBs and Obesity
 Has Been Amply Demonstrated.**

10 A World Health Organization (WHO) meta-analysis – a collection and analysis of direct
 11 studies – concluded that the “systematic review showed a clear positive association between
 12 higher intake of sugars and body fatness in adults.” The body of research established that “intake
 13 of free sugars or sugar sweetened beverages is a determinant of body weight.”³⁴

14 Other prominent systematic reviews and meta-analyses concur. “The weight of
 15 epidemiologic and experimental evidence indicates that a greater consumption of sugary drinks is
 16 associated with weight gain and obesity.”³⁵ Research from the Harvard School of Public Health

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 18 ³¹ DGAC Report, *supra* n.3, at 20. The final 2015-20 Dietary Guidelines for Americans depart
 19 from their own expert panel and call the evidence “moderate” – i.e., “sufficient evidence to draw
 20 conclusions” – and still recommend reducing added sugar intake to less than 10% of daily calories.
 21 At [http://health.gov/dietaryguidelines/2015/guidelines/chapter-1/a-closer-look-inside-healthy-
 22 eating-patterns/](http://health.gov/dietaryguidelines/2015/guidelines/chapter-1/a-closer-look-inside-healthy-eating-patterns/) A leading professor of nutrition called the more “circumspect[]” tone of the DGA
 toward sugary drinks “weird” because “[c]lear, straightforward advice to cut down on sugary
 beverages has plenty of historical precedent.” She concluded, “[I]t can have only one explanation:
 politics.” Marion Nestle, *The 2015 Dietary Guidelines’ Hidden Advice About Sugary Drinks:
 Definitely There, but Hard to Find* (Jan. 11, 2016), at [http://www.foodpolitics.com/tag/dietary-
 23 guidelines](http://www.foodpolitics.com/tag/dietary-guidelines)

24 ³² FDA, *Food Labeling: Revision of the Nutrition and Supplement Facts Labels*, 80 Fed. Reg.
 44302 (Jul. 27, 2015), at <https://www.federalregister.gov/a/2015-17929>

25 ³³ Gail Woodward-Lopez et al., *To What Extent Have Sweetened Beverages Contributed to the
 26 Obesity Epidemic?* 14 PUB. HEALTH NUTR. 499 (2010) (concluding that the association between
 sugary beverage consumption and weight gain is stronger than for any other food), at
 27 http://banpac.org/pdfs/sfs/2011/sodas_cont_obesity_2_01_11.pdf

28 ³⁴ Lisa Te Morenga, et al., *Dietary Sugars and Body Weight: Systematic Review and Meta-
 Analyses of Randomised Controlled Trials and Cohort Studies*, 346 BMJ e7492, 5, 7 (2012), at
<http://www.bmj.com/content/bmj/346/bmj.e7492.full.pdf>

³⁵ Vasanti Malik et al., *Intake of Sugar-Sweetened Beverages and Weight Gain: A Systematic
 Review*, 84 AM. J. CLINICAL NUTR. 274 (2006), at [http://www.ncbi.nlm.nih.gov/pmc/articles/
 PMC3210834/pdf](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3210834/pdf)

1 concluded, “Findings from well-powered prospective cohorts have consistently shown a
 2 significant association ... and demonstrated a direct dose–response relationship between SSB
 3 consumption and long-term weight gain and risk of type 2 diabetes.”³⁶ Prospective cohort studies
 4 (i.e., studies tracking a population over time) have yielded “a strong link between SSB
 5 consumption and development of obesity.”³⁷ That link has held firm in studies including cohorts
 6 of over 50,000 female nurses, more than 40,000 women in the Black Women’s Health Study, and
 7 over 43,000 Chinese adults in Singapore. A further study of 120,877 initially non-obese women
 8 and men in three observational cohorts found that “each daily increase of one 12-oz ... serving of
 9 SSB was significantly associated with approximately 0.5 kg greater weight gain every 4 years,
 10 after adjustment for age, baseline BMI, sleep, changes in physical activity, smoking, TV watching
 11 and multiple other dietary factors.”³⁸

12 One reason SSBs lead to weight gain is because they tend to be consumed on top of the
 13 normal diet. Randomized controlled trials (RCTs) have also shown a direct effect between
 14 consumption of SSBs and body weight.

15 A recently published meta-analysis of RCTs commissioned by the World Health
 16 Organization found that decreased intake of added sugars significantly reduced body
 17 weight ..., whereas increased sugar intake led to a comparable weight increase....
 18 Recently, two large RCTs with a high degree of compliance provided convincing data
 19 that reducing consumption of SSBs significantly decreases weight gain and adiposity
 20 in children and adolescents.³⁹

21 Because people do not typically reduce their calorie intake from other sources sufficiently
 22 to compensate for the calories consumed in SSBs (in part because beverages satisfy hunger less

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25 ³⁶ Hu, *Resolved, supra* n.1, at 606.

26 ³⁷ Vasanti Malik, et al., *Sugar-Sweetened Beverages and Weight Gain in Children and Adults: A
 27 Systematic Review and Meta-analysis*, 98 AM. J. CLINICAL NUTR. 1084 (2013), at
 28 <http://www.ncbi.nlm.nih.gov/pubmed/23966427>

³⁸ Hu, *Resolved, supra* n.1, at 608 (endnotes omitted) (referring to the Nurses’ Health Study,
 Nurses’ Health Study II and Health Professionals’ Follow-up Study).

³⁹ *Id.* at 606, citing Janne de Ruyter et al. *A Trial of Sugar-Free or Sugar-Sweetened Beverages
 and Body Weight in Children*, 367 NEJM 1397 (2012), at <http://www.nejm.org/doi/full/10.1056/NEJMoa1203034#t=article>; Cara Ebbeling et al., *A Randomized Trial of Sugar-Sweetened Beverages and Adolescent Body Weight*, 367 NEJM 1407 (2012), at <http://www.nejm.org/doi/full/10.1056/NEJMoa1203388#t=article>.

1 than do solid foods), SSB consumption results in an overall increase in calories consumed.⁴⁰

2 Extensive studies confirm that consuming (non-viscous) beverages is not associated with any
3 corresponding reduction in calorie intake from solid food.⁴¹ The consequences can be severe.

4 A typical 12 oz (360 ml) serving of soda contains on average 140 to 150 calories and
5 35 to 37.5 g of sugar. If these calories are added to the typical diet without
6 compensation for the additional calories, 1 can of soda/day could, in theory, lead to a
7 weight gain of 5 lbs in 1 year. Short-term feeding studies comparing SSBs with
8 artificially sweetened beverages in relation to energy intake and weight change
9 illustrate this point.⁴²

10 In sum, the “evidence that SSB intake is causally related to increased risk of obesity” is
11 “compelling.”⁴³ The strong link between SSB consumption and weight gain holds true through
12 analyses of strength consistency, temporality, dose-response relationship, biological plausibility,
13 alternate explanations, and experimental data, so that “current evidence on SSBs and obesity
14 meets all key criteria commonly used to evaluate causal relationships in epidemiology.”⁴⁴

15 2. Studies Questioning the Contribution of SSBs to Obesity Contain 16 Methodological Weaknesses.

17 As noted, the evidence linking SSBs and obesity is strong. Studies suggesting otherwise
18 generally contain methodological problems. For example, the DGAC determined, after examining
19 three “high quality” meta-analyses, that the two finding a strong connection between SSBs and
20 //

21 ⁴⁰ Vasanti Malik, et al., *Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2*
22 *Diabetes: A Meta-Analysis*, 33 DIABETES CARE 2477, 2482 (2010), at [http://care](http://care.diabetesjournals.org/content/33/11/2477.full)
23 [.diabetesjournals.org/content/33/11/2477.full](http://care.diabetesjournals.org/content/33/11/2477.full); An Pan & Frank Hu, *Effects of Carbohydrates on*
24 *Satiety: Differences Between Liquid and Solid Food*, 14 CURR. OPIN. CLIN. NUTR. METAB. CARE
25 385 (2011), at [http://www.kickthecan.info/sites/default/files/documents/00075197-201107000-](http://www.kickthecan.info/sites/default/files/documents/00075197-201107000-00013.pdf)
26 [00013.pdf](http://www.kickthecan.info/sites/default/files/documents/00075197-201107000-00013.pdf)

27 ⁴¹ Doreen DiMeglio & Richard Mattes, *Liquid Versus Solid Carbohydrate: Effects on Food Intake*
28 *and Body Weight*, 24 INT’L J. OBESITY & RELATED METABOLIC DISORDERS 794 (2000); Diane
DellaValle et al., *Does the Consumption of Caloric and Non-Caloric Beverages With a Meal*
Affect Energy Intake? 44 APPETITE 187 (2005); Denise Mourao et al., *Effects of Food Form on*
Appetite and Energy Intake in Lean and Obese Young Adults, 31 INT’L J. OBESITY 1688 (2007);
Julie Flood-Obbagy & Barbara Rolls, *The Effect of Fruit in Different Forms on Energy Intake and*
Satiety at a Meal, 52 APPETITE 416 (2009).

⁴² Vasanti Malik & Frank Hu, *Fructose and Cardiometabolic Health: What the Evidence From*
Sugar-Sweetened Beverages Tells Us, 66 J. AM. COLL. CARDIOL. 1615, 1620 (2015) (citing
studies), at <http://content.onlinejacc.org/article.aspx?articleID=2445331>

⁴³ Hu, *Resolved, supra* n.1, at 612.

⁴⁴ *Id.*

1 body weight⁴⁵ were “stronger” than the third,⁴⁶ which found the evidence equivocal; the latter was
2 weakened by “methodological issues.”⁴⁷

3 Methodological problems likewise affect other studies that appear to show little or no
4 independent effect from SSBs on weight gain.⁴⁸ In particular, these studies – including those relied
5 on by plaintiffs⁴⁹ – generally have adjusted for total energy intake in order to test whether calories
6 from sugar have a different effect on body weight than calories from other sources. The trouble
7 with such an approach is that – as noted – consuming added sugars, and particularly added sugars
8 in liquid form, has been shown to increase the total number of calories a person consumes.⁵⁰ If
9 much of the effect of SSBs on weight gain is attributable precisely to the fact that SSBs increase
10 total calorie intake, then “adjusting” for total energy intake will “artificially underestimate the
11 association between SSBs and body weight.”⁵¹

12 To analogize: If researchers wanted to test whether football players are more likely to
13 experience concussions than non-football players, it would not make sense to “correct” for the
14 amount of time spent playing football. Doing so would test only whether football players are more
15 likely than non-football players to experience concussions when *not* playing football. A negative
16 result would just obscure the fact that football players experience more concussions, *because* they
17 play more football. Similarly, adjusting for calorie intake just obscures the fact that SSB drinkers
18 gain more weight, largely *because* they consume more calories.

19 Further, meta-analyses that rely exclusively on randomized controlled studies are
20 necessarily incomplete, because of cost and compliance issues.⁵² Many of the RCTs “suffer from
21

22 ⁴⁵ Te Morenga et al., *Dietary Sugars and Body Weight*, *supra* n. 34; and Malik, et al. *Sugar-Sweetened Beverages and Weight Gain in Children and Adults*, *supra* n. 37.

23 ⁴⁶ Kathryn Kaiser et al., *Will Reducing Sugar-Sweetened Beverage Consumption Reduce Obesity? Evidence Supporting Conjecture Is Strong, But Evidence When Testing Effect Is Weak*, 14 OBES. REV. 620 (2013), at <http://www.ncbi.nlm.nih.gov/pubmed/23742715>

24 ⁴⁷ DGAC Report (2015), *supra* n.3, at 26.

25 ⁴⁸ Hu, *Resolved*, *supra* n.1, at 608.

26 ⁴⁹ See PI Mot. at 12-14; Kahn Aff. at 13-19.

27 ⁵⁰ Hu, *Resolved*, *supra* n.1, at 608.

28 ⁵¹ *Id.* (critiquing Richard Forshee et al., *Sugar-Sweetened Beverages and Body Mass Index in Children and Adolescents: A Meta-Analysis*, 87 AM. J. CLIN. NUTR. 1662 (2008)).

⁵² Hu, *Resolved*, *supra* n.1, at 10 (discussing Kaiser et al., *Will Reducing Sugar-Sweetened Beverage Consumption Reduce Obesity?*, *supra* n. 46).

1 small sample sizes, short duration, poor compliance, lack of randomization at the individual level,
 2 lack of blinding and the overstating of subgroup findings.”⁵³ Others, better designed, have shown
 3 a direct connection between SSB consumption and body weight.⁵⁴ Still, to draw an inference
 4 about causality between SSBs and obesity and related diseases, it is essential to consider evidence
 5 not only from RCTs but also from prospective cohort studies, which are better suited to
 6 investigate long-term associations between dietary exposures and chronic disease risk.⁵⁵ These
 7 more thorough and complete meta-analyses – unlike the studies put forward by plaintiffs⁵⁶ – are,
 8 as the DGAC confirmed, the most credible reviews.⁵⁷

9 Of course, with respect to the accuracy of San Francisco’s warning label measure, it does
 10 not matter whether SSBs induce weight gain by increasing calorie consumption or through other
 11 mechanisms. Given that SSBs are a significant added source of calories with virtually no nutritive
 12 value in a nation where a full third of adults are obese or overweight, these products plainly
 13 “contribute to obesity.”

14 **B. Consuming SSBs Contributes To Type 2 Diabetes.**

15 The 2015 DGAC determined that “[c]ompelling evidence indicates that reducing SSBs will
 16 have significant impact on the prevalence of obesity and its related diseases, especially T2D.”⁵⁸
 17 The committee gave its highest grade, “Strong,” to the proposition that “[s]trong evidence shows
 18 that higher consumption of added sugars, especially sugar-sweetened beverages, increases the risk
 19 of type 2 diabetes among adults and this relationship is not fully explained by body weight.”⁵⁹

20 //

21 //

22 ⁵³ Richard Mattes et al, *Nutritively Sweetened Beverage Consumption and Body Weight: A*
 23 *Systematic Review and Meta-Analysis of Randomized Experiments*, 12 OBES. REV. 346 (2011), at
 24 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3169649>

⁵⁴ See *supra* n. 39 & accompanying text.

⁵⁵ DGAC Report, *supra* n.3, at 21.

⁵⁶ See, e.g., Kahn Aff. at ¶ 34.

⁵⁷ DGAC Report, *supra* n.3, at 26.

⁵⁸ Hu, *Resolved*, *supra* n.1, at 617.

⁵⁹ DGAC Report, *supra* n.3, at 20, 22. As with obesity, see *supra* n. 31, the Dietary Guidelines themselves departed from the recommendation of their scientific advisory panel, deeming the evidence moderate – i.e., “sufficient evidence to draw conclusions” – while still calling for a reduction in sugary drink intake and a limit of 10% of calories from added sugars.

1 The DGAC’s conclusions are well supported. Data from the Nurses’ Health Study II show
 2 that replacing SSBs with either water⁶⁰ or coffee⁶¹ is associated with a significantly lower risk of
 3 diabetes. A recent meta-analysis of studies on SSBs and diabetes concluded, based on data from
 4 studies including 310,819 participants and 15,043 cases of T2D, that there was “an excess risk of
 5 26% associated with higher consumption of SSBs compared with lower consumption.”⁶² This link
 6 was “consistent across ethnic groups..., genders and age groups” as well as studies from other
 7 countries.⁶³ The meta-analysis concluded: “Several lines of evidence, taken together, meet the key
 8 . . . criteria to establish a causal relationship between SSB consumption and risk of T2D.”⁶⁴

9 Studies that do not find a link between SSBs and diabetes generally suffer from the same
 10 fundamental methodological problem explained *supra* regarding obesity: they “adjust” for calorie
 11 intake and BMI. If “approximately half of the effects of SSBs on type 2 diabetes [a]re mediated
 12 through obesity,” then “adjustment for [calorie intake and BMI] will tend to underestimate any
 13 effect.”⁶⁵ In other words, SSBs make people heavier, and greater weight increases their risk of
 14 diabetes. So it doesn’t make sense to adjust results of studies to eliminate differences in weight as
 15 a factor in determining whether SSBs cause diabetes. Yet that is precisely what the studies relied
 16 on by plaintiffs do.⁶⁶

17 In fact, studies that adjust for BMI show that SSBs contribute to diabetes even beyond
 18 their contribution to obesity. A recent meta-analysis of 17 cohort studies, for example, found that
 19 a 1-serving/day increase in SSBs was associated with an 18% increased risk of diabetes.

20 ⁶⁰ An Pan et al., *Plain-Water Intake and Risk of Type 2 Diabetes in Young and Middle-Aged*
 21 *Women*, 95 AM. J. CLIN. NUTR. 1454 (2012), <http://ajcn.nutrition.org/content/95/6/1454.full.pdf>

22 ⁶¹ Lawrence de Koning et al., *Sugar Sweetened and Artificially Sweetened Beverage Consumption*
 23 *and Risk of Type 2 Diabetes in Men*, 93 AM. J. CLIN. NUTR. 1321 (2011), at
 24 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3095502>

25 ⁶² Malik, *Sugar-Sweetened Beverages and Risk*, *supra* n. 40, at 2480.

26 ⁶³ Hu, *Resolved*, *supra* n.1, at 7 (citing The InterAct Consortium, *Consumption of Sweet Beverages*
 27 *and Type 2 Diabetes Incidence in European Adults*, DIABETOLOGIA (2013)).

28 ⁶⁴ *Id.* at 8, Table 2 (taking into account strength of association, consistency, specificity,
 temporality, biological gradient, biological plausibility, and experimental evidence).

⁶⁵ Malik, *Sugar-Sweetened Beverages and Risk*, *supra* n. 40, at 2482, 2481 (citing Matthias
 Schulze, et al., *Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type 2 Diabetes in*
Young and Middle-Aged Women, 292 JAMA 927 (2004)).

⁶⁶ It is appropriate for studies to control for total calories and obesity to examine the hormonal
 consequences of diets heavy in added sugars (e.g., how people become insulin resistant and then
 wind up diabetic). The problem here is that the ABA is misrepresenting some of these studies.

1 Adjusting for BMI, the increased risk was still 13%.⁶⁷ There is strong evidence that SSBs
 2 contribute to T2D for reasons in addition to weight gain.⁶⁸ The additional effects “may ... stem
 3 from the high levels of rapidly absorbable carbohydrates in the form of added sugars.”⁶⁹ SSBs
 4 lead to fat accumulation in the liver and muscle,⁷⁰ which may promote insulin resistance.⁷¹ SSBs
 5 may also increase the “risk of developing cholesterol gallstone disease, which is associated with
 6 insulin resistance, metabolic syndrome, and type 2 diabetes.” Finally, SSBs may lead to
 7 accumulation of triglycerides in the liver, which can also induce insulin resistance and increase
 8 the risk of T2D.⁷²

9 Of course, the contribution of SSBs to obesity alone, which in turn is a primary risk factor
 10 for T2D, suffices to establish that consuming SSBs contributes to diabetes.⁷³

11 **C. Consuming SSBs Contributes To Tooth Decay.**

12 “Sugars are undoubtedly the most important dietary factor in the development of dental
 13 caries,”⁷⁴ and there is “overwhelming evidence of [their] unique role in causing a worldwide caries
 14 epidemic.”⁷⁵ The role of sugars is clear: “sucrose causes major biochemical and physiological
 15 changes [on teeth] during the process of biofilm formation, which, in turn, enhance its caries-
 16 inducing properties.”⁷⁶ SSBs are, as noted, the single largest source of free sugars (i.e., added
 17 sugars plus sugars present in honey, syrups and fruit juices) in the American diet. *See supra* §I.B.

18 ⁶⁷ Malik & Hu, *Fructose and Cardiometabolic Health*, *supra* n. 42.

19 ⁶⁸ DGAC Report, *supra* n. 3, at 22.

20 ⁶⁹ Malik, *Sugar-Sweetened Beverages and Risk*, *supra* n. 40, at 2482.

21 ⁷⁰ Maria Maersk et al., *Sucrose-Sweetened Beverages Increase Fat Storage in the Liver, Muscle, and Visceral Fat Depot*, 95 AM J. CLIN. NUTR. 283 (2012), at <http://ajcn.nutrition.org/content/95/2/283.full.pdf+html>

22 ⁷¹ Malik & Hu, *Fructose and Cardiometabolic Health*, *supra* n. 42.

23 ⁷² Kimber Stanhope & Peter Havel, *Fructose Consumption: Potential Mechanisms for Its Effects to Increase Visceral Adiposity and Induce Dyslipidemia and Insulin Resistance*, 19 Curr. Opin. Lipidol. 16 (2008), at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4151171>

24 ⁷³ A recent study showed that limiting SSB intake reduced body weight and improved insulin sensitivity in only 9 days in obese Hispanic and African-American children. Robert Lustig, et al., *Isocaloric Fructose Restriction and Metabolic Improvement in Children with Obesity and Metabolic Syndrome*, 24 OBESITY 453 (2015). Whether this improvement was mediated by weight loss or a specific effect of sugar reduction on insulin is less important than the finding that risk factors for obesity and diabetes in vulnerable populations were improved in only 9 days.

25 ⁷⁴ Sheiham & James, *A New Understanding*, *supra* n. 24, at 2176.

26 ⁷⁵ Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1341.

27 ⁷⁶ *Id.* at 1342, 1341. Other potential causes like processed food starches possess “a very low cariogenic potential.” *Id.* at 1346.

1 The link between free sugars and caries is confirmed in international situations of reduced
2 sugar availability. “[L]evels of dental caries in Iraqi children halved after ... sanctions reduced
3 sugars from 50 kg/capita per year ... to 12 kg/capita per year 5 years later.”⁷⁷ Similar results
4 emerged from longitudinal studies in Japan during and after the Second World War.⁷⁸

5 The strength of the evidence for the contribution of sugar to caries is not contradicted by a
6 DGAC conclusion, based on a WHO analysis, that only “moderate consistent evidence supports a
7 relationship between the amount of free sugars intake and the development of dental caries.”⁷⁹
8 The WHO meta-analysis concerned not whether added sugar contributes to dental caries but
9 rather whether incidence of dental caries varies in direct proportion to the amount of sugar
10 consumed, and particularly whether the WHO’s specific 10% threshold for added sugars was
11 justified.⁸⁰ There was no serious question about the general proposition that free sugars contribute
12 to tooth decay. Moreover, DGAC’s finding of “moderate” evidence seems to have resulted not
13 from any contrary evidence, but rather – in an abundance of caution – from a lack of randomized-
14 controlled trials.⁸¹ The WHO review noted “evidence of a large effect for the individual cohort
15 studies” and “[a] consistent association ... : 7 out of 8 studies reported higher dental caries with
16 higher sugars intake.” Further, “[p]opulation studies support the dose-response effect, with 18 out
17 of 20 showing a positive ... association between sugars intake and dental caries. Nine population
18 studies provided evidence of positive correlations between sugars intake and caries levels.”⁸²

19 A recent guest editorial in the Journal of the American Dental Association summarized:

20 Dental cavities are the most prevalent chronic disease in the United States and are a
21 significant cause of health inequalities. There is a strong link between the amount and
22 frequency of sugar consumed and dental cavities. The primary cause of dental cavities
is a diet high in sugar, and the primary source of sugar in children’s diets is sugary

23 ⁷⁷ *Id.* at 1343.

24 ⁷⁸ *Id.*

⁷⁹ DGAC Report, *supra* n. 3, at 20.

25 ⁸⁰ Paula Moynihan & S.A.M. Kelly, *Effect on Caries of Restricting Sugars Intake: Systematic
Review to Update WHO Guidelines*, 93 J. DENT. RES. 8 (2014), at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3872848>

26 ⁸¹ Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1343 (noting, “the difficulty of
27 undertaking single-blind, let alone double-blind, community-based randomized trials of sucrose
reduction over sufficient periods to monitor dental caries development makes it impossible to
satisfy the current WHO assessment of the strength of evidence”).

28 ⁸² Moynihan & Kelly, *Effect on Caries*, *supra* n. 80.

1 drinks.⁸³

2 **D. The Sugar And Beverage Industries Have Long Worked To Create Scientific**
 3 **‘Controversy’ By Influencing Academic Studies, Public Health Organizations,**
 4 **And Government Policy.**

5 Any ‘controversy’ that may exist about the clear and consistent conclusions of well-
 6 designed and unbiased studies linking SSBs to disease has little to do with their merits. “The long-
 7 standing failure to identify the need for drastic national reductions in sugars intakes reflects
 8 scientific confusion partly induced by pressure from major industrial sugar interests.”⁸⁴

9 Recently researchers analyzing archival internal sugar industry documents revealed that, as
 10 early as 1950, “sugar industry trade organizations had accepted that sugar damaged teeth and had
 11 recognized that the dental community favored restricting sugar intake as a key way to control
 12 caries.”⁸⁵ The industry set out to change that. The 1950 Sugar Research Foundation [SRF] annual
 13 report explicitly stated that “[t]he ultimate aim of the Foundation in dental research has been to
 14 discover effective means of controlling tooth decay by methods other than restricting carbohydrate
 15 intake.” For decades SRF “influenced policy . . . to exclude the proposal to restrict sugars
 16 consumption to prevent caries.”⁸⁶

17 Between 2010 and 2015 Coca-Cola alone gave almost \$120 million in grants to medical,
 18 health, and community organizations, including \$29 million to fund academic research.⁸⁷ Just two
 19 months ago, “[a] group called the Global Energy Balance Network (GEBN), led by scientists and
 20 created by Coca-Cola, announced . . . that it was shutting down after months of pressure from
 21 public health authorities who said that the group’s mission was to play down the link between soft
 22 drinks and obesity.”⁸⁸

23 ⁸³ Rob Beaglehole, *Dentists and Sugary Drinks: A Call to Action*, 146 J. AM. DENTAL ASS’N 73
 (Feb. 2015), at [http://jada.ada.org/article/S0002-8177\(14\)00060-9/pdf](http://jada.ada.org/article/S0002-8177(14)00060-9/pdf)

24 ⁸⁴ Sheiham, *Diet and Dental Caries*, *supra* n. 21, at 2176.

25 ⁸⁵ Cristin Kearns et al., *Sugar Industry Influence on the Scientific Agenda of the National Institute*
 26 *of Dental Research’s 1971 National Caries Program*, 12 PLOS MED. e1001798 (2015), at
 27 <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001798>

28 ⁸⁶ Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1345.

⁸⁷ Anahad O’Connor, *Coke Spends Lavishly on Pediatricians and Dietitians*, N.Y. TIMES (Sept.
 28, 2015), at [http://well.blogs.nytimes.com/2015/09/28/coke-spends-lavishly-on-pediatricians-](http://well.blogs.nytimes.com/2015/09/28/coke-spends-lavishly-on-pediatricians-and-dietitians)
 29 [and-dietitians](http://well.blogs.nytimes.com/2015/09/28/coke-spends-lavishly-on-pediatricians-and-dietitians)

⁸⁸ Anahad O’Connor, *Research Group Funded by Coca-Cola to Disband*, N.Y. TIMES (Dec. 1,
 2015), <http://well.blogs.nytimes.com/2015/12/01/research-group-funded-by-coca-cola-to-disband>

1 Yet decades of funding for industry-friendly studies have had an effect. A 2007 study
 2 found that medical research articles about soft drinks, juice, and milk “sponsored exclusively by
 3 food/drinks companies were four to eight times more likely to have conclusions favorable to the
 4 financial interests of the sponsoring company.”⁸⁹ A 2013 analysis found that studies “funded by
 5 Coca-Cola, PepsiCo, the American Beverage Association and the sugar industry were five times
 6 more likely to find no link between sugary drinks and weight gain.”⁹⁰ Of twelve reviews reporting
 7 no financial conflicts of interest, ten found a positive association between SSB consumption and
 8 weight gain; meanwhile, of six reviews reporting industry funding, five found the evidence
 9 insufficient to support a positive association.⁹¹

10 The impact of industry funding has extended beyond academia. In 2003, the World Sugar
 11 Research Organisation (WSRO), a trade organization that includes Coca-Cola, successfully
 12 blocked a WHO committee recommendation limiting free or added sugars to 10% of total calories
 13 from becoming WHO policy. A similar policy proposal was reintroduced in 2014; WSRO
 14 submitted comments arguing that “dental public health interventions should focus on reducing the
 15 harm of sugar consumption with methods such as the ‘regular use of fluoride toothpaste’ rather
 16 than restricting sugar intake.”⁹²

17 Public health organizations have not been immune. In 2003,

18 the American Academy of Pediatric Dentistry received \$1 million from the Coca-Cola
 19 Company. A few months later, the academy stated that “scientific evidence is not clear
 20 on the exact role that soft drinks play in terms of children’s oral disease.” This
 contradict[ed] their previous statement that “consumption of sugars in any beverage

21 ⁸⁹ Lenard Lesser et al., *Relationship Between Funding Source and Conclusion Among Nutrition-*
 22 *Related Scientific Articles*, 4 (1) PLOS MED. 41, 44 (2007), at [http://journals.plos.org](http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0040005)
 23 [/plosmedicine/article?id=10.1371/journal.pmed.0040005](http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0040005); accord Lenny Vartanian et al (2007).
Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-
 Analysis, 97 AMER. J PUB. HEALTH 667 (2013), at [http://www.ncbi.nlm.nih.gov/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1829363)
[pmc/articles/PMC1829363](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1829363)

24 ⁹⁰ Anahad O’Connor, *Coca-Cola Funds Scientists Who Shift Blame for Obesity Away From Bad*
 25 *Diets*, N.Y. TIMES (Aug. 9, 2015), at [http://well.blogs.nytimes.com/2015/08/09/coca-cola-funds-](http://well.blogs.nytimes.com/2015/08/09/coca-cola-funds-scientists-who-shift-blame-for-obesity-away-from-bad-diets)
 26 [scientists-who-shift-blame-for-obesity-away-from-bad-diets](http://well.blogs.nytimes.com/2015/08/09/coca-cola-funds-scientists-who-shift-blame-for-obesity-away-from-bad-diets) (citing Maira Bes-Rastrollo et al.,
Financial Conflicts of Interest and Reporting Bias Regarding the Association Between Sugar-
Sweetened Beverages and Weight Gain: A Systematic Review of Systematic Reviews, 10 PLOS
 Med. 1 (2013)).

27 ⁹¹ Bes-Rastrollo et al., *Financial Conflicts of Interest*, *supra* n. 90, at [http://journals.plos.org](http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001578#s3)
 28 [/plosmedicine/article?id=10.1371/journal.pmed.1001578#s3](http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001578#s3)

⁹² Kearns et al., *Sugar Industry Influence on the Scientific Agenda*, *supra* n. 85, at e1001798.

1 can be a significant factor that contributes to dental caries.” Fortunately, the academy
 2 now states that “frequent ingestion of sugars and other carbohydrates (eg, fruit juices,
 acidic beverages) ... are [among] particular risk factors in the development of caries.”⁹³

3 The Academy of Nutrition and Dietetics (AND), the organization of nutrition
 4 professionals cited by the ABA as approving the consumption of added sugar ““in moderation,””
 5 PI Mot. at 12,⁹⁴ has received \$1.7 million in funding from Coca-Cola since 2010. AND has been
 6 widely criticized for “haul[ing] in large sums of money advocating for the food industry.”⁹⁵ In
 7 1995, for example, an AND nutrition fact sheet, sponsored by the National Association of
 8 Margarine Manufacturers, proclaimed: “There is little scientific evidence to suggest that current
 9 consumption levels of trans-fatty acids need to be changed.”⁹⁶ Trans fats have since been banned
 10 from the nation’s food supply because of their adverse health impacts.⁹⁷

11 While it may be technically true that Dr. Richard Kahn, the ABA’s chief scientific expert in
 12 this case, has himself “never received any form of compensation or funding from the beverage
 13 industry,” Kahn Aff., ¶ 2, under his leadership the American Diabetes Association entered into a
 14 \$1.5 million sponsorship agreement with Cadbury-Schweppes.⁹⁸ Dr. Kahn’s Affidavit repeatedly
 15 cites, *e.g.* Kahn Aff., n. 5, an article he co-authored with David Sievenpiper,⁹⁹ who discloses in
 16 that article that he received funding from Coca-Cola and speaker’s fees and honoraria from Coca-
 17 Cola and the Dr Pepper Snapple Group.¹⁰⁰ An author of at least one of the studies reviewed in that
 18 article responded that “Kahn and Sievenpiper misrepresented the outcome of our trial of sugar-

19 _____
 20 ⁹³ Rob H. Beaglehole, *Dentists and Sugary Drinks*, *supra* n. 83, at 74.

⁹⁴ Citing Comp. ¶ 139(a) (identifying AND as the organization in question).

21 ⁹⁵ Sheldon Rampton & John Stauber, *Trust Us, We’re Experts!: How Industry Manipulates*
 22 *Science and Gambles with Your Future* (2002) (AND was then known as the American Dietetic
 Association).

23 ⁹⁶ Marian Burros, *Group’s Pursuit of Cash Draws Fire*, MILWAUKEE J. SENTINEL (Dec. 6, 1995),
 at http://www.cspinet.org/new/industryties_salt.html

24 ⁹⁷ Brady Dennis, *FDA Moves to Ban Trans Fat From US Food Supply*, WASH. POST (June 16,
 25 2015), https://www.washingtonpost.com/national/health-science/fda-moves-to-ban-trans-fat-from-us-food-supply/2015/06/16/f8fc8f18-1084-11e5-9726-49d6fa26a8c6_story.html

26 ⁹⁸ Marc Santora, *In Diabetes Fight, Raising Cash and Keeping Trust*, N.Y. TIMES (Nov. 25, 2006),
<http://www.nytimes.com/2006/11/25/health/25ada.html>

27 ⁹⁹ *E.g.* Kahn Aff., n. 5.

28 ¹⁰⁰ Richard Kahn & David Sievenpiper, *Dietary Sugar and Body Weight: Have We Reached a*
Crisis in the Epidemic of Obesity and Diabetes?, 37 DIABETES CARE 957, 961 (2014),
<http://care.diabetesjournals.org/content/37/4/957.full.pdf>

1 sweetened beverages and body weight in children.”¹⁰¹ Dr. Kahn’s Affidavit also relies on articles
 2 authored and co-authored by James Rippe.¹⁰² Not only did Rippe’s research group receive \$10
 3 million in funding from a corn syrup industry trade group, but Rippe personally received a
 4 \$41,000-per-month retainer from the group.¹⁰³

5 In sum, “[t]he industry’s tactic is to undermine all the scientific evidence by supporting
 6 scientists who offer contrary evidence, thereby creating a ‘controversy.’”¹⁰⁴ Scientists have
 7 decried these efforts to “confuse the science and deflect attention from dietary intake”¹⁰⁵ and
 8 called industry support of “prominent health researchers . . . reminiscent of tactics used by the
 9 tobacco industry, which enlisted experts to become ‘merchants of doubt’.”¹⁰⁶

10 **E. There is Broad Consensus Among National And International Public Health**
 11 **Organizations That Consumption of SSBs Should Be Limited In Order To Reduce**
 12 **Chronic Disease.**

13 Despite industry’s best (and continuing) efforts, the most respected and influential voices
 14 in public health agree that SSBs contribute to obesity, diabetes and tooth decay, and uniformly
 15 recommend limiting intake of added sugars and specifically SSBs.

16 The advisory committee for the recently-released Dietary Guidelines for Americans
 17 concluded that “[o]besity, type 2 diabetes, . . . and dental caries are major public health concerns.
 18 Added sugars intake negatively impacts all of these conditions, and strong evidence supports

19 ¹⁰¹ Martijn Katan, *Comment on Kahn & Sievenpiper, Dietary Sugar and Body Weight*, 37 DIAB.
 20 CARE e188 (2014), at <http://care.diabetesjournals.org/content/37/8/e188.full.pdf>

21 ¹⁰² E.g., Kahn Aff., nn. 12, 34; see also Kimber, *Sugar Consumption, Metabolic Disease, and*
 22 *Obesity*, 53 CRIT. REV. CLIN. LAB. SCI. 52 (2015) at 7 (cited in Kahn Aff. at ¶ 42) (noting of Rippe
 23 study that “the inexplicable use of milk as a vehicle for the study, the lack of a control group, . . .
 and the lack of objective compliance monitoring . . . give the appearance that the objective of this
 industry-sponsored study was not to answer an important public health question, but to generate
 results that will assure the public that the current level of sugar consumption is safe and maintain
 the state of controversy”).

24 ¹⁰³ Eric Lipton, *Rival Industries Sweet-Talk the Public*, N.Y. TIMES (Feb. 11, 2014), at
 25 <http://www.nytimes.com/2014/02/12/business/rival-industries-sweet-talk-the-public.html>

26 ¹⁰⁴ Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1345, citing Gretchen Goldman et
 27 al., *Added Sugar, Subtracted Science – How Industry Obscures Science and Undermines Public*
Health Policy on Sugar, CTR. FOR SCIENCE AND DEMOCRACY (2014), at [http://www](http://www.ucsus.org/assets/documents/center-for-science-and-democracy/added-sugar-subtracted-science.pdf)
 .ucsus.org/assets/documents/center-for-science-and-democracy/added-sugar-subtracted-

28 ¹⁰⁵ Prof. Marion Nestle, *quoted in O’Connor, Coca-Cola Funds Scientists*, *supra* n. 90.

¹⁰⁶ Prof. Barry Popkin, *quoted in O’Connor, Coca-Cola Funds Scientists*, *supra* n. 90.

1 reducing added sugars intake to reduce health risks.”¹⁰⁷ The DGAC noted that “[t]he
 2 recommendation to limit added sugars, especially sugar-sweetened beverages, is consistent with
 3 recommendations from national and international organizations including the American Academy
 4 of Pediatrics, World Health Organization, American Heart Association, Centers for Disease
 5 Control and Prevention, and the American Diabetes Association.”¹⁰⁸

6 The Surgeon General of the United States has placed “reducing consumption of sodas and
 7 juices with added sugars” as the first item on a list of changes needed to improve the nation’s
 8 health.¹⁰⁹ The Food & Drug Administration, reconsidering earlier positions, has proposed that
 9 added sugars be listed separately on the Nutrition Facts Panel and that a Daily Value of 10% of
 10 calories from added sugars be set.¹¹⁰ The World Health Organization grades the evidence as
 11 “strong” supporting a guideline that children reduce their intake of SSBs and that people of all
 12 ages reduce intake of free sugars to no more than 10% of total calories consumed.¹¹¹ The
 13 American Heart Association “recommends reductions in added sugars.”¹¹² The CDC calls on
 14 communities to “discourage consumption of sugar-sweetened beverages.”¹¹³ The American
 15 Diabetes Association notes that “[r]esearch has shown that drinking sugary drinks is linked to
 16 type 2 diabetes” and “recommends that people should avoid intake of sugar-sweetened
 17 beverages.”¹¹⁴ The American Academy of Pediatrics (AAP) has noted “[p]otential health
 18 problems associated with high intake of sweetened drinks, [including] overweight or obesity [and]
 19 dental caries and potential enamel

20 //

21 _____
 22 ¹⁰⁷ DGAC Report, *supra* n. 3, at 26.

¹⁰⁸ *Id.*

¹⁰⁹ *The Surgeon General’s Vision for a Healthy and Fit Nation, Fact Sheet* (2010),
 23 http://www.surgeongeneral.gov/priorities/healthy-fit-nation/obesityvision_factsheet.html

¹¹⁰ *See supra* n. 32 & accompanying text.

¹¹¹ WORLD HEALTH ORGANIZATION, *Guideline: Sugars Intake for Adults and Children* (2015), *at*
 24 http://apps.who.int/iris/bitstream/10665/149782/1/9789241549028_eng.pdf

¹¹² Linda Van Horn et al., *Translation and Implementation of Added Sugars Consumption*
 25 *Recommendations*, 122 CIRCULATION 2470 (2010), *at* [http://circ.ahajournals.org/content](http://circ.ahajournals.org/content/122/23/2470.long)
 26 [/122/23/2470.long](http://circ.ahajournals.org/content/122/23/2470.long)

¹¹³ CDC, *Recommended Community Strategies and Measurements to Prevent Obesity in the U.S.*
 27 *Morb. and Mort. Weekly Rep.*, (July 24, 2009), *at* [http://www.cdc.gov/mmwr/preview](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm)
 28 [/mmwrhtml/rr5807a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm)

¹¹⁴ AM. DIABET. ASS’N, *Diabetes Myths*, *at* <http://www.diabetes.org/diabetes-basics/myths>

erosion.”¹¹⁵ The American Dental Association advises: “Limit added sugars in your diet”¹¹⁶; “If you consume too many sugar-filled sodas . . . , you could be at risk for tooth decay.”¹¹⁷

All of these organizations – along with, among others, the United States Departments of Agriculture and Health & Human Services,¹¹⁸ the American Medical Association,¹¹⁹ and the Institute of Medicine of the National Academies¹²⁰ – are convinced of the evidence and calling for reductions in consumption of SSBs for prevention of obesity and chronic diseases.¹²¹

The same is true, of course, for the signatories to this brief.

III. THE MANDATED WARNINGS ARE FACTUAL AND ACCURATE COMMERCIAL DISCLOSURES, AND EASILY PASS THE LENIENT FIRST AMENDMENT REVIEW THAT APPLIES.

Measures that foster, rather than impede, the flow of useful information to consumers – “factual and uncontroversial” disclosures in commercial contexts – are subject to deferential First Amendment review. *Zauderer*, 471 U.S. at 651. Ordinance No. 100-15 is such a measure.

A. The Required Warnings Are Factual And Uncontroversial.

A factual and uncontroversial statement is in essence one that is actually informative, rather than a statement of personal belief or a factual claim of questionable accuracy.

Specifically, “factual” statements are statements made true or false by objective, discoverable facts; they contrast with statements of opinion, value, personal preference, or

¹¹⁵ AAP, Comm. on Sch. Health, *Soft Drinks in Schools*, 113 PEDIATRICS (Jan. 2004), at <http://pediatrics.aappublications.org/content/113/1/152>. The AAP said this even while receiving more than \$3 million from the Coca-Cola Company over the past 5 years, a relationship it recently severed. See Anahad O’Connor, *Coke Spends Lavishly on Pediatricians and Dietitians*, N.Y. TIMES (Sep. 28, 2015), at <http://well.blogs.nytimes.com/2015/09/28/coke-spends-lavishly-on-pediatricians-and-dietitians/>

¹¹⁶ AM. DENT. ASS’N, Mouth Healthy, *Nutrition*, at <http://www.mouthhealthy.org/en/nutrition>

¹¹⁷ AM. DENT. ASS’N, Mouth Healthy, *Diet and Dental Health*, at <http://www.mouthhealthy.org/en/az-topics/d/diet-and-dental-health>

¹¹⁸ DGAC Report, *supra* n. 3, at 26.

¹¹⁹ Sarah Barlow, *Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity*, 120 PEDIATRICS S164–S192 (2007), at http://pediatrics.aappublications.org/content/120/Supplement_4/S164

¹²⁰ INST. OF MEDICINE, *Local Government Actions to Prevent Childhood Obesity* (2009) at 5 (calling for action to “increase access to free, safe drinking water in public places to encourage water consumption instead of sugar-sweetened beverages” and “implement a tax strategy to discourage consumption of food and beverages that have minimal nutritional value, such as sugar-sweetened beverages”), at https://www2.aap.org/obesity/community_advocacy/IOM.pdf

¹²¹ Hu, *Resolved*, *supra* n.1, at 617.

1 ideology. *See Disc. Tobacco City & Lottery, Inc. v. United States*, 674 F.3d 509, 556 (6th Cir.
 2 2012) (distinguishing between facts and personal or political opinions); *Entm't Software Ass'n v.*
 3 *Blagojevich*, 469 F.3d 641, 652 (7th Cir. 2006) (required labels were not factual, because
 4 definition of “sexually explicit” is “subjective” and “opinion-based”).

5 A factual statement is “uncontroversial” if its truth is well established. *See Disc. Tobacco*,
 6 674 F.3d at 560 (asking whether required warnings were “accurate” as well as factual to determine
 7 if *Zauderer* review applied); *Nat'l Elec. Mfrs. Ass'n v. Sorrell*, 272 F.3d 104, 114 (2d Cir. 2001)
 8 (“mandated disclosure of *accurate*, factual, commercial information” is reviewed under *Zauderer*)
 9 (emphasis added).

10 “Drinking beverages with added sugar(s) contributes to obesity, diabetes, and tooth decay”
 11 is a factual claim. The key question in this case is whether it is accurate.

12 **1. The Accuracy of the Required Warnings is Solidly Established.**

13 As demonstrated, *supra* § II, the accuracy of the warning is amply established by numerous
 14 long-term studies and randomized controlled trials demonstrating that higher rates of SSB
 15 consumption are strongly linked to higher rates of obesity, diabetes, and tooth decay.

16 Because the contributions of SSB consumption to obesity, diabetes, and tooth decay are so
 17 well established, the ABA seeks to distort the meaning of the required warnings by transmuted
 18 well established public health findings into implausible generalizations. *See* PI Mot. at 6. The
 19 warning cannot plausibly be read to state or imply that *any* level of consumption of SSBs
 20 “necessarily and inevitably” produces obesity, diabetes, and tooth decay – no reasonable reader
 21 would infer that any individual who consumes a single soft drink will inevitably suffer from
 22 obesity, diabetes, and tooth decay.

23 That some authorities have stated that some “moderate” consumption of SSBs may be safe,
 24 given an otherwise healthy lifestyle, PI Mot. at 12, 13, does not make the accuracy of the warnings
 25 controversial. Their accuracy is not belied, but actually corroborated, by the fact that more
 26 moderate consumption of SSBs results in more moderate risk of adverse health effects. Moreover,
 27 even levels of consumption widely seen as “moderate” *are* problematic:

28 [WHO] recommends that people limit their added sugar intake to less than 10% of their

1 calories and says cutting it to 5% provides additional health benefits. For a person on a
2 2,000 calorie diet, 5% of calories amounts to 100 calories a day, which means a single
12-ounce soda puts you over the limit.¹²²

3 Drinking just one soda per day increases a child's odds of developing obesity by 55%, and
4 a woman's risk of developing type 2 diabetes by 80%.¹²³ In fact, the widespread, mistaken belief
5 that what many consider moderate consumption is not harmful itself represents a substantial
6 challenge to public health. Focus groups on prospective anti-SSB advertising by the New York
7 City Health Board elicited such comments as “Anything in moderation is okay” and “drinking
8 one or two sodas a day wasn't a problem,” when “[i]n fact, an additional one or two sodas every
9 day might be enough to drive the entire obesity epidemic.”¹²⁴

10 Disagreement over whether added sugars contribute more to obesity or diabetes than an
11 equivalent number of calories in other form, PI Mot. at 12-13, does not call the accuracy of the
12 warning into question either. There is in fact substantial evidence that added sugars – particularly
13 in liquid form – are more harmful than other calories. *See supra* §§II.A-C. But the warnings are
14 accurate regardless. There is ample evidence that SSBs are not consumed *instead of* other calories,
15 but in addition. *See supra* §II.A.1. Similarly, regardless of whether added sugars are more harmful
16 than other sugars, PI Mot. at 13-14, SSBs substantially increase sugar intake and lack the benefits
17 of beverages naturally containing sugar. 100% fruit juices, for example, are a source of naturally
18 occurring vitamins.¹²⁵ Milk, besides providing protein and valuable minerals such as calcium,
19 actually *reduces* diabetes risk.¹²⁶

20 There are sound medical reasons for singling out SSBs. As the largest source of sugar and
21 of calories in the U.S. diet, especially among groups most susceptible to these chronic health
22

23 ¹²² Tom Farley, *Resurrect the Sugary Soda Tax*, N.Y. DAILY NEWS (Oct. 18, 2015), at
24 <http://www.nydailynews.com/opinion/tom-farley-resurrect-sugary-soda-tax-article-1.2400779>

¹²³ Te Morenga et al., *Dietary Sugars and Body Weight*, *supra* n. 34.

¹²⁴ Tom Farley, *SAVING GOTHAM* (2015), at 152.

¹²⁵ CDC, 60 *Morb. & Mortal. Weekly Rep.* 778, *Beverage Consumption Among High School Students* (June 17, 2011), at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6023a2.htm>

¹²⁶ Arne Astrup, *Yogurt and Dairy Product Consumption to Prevent Cardiometabolic Diseases*, 99 *AM. J. CLIN. NUTR.* 1235S (2014), at <http://ajcn.nutrition.org/content/99/5/1235S.full>; Peter Elwood et al., *Consumption of Milk and Dairy Foods and the Incidence of Vascular Disease and Diabetes*, 45 *Lipids* 925 (2010), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2950929>

1 conditions,¹²⁷ and with almost no countervailing nutritional benefit, SSBs occupy a position in the
 2 American diet that readily merits a warning. As New York City’s former Health Commissioner
 3 summarized, “In the end, it didn’t matter much ... whether soda leads to weight gain because it
 4 delivers unnecessary calories, or because those calories come from carbohydrates, or because
 5 those carbohydrates are sugar, or because the sugar is in liquid form. Sugary drinks make people
 6 fat.... And that mattered very much.”¹²⁸

7 **2. The Existence of Some Scientific Disagreement Does Not Make a Claim**
 8 **‘Controversial’.**

9 A factual claim can be “uncontroversial” even if some scientists may disagree with some
 10 aspect. There are scientists in every field who question generally accepted theories. Such diversity
 11 may even help to make scientific progress possible.¹²⁹ It does not follow that no scientific claim is
 12 ever sufficiently well established to support a public warning. “Of course, ... the scientific
 13 evidence will continue to evolve regarding the health effects of SSBs. ... All scientific work is
 14 liable to be upset or modified by advancing knowledge. That does not confer upon us a freedom to
 15 ignore the knowledge we already have, or to postpone the action it appears to demand at a given
 16 time.”¹³⁰ If scientific unanimity were required for *Zauderer* review to apply, any imaginable
 17 science-based disclosure – about health risks, environmental hazards, or other vital information –
 18 would be subject to heightened review under the First Amendment. “A ‘controversy’ cannot be
 19 created any time there is a disagreement ... because *Zauderer* would never apply, especially where
 20 there are health and safety risks, which invariably are dependent in some degree on the current
 21 state of science and research.” *CTIA v. City of Berkeley*, No. 15-CV-02529-EMC, 2016 WL
 22 324283, at *6 (N.D. Cal. Jan. 27, 2016).

23
 24 ¹²⁷ Hispanics and African-Americans consume significantly more SSBs than non-Hispanic
 25 Caucasians. Cynthia Ogden et al., *Consumption of Sugar Drinks in the United States, 2005-2008*,
 Nat. Ctr. Health Stat., NCHS Data Brief No. 71 (Aug. 2011) at 3, at
 26 <http://www.cdc.gov/nchs/data/databriefs/db71.pdf>

¹²⁸ Farley, *SAVING GOTHAM*, *supra* n. 124, at 103.

¹²⁹ See, e.g., Christian Strasser et al., *Heuristic Reasoning*, 16 *STUDIES IN APPLIED PHILOSOPHY, EPISTEMOLOGY & RATIONAL ETHICS* 113, 113 (2015) (“Many philosophers of science consider scientific disagreement to be a major promoter of scientific progress”).

¹³⁰ Hu, *Resolved*, *supra* n.1, at 612.

1 While any current scientific belief might be disproven some day, the ABA’s claim that
 2 “Yesterday’s dietary truths are routinely reevaluated and discarded,” PI Mot. at 4, is singularly
 3 inapplicable to the health harms of sugar. Nutrition scientists have long been concerned that sugar
 4 contributes to weight gain, diabetes, and tooth decay. Internal trade association documents reveal
 5 that the sugar industry was aware of potential links between sugar and chronic disease more than
 6 half a century ago. Yet the industry continued to deny them publicly for decades thereafter.¹³¹

7 Indeed, it continues to do so today.

8 When an evidence-based nutrition determination is endorsed by the United States Surgeon
 9 General, the Institute of Medicine, the Dietary Guidelines for Americans Committee, the World
 10 Health Organization, and a host of preeminent national and international public health NGOs,¹³²
 11 *see supra* §II.E, while research calling it into question is largely supported by funding from the
 12 sugar and soda industries, *see supra* §II.D, that determination can hardly be deemed
 13 ‘controversial.’¹³³ *Zauderer* review applies.¹³⁴

14 **B. The ABA Misrepresents The Applicable Legal Standard.**

15 While the required warnings easily survive “reasonable relationship” review under
 16 *Zauderer*, 471 U.S. at 651, the ABA’s attempts to distort the standard call for a response.

17 (1) A substantial state interest is not required. While San Francisco’s interests in “improved
 18 ... health” and in “informed consumer choice” with respect to purchases that may affect health,

19 _____
 20 ¹³¹ Kearns et al, *Sugar Industry Influence on the Scientific Agenda*, *supra* n. 84, at e1001798.

21 ¹³² Even the Academy of Nutrition and Dietetics (AND), cited by the ABA, does not dispute the
 22 harms of sugar. AND differs only in approving sugar consumption in moderation. AND’s
 23 credibility is in any event compromised by the large sums it has until recently accepted from the
 24 soda industry. *See supra* §II.D.

25 ¹³³ The consensus is reflected in a proposed California bill that would require nearly identical
 26 warnings statewide. SB 203 (2015), at https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB203/ The nonpartisan national panel of nutrition and
 27 public health experts vetting the bill agreed that the warning “is based on strong scientific
 28 evidence.” Scientific Panel, *SB 203: Warning Labels on Sugary Drinks*,
http://www.publichealthadvocacy.org/resources/warninglabel/SB203_PressKit_ScientificPanel.pdf/
 Legislation requiring almost identical warnings has also been proposed in New York,
 Hawaii, Vermont, and Washington. Kick the Can, *Legislative Campaigns*, at
<http://www.kickthecan.info/legislative-campaigns>

¹³⁴ There is no dispute that the Ordinance affects mostly commercial speech. The message ads
 adduced by the ABA, PI Mot. at 8, are equally commercial. “[A]dvertising which ‘links a product
 to a current public debate’ is not thereby entitled to the constitutional protection afforded
 noncommercial speech.” *Bolger v. Youngs Drug Products Corp.*, 463 U.S. 60, 68 (1983).

1 S.F. Health Code § 4201, are certainly substantial, as a matter of law they do not need to be. The
 2 ABA misleadingly characterizes “reasonably related” review under *Zauderer* as requiring a
 3 “substantial [state] interest,” on the strength of a single concurring opinion. PI Mot., at 10 (citing
 4 *Am. Meat Inst. [AMI] v. USDA*, 760 F.3d 18, 34 (D.C. Cir. 2014) (Kavanaugh, J., concurring in
 5 judgment).¹³⁵ In actuality, most courts agree that commercial disclosure mandates require only “a
 6 conceivable legitimate state purpose.” *Beeman v. Anthem Prescription Mgmt., LLC*, 315 P.3d 71,
 7 95 (Cal. 2013); *see also Conn. Bar Ass’n v. United States*, 620 F.3d 81, 101 (2d Cir. 2010)
 8 (upholding statutes under *Zauderer* review on the basis of a “legitimate government concern”).
 9 The *Zauderer* standard is often likened to “rational basis” review, *e.g. Safelite Grp., Inc. v. Jepsen*,
 10 764 F.3d 258, 264 (2d Cir. 2014); *Greater Baltimore Ctr. for Pregnancy Concerns, Inc. v. Mayor*
 11 *& City Council of Baltimore*, 721 F.3d 264, 283 (4th Cir. 2013); *Disc. Tobacco*, 674 F.3d at 555
 12 (6th Cir. 2012); *Pharm. Care Mgmt. Ass’n v. Rowe*, 429 F.3d 294, 316 (1st Cir. 2005); *United*
 13 *States v. Marzzarella*, 614 F.3d 85, 96 (3d Cir. 2010), which demands only that legislation be
 14 “rationally related to *legitimate* governmental objectives,” *Schweiker v. Wilson*, 450 U.S. 221, 230
 15 (1981) (emphasis added). The ABA’s view makes little sense: if the “constitutionally protected
 16 interest in *not* providing any particular factual information ... is “minimal,” *Zauderer*, 471 U.S. at
 17 651, a weighty government interest should not be needed to override it.

18 (2) San Francisco need not employ the least restrictive means. The purported availability
 19 of less speech-restrictive alternatives, *see* PI Mot. at 22, is irrelevant. *See Zauderer*, 471 U.S. at
 20 651 n. 14 (“We reject [the] contention that we should subject disclosure requirements to a strict
 21 ‘least restrictive means’ analysis”). Indeed, there is irony in the ABA’s raising this issue.
 22 Disclaimers have generally been suggested as a *less* restrictive alternative to measures that limit
 23 commercial speech. *See, e.g., Peel v. Att’y Registration & Disciplinary Comm’n of Illinois*, 496
 24 U.S. 91, 110 (1990); *In re R.M.J.*, 455 U.S. 191, 201-203 (1982).

25 (3) The Ordinance is not paternalistic. Characterizing the Ordinance as “paternalistic,”
 26 Amicus Br. of Ass’n of Nat’l Advertisers at 8, is equally ironic. Speech regulations are

27 //

28 ¹³⁵ The *AMI* majority left the question undecided. *AMI*, 760 F.3d at 23.

1 “paternalistic” when they “seek to keep people in the dark for what the government believes to be
2 their own good.” *Rubin v. Coors Brewing Co.*, 514 U.S. 476, 497 (1995) (Stevens, J., conc. in
3 judgment). Here it is the soda manufacturers who seek to keep people in the dark (for the good of
4 the soda manufacturers). Moreover, the information which the city seeks to make available is
5 expressly desired by consumers¹³⁶ – just the opposite of paternalistic regulation.

6 **CONCLUSION**

7 Because the Ordinance requires only that factual and uncontroversial commercial
8 information be provided to San Francisco residents, and because that information relates to vitally
9 important decisions residents make about their health, the Ordinance readily passes muster under
10 the First Amendment. The motion for a preliminary injunction should be denied.

11
12 DATED: February 23, 2016

Respectfully submitted,

13 /s/ Seth E. Mermin

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21
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26 ¹³⁶ See Alexei Koseff, *California Voters Favor Taxes, Labels for Sugary Drinks*, SAC. BEE (Feb. 3,
27 2016) (Field Poll found that “[s]eventy-eight percent of respondents approved of labeling sugary
28 drinks with a cautionary message, stating that studies show daily consumption contributes to
diabetes, obesity and tooth decay”), at [http://www.sacbee.com/news/politics-government/capitol-
alert/article58298533.html](http://www.sacbee.com/news/politics-government/capitol-alert/article58298533.html)

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PROOF OF SERVICE

I hereby certify that on February 23, 2016, I caused to be filed electronically via the Court’s CM/ECF System, and thereby served on all counsel, a true and correct copy of this Brief of Amici Curiae.

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I declare under penalty of perjury pursuant to the laws of the State of California that the foregoing is true and correct.

Executed February 23, 2016, at San Francisco, California.

/s/ Vanessa Buffington
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