



Published in final edited form as:

Obes Rev. 2012 July ; 13(7): 618–629. doi:10.1111/j.1467-789X.2012.00983.x.

Nutrition Standards for Away-from-home Foods in the United States

Deborah A. Cohen, MD, MPH and
RAND Corporation

Rajiv Bhatia, MD, MPH
San Francisco Department of Public Health

Abstract

Away-from-home foods are regulated with respect to the prevention of food-borne diseases and potential contaminants, but not for their contribution to dietary-related chronic diseases. Away-from-home foods have more calories, salt, sugar, and fat and provide fewer fruits and vegetables than recommended by national nutrition guidelines; thus, frequent consumption of away-from-home foods contributes to obesity, hypertension, diabetes, heart disease, and cancer. In light of this, many localities are already adopting regulations or sponsoring programs to improve the quality of away-from-home foods. We review the rationale for developing nutritional performance standards for away-from-home foods in light of limited human capacity to regulate intake or physiologically compensate for a poor diet. We offer a set of model performance standards to be considered as a new area of environmental regulation. Models for voluntary implementation of consumer standards exist in the environmental domain and may be useful templates for implementation. Implementing such standards, whether voluntarily or via regulations, will require addressing a number of practical and ideological challenges. Politically, regulatory standards contradict the belief that adults should be able to navigate dietary risks in away-from-home settings unaided.

Keywords

Away-from-home foods; nutrition; obesity; chronic diseases; regulation; consumer protection; menu-labeling

Introduction

The prevalence of obesity and diet-related chronic diseases continues to climb across the world and it has become increasingly clear that the major source of this problem is the over-supply and subsequent overconsumption of food, especially energy-dense, low nutrient foods (1). Many view dietary choice as a matter of personal responsibility, and claim that overproduction and overconsumption is driven primarily by consumer demand. Others argue that individual choice occurs in an environment that encourages overconsumption, suggesting that regulation of food choices may be a necessary part of the solution.

Theoretically people do choose what they eat, but people cannot make healthy choices if they are not available. With the rising prevalence of dietary related chronic diseases and

Corresponding author: Deborah A. Cohen MD, MPH, *RAND Corporation, 1776 Main St, Santa Monica, CA 90407*, 310 393-0411 ext 6023, fax 310 260-8175, dcohen@rand.org.

Neither author has any competing financial interest.

their attendant social and economic costs, municipalities are increasingly motivated to look at the opportunities for regulation of away-from-home foods (2, 3). Recent U.S. health care insurance reform legislation includes requirements for posting of calories for foods served in chain restaurants. Many localities want to go further and have already enacted policies that are intended to reduce access to foods considered unhealthy and increase the availability of healthy items. In South Los Angeles, new fast food outlets have been temporarily banned (4); in Watsonville, CA all new restaurants are required to offer fruits and vegetables as a condition for getting a building permit (5). Table 1 describes four local initiatives of which 2 are regulatory and 2 are voluntary.

Legal authority to establish and enforce regulations that protect public health derives from the society's right to self-defense (6). Regulations may involve prohibitions, controls, and standards, require permits, licenses and registrations, and use inspections, orders, penalties, and injunctions to monitor and enforce compliance where private activities create risks to the public, workers, or consumers. Most regulations target risks that individuals cannot observe, prevent, or control.

Practically speaking, people have a limited capacity to make healthy choices in away-from-home settings. The look or taste of food does not usually indicate its nutrient content precisely and internal cues of satiety are insufficient to regulate caloric intake (7–11). Even with knowledge, consumers are not always able to act in their own long-term health interests. A great deal of evidence has emerged to indicate that people's diets are largely influenced by the relative availability of different food products, by marketing, and by other contextual factors of which individuals cannot be aware (12–14). Furthermore, research in behavioral economics suggest that agency and choice are subject to influences for which individuals lack insight and cannot avoid (15). This article considers why away-from-home foods may be an appropriate target for nutritional regulation.

Risk of diet-related chronic diseases

Historically, discoveries of nutrient-disease relationships led to population-level interventions such as fortification or enrichment of processed foods to prevent nutritional deficiency diseases. Table 2 provides a list of interventions that have altered the availability of nutrients in the food and water supply, indicating the beneficial role of controlling nutrient exposures. Several other nutrients that play a role in disease have been proposed as targets of regulation. Table 3a lists some examples of epidemiological studies that have identified links between excess sodium and hypertension (16); saturated fats and trans-fats and heart disease (17); sweetened beverages and diabetes (18); and deficiency in fiber and colon cancer (19).

Table 3b also provides the relative risk of environmental exposures already regulated. For example, the risk of getting lung cancer from exposure to second hand smoke is about the same as the risk associated with colorectal cancer and eating large amounts of red meat (20). The comparisons are noteworthy, particularly considering that the proportion of the population affected by dietary exposures may be far greater than those affected by particular environmental toxins for which regulations have already been imposed.

Physiological regulation of energy balance and diet is limited

Humans do not appear to have regulatory mechanisms that tightly link eating behaviors to weight (21). In studies where individuals were routinely provided with excess calories, they typically eat more than when provided with fewer calories (10, 11, 22–24); they do not naturally compensate by eating less at subsequent meals and continue to overconsume energy over long periods of time (22, 25–27). Furthermore, evidence suggests the capacity

to absorb and/or store particular nutrients is limited (28). Water-soluble vitamins like C and the B vitamins are not stored in the body and need to be consumed daily; protein eaten to excess is simply excreted and not stored. If people fail to consume a reasonable proportion of the recommended daily servings of nutrient dense foods (such as fruits and vegetables) at one meal, the likelihood they will compensate at a later meal or on a subsequent day is small.

Cognitive abilities to control over-consumption are limited

Although there appears to be widespread popular understanding of the harms of overconsumption and considerable motivation to regulate diet and lose weight, most people fail to achieve their weight goals (29). Limited cognitive capacity contributes to this problem: people do not accurately recall what or how much they have eaten at an earlier time; individuals usually underreport their caloric intake by 300 to 900 calories. (30) People also have a limited ability to make reasoned decisions (31–33), which are slow and thoughtful, and instead usually rely on heuristic or automatic pathways that do not require cognitive processing (34, 35). People tend to choose less healthy foods and eat more when using heuristic processing, which occurs when their minds are pre-occupied (36) and when they are distracted (37, 38), or as a consequence of having recently made difficult decisions (39). In these cases, people are usually unaware of the quantity consumed (40, 41). The tendency to rely either on heuristic or cognitive processing is governed in part by glucose levels in the brain. When glucose levels are low, people are more likely to resort to heuristic or automatic decision-making approaches, and perform worse on tasks that require thoughtful cognitive reasoning (32). For this reason, multiple studies have shown that children who have eaten breakfast before school perform better on tests of cognitive capacity than students who skipped breakfast (42). Therefore, after three to five hours of fasting, automatic choices leaning towards foods that are high in fat and added sugar are likely to predominate in away-from-home settings. Moreover, many foods, especially those high in fat and sugar, are tempting and overwhelm satiety control mechanisms (43).

Environmental context influences food choices

While neither physiologic nor cognitive processes prevent over-consumption, several actionable environmental factors, including portion size and food presentation, do appear to influence food choices and energy and nutrients consumed. Experimental studies show that people will increase their consumption in proportion to the amount they are served (26, 44). Notably, there has been a clearly documented increase in portion sizes over the past three decades in both food prepared at home and away-from-home (45). Consumers of away-from-home foods have generally failed to adjust to these increases (e.g., by consuming only a portion of what is served and leaving the rest, splitting the meal with another diner, taking the remainder with them, or compensating by eating less at a later time). The caloric content of a single restaurant meal may equal or exceed the daily requirements of the average person (45–47).

In restaurants, menu design also can influence people's food choices, often guiding customers to choose the highest profit items (48, 49). Menu design experts claim menus contain a "sweet spot," a position on the menu to which the eye is drawn, and that whatever item is described in that position will be chosen with greater frequency than if the same food were placed at the bottom of the menu (48). Controlled studies supported this notion, in that simply changing the placement of various items on a menu resulted in a significant difference in the items chosen (49, 50).

Individuals are usually unaware of the contextual influences acting on their food choice and may misinterpret why they may be making poor decisions in this regard, even when they

would prefer to choose foods that were consistent with their overall long term dietary objectives (51). People often assume their choices are the consequence of character flaws, low willpower, or moral weakness, and suffer great remorse over what they perceive to be their lack of self-control, when the primary determinant of their choice is usually the context in which the information is presented (52).

Away-from-home foods are nutritionally inferior to foods eaten at home

Away-from-home foods are generally inferior to what is consumed at home, with higher amounts of salt, fat, and calories and lower amounts of fruit, vegetables, and the individual nutrients iron, calcium and fiber (53–55). Another study showed consumption of vegetables in restaurants by youth was directly related to their availability (56). In a study of over 200 restaurants in four neighborhoods in Atlanta, GA, Saelens and colleagues found that the majority of restaurants did not serve non-fried vegetables, although sit-down restaurants were twice as likely (53% versus 26%) to have non-fried vegetables as fast food venues (57). Fewer than 12% of either type of restaurants had any fruits on the menu. Multiple studies have confirmed that frequency of eating away-from-home is associated with the risk for overweight (58–61).

Frequent eating away-from-home has become a cultural norm

If eating away-from-home were limited to an occasional meal, it would not make a significant difference in one's overall health. Today, food away-from-home comprises a substantial share of all food consumed. In the United States, from 1962 to 2002, spending on food away-from-home rose from 27 percent to 46 percent of all food dollars. (62). About one third of the average person's daily calories now come from food purchased for consumption outside the home (53). Data from the 1999–2000 NHANES also indicate the average person eats commercially prepared food 2.77 times per week. Nearly 20% of males and 10% of females eat commercially prepared foods 6 or more times a week, while 55.9% of Americans eat out 2 or more times per week and fewer than 24% eat out less than once per week (63).

While it has been argued that individuals are not forced to frequent restaurants and they do so of their own volition, and that once in a restaurant, they are free to choose the foods they want, this is not necessarily the case for everyone in today's environment. Limited time, competing work, and parental duties often make eating out unavoidable. Many business meetings are conducted in restaurants over meals, and failing to participate would be a detriment to an individual's ability to compete professionally. Many social gatherings occur in restaurants and failing to attend would isolate people from families and friends. Many people must use restaurants when they travel for business and many have other justifiable reasons why they cannot prepare their own food at home, and some simply lack cooking facilities or skills. Furthermore, in many areas of the country, the small number and variety of away-from-home food outlets limits choice.

Current efforts at regulation of away-from-home foods

Environmental regulations can potentially address any aspect of the quality, source, storage, preparation, marketing, and disposal of food prepared outside the home. Currently, national food safety regulations protect animal and plant health, limit pesticide residues, and monitor safe food processing and storage. Local regulations typically require food to be from an approved source, prepared in an inspected kitchen and stored and served in a manner that prevents communicable disease.

In spite of the burgeoning evidence for diet-related chronic diseases, few regulatory efforts have targeted nutritional content or portion size. Efforts include point of sale calorie menu labeling now required nationally under Federal legislation, the ban on trans-fats in away-from-home foods in both California and NYC, and the toy ordinance governing the content of “Kid’s Meals” sold with free toys in San Francisco and Santa Clara. While these examples reflect the growing interest in societal level action, the interventions are individually and collectively insufficient to address the broad scope of dietary related chronic diseases. They do illustrate several general issues in regulation of away-from-home foods.

Menu labeling

Point of sale calorie labeling in national chain restaurants has been promoted to address the people’s limited knowledge about nutrient content. Menu labeling follows in a tradition of right-to-know laws and consumer product labeling and does not restrict individual agency or food choices offered by restaurants. Theoretically, if people know the caloric contents of menu items, they may be able to make choices that are protective of health. Yet evidence for the effectiveness of menu labeling is limited. A few studies have suggested a benefit (64, 65) (66), while others have not (67–69). One study even showed that menu labeling resulted in orders of higher caloric foods, opposite of what was anticipated (50). Even if menu labeling can reduce calorie consumption for a subset of consumers, its scope is unlikely to reach to the breadth of food choices important for dietary health. The new health care reform menu labeling law applies only to franchises with 20 or more outlets, excluding the vast majority of food consumed away-from-home. In NYC, 89% of food outlets are not subject to menu-labeling (70). Finally, menu labeling may be undermined by restaurants in several ways, for example, if they differentially promote or discount higher calorie items (71).

Other menu-labeling schemes have been developed under a variety of voluntary initiatives. The American Heart Association recognizes and promotes certain low fat foods. The State of Colorado has a “Smart Meal” program, that provides a seal of approval to restaurants meeting specific criteria, such as offering at least two meals that include at least two servings or more of beans, whole grains, fruits, and vegetables and have 700 or fewer calories (72). San Antonio sponsors the “Por Vida!” program, which requires that items not exceed maximal standards for calories, fat and sodium. For their participation, restaurants get free advertising and artwork. However, the impact of these methods has not been formally evaluated.

Banning transfat

The ban on trans-fat follows a traditional paradigm in environmental regulation—the elimination and substitution of a single hazardous constituent in a manufacturing process or product. Trans-fat conforms to this paradigm because there is a clear documentation of harm (73) and substitutes exist.

Ordinance regulating nutrient content of meals with toy incentives

In 2010 the Boards of Supervisors in both San Francisco and Santa Clara County adopted legislation requiring that meals that include free incentive items like toys meet certain nutritional standards, including limits on calories and sodium (74). The San Francisco standards additionally require a minimum number of servings of fruits and vegetables. These ordinances set a national precedent in establishing an explicit regulatory standard for meals sold in the private sector but made the achievement of these standards conditional on free incentives. The response of some chain restaurants including Burger King and McDonald’s, has been to simply charge for the toy rather than reformulate their meals; however, other

restaurants are seeking to achieve the meal standards. Requiring the achievement of nutritional standards for all marketed children's meals, regardless of the presence of an incentive, may have been a more effective policy to achieve the public health goal.

A model set of performance standards for foods consumed away-from-home

While there are a number of local efforts to promote more healthful restaurant offerings, currently no national guidelines address nutritional standards in away-from home settings, other than in public schools. Here, we offer five standards applicable to all restaurants to meet this need : 1) Provide one or more meal options that provides 25%–35% of daily nutrients recommended by the Dietary Guidelines for Americans (DGA), (also the basis of standards for Federally subsidized school lunches), 2) Offer foods in portion sizes that are consistent with the serving sizes recommended in the DGA (75, 76), 3) Label all foods that do and do not conform to the DGA recommended quantity and quality with appropriate symbols and icons, 4) Preferentially position information about the healthiest options on menus and menu boards where customers would notice them first, and 5) Price meals that meet nutritional performance standards no higher than the average of other meals offered in the same venue (Table 4). As a starting point, we discuss each one below.

1. Provide at least one meal option that provides 25%–35% of recommended daily nutrients

The USDA DGA, which represents a scientific consensus on a balanced and healthy diet, provides clear criteria for judging nutritional quality. Meals conforming to the DGA could be designed to include up to one-third of recommended amounts of key nutrients needed on a daily basis and based on an adult energy demand of 2000 kcal/day. The IOM already defines the quality of meals and snacks that children should receive in school based upon child age, which can serve as examples for adult guidelines (77). Regular consumption of meals that provide 25%–35% of recommended daily nutrients should neither cause nor exacerbate most chronic diseases, nor require significant compensation in subsequent meals. As the average number of daily eating occasions has grown to more than five per day (78, 79), a meal that has as its upper limit one third of the day's nutrients and calories may still exceed the amount needed, but it would at least make it easier for individuals to keep track of their consumption. Every food establishment that serves full meals should be able to offer at least one option that meets the following criteria: Contains at least 1 cup fruit (without added sugar), at least 1 cup vegetables (without added fat), no more than 1–3 ounces of a whole grain product, no more than 3 ounces of meat or meat equivalent, less than 500 mg sodium, less than 30% total fat, < 10% saturated fat, AND is less than 700 calories. Restaurants could augment these standard meals intended for weight maintenance by also offering meals that are 500 calories or less intended for those people trying to lose weight (or for people of short stature, who require fewer calories to stay in energy balance). Some meal options could also be free of red meat and some completely vegetarian.

2. Offer foods in portion sizes that are consistent with the serving sizes recommended in the Dietary Guidelines for Americans

Since people cannot easily judge what constitutes an appropriate individual portion (11, 25, 80), the default portion size for all menu items intended for one person should be served in the amount that is recommended by the DGA as a single serving during a standard meal. For example, a serving of meat is 2–3 oz., a serving of grains is 1 oz., and serving of leafy vegetables is 1 cup. These proposed standards should not interfere with consumers' freedom to order what they choose, and they would be free to order multiple portions. Regulating portion sizes has a precedent in state laws that require that alcohol be served in standard

portions; twelve states also require that larger portions of alcohol carry a higher price (81). Standardized portions allow people to gauge their consumption and prevent inebriation.

3. Nutrition profiling: Label all foods that do and do not conform to the DGA recommended quantity and quality with appropriate cautionary symbols and icons

Because people attend more to pictures and symbols than to numbers (82), universal signs and symbols identifying meals and a la carte items as meeting dietary guidelines are likely to be more useful to people to both gauge and control consumption. This approach avoids the need to access detailed nutritional information or make comparisons among numerous offerings. Labels could encourage the choice of DGA conforming meals and cautionary labels could identify items that substantially outside the range of recommended portion or nutrient requirements. For example, a steak house serving 12-ounce steaks would provide a label or symbol informing customers that this item represented more than twice the recommended daily amount of meat. Signs and warnings may not always have the intended effects, as some studies have shown that labeling foods as healthy can discourage their selection (83, 84). Nutrition profiling using traffic light signals was found to help consumer better distinguish among healthy and unhealthy items (82). Since we don't know which symbols might encourage or discourage healthy choices, research is needed to empirically test the effects of signs and symbols that can serve as heuristics for better rapid decision-making.

4. To preferentially position the healthiest options where customers would notice them first

Consumers are influenced in their decision-making by the way information is presented (15), so standards should also cover the order and the context of menu items. Meals identified as meeting the performance standards should be given preferential visibility on menus (e.g. seen first, using larger or enhanced fonts). Further research is needed to divine the principles governing how people read menus and which aspects draw the most attention. Precedent also exists for disclosing nutrient content and warning consumers about product hazard and regulations further define the location of nutrition labels, health claims, and warnings (85, 86).

5. To price meals that meet performance standards no higher than the average of other meals offered in the same venue

Cost is an important determinant of consumer choice (87) and performance standards for healthy meals should take this into account. Given that these meals are likely to be smaller than the standard meals the restaurant already offers, restaurants should be able to make these meals affordable to customers. A reasonable starting point is that conforming meal items should not exceed the average cost of all other meal items. In the US, there is a precedent for establishing price ceilings as a part of rent control and as a way to control the costs of certain utilities (88). In the setting of a restaurant, keeping the price of the standard-conforming meals in line with other items will make it possible for most consumers to afford them.

Incremental implementation and adoption of performance standards

A number of steps to advance these performance standards in the away-from-home food industry will be necessary, including: 1) building a consensus on feasible standards; 2) developing product and business labeling; 3) creating certification and incentive programs; 4) evaluation, and 5) regulation. The process would need to build legitimacy and buy-in for the standards, taking into account the DGA, marketing and consumer behavior research,

reasonable feasibility concerns, and the experience of industry members, some of whom are already marketing healthy meal choices.

Health labeling for away from home food could borrow lessons from clear successes of government sponsored eco-labeling programs for other consumer products (See Table 5). Eco-labels provide a simple signal to consumers that products have met environmental, social and other sustainability standards of verifying agencies, and many eco-labeling programs have been developed and managed by federal agencies. For example, the U.S. Environmental Protection Agency (EPA) Design for the Environment (DfE) logo consumers can choose household cleaners meeting standards for minimal toxicity; U.S. EPA's Energy Star label identifies energy efficient electronics and appliances; and USDA's certified organic label identifies food grown without chemicals. In each of these cases, eco-labeling and certification by an authoritative agency has contributed to the growth of markets for sustainable products.

Moving from Voluntary Programs to Regulatory Mandates

Formal regulations based on these standards would require information on their feasibility and efficacy that would be learned through experimentation and evaluation. At present, we cannot judge the effectiveness of performance standards, given they have never been implemented. Furthermore, efficacy data need not be perfect to justify regulatory interventions. Other novel environmental policy interventions have been justified primarily because of a need to act on a significant and avoidable public hazard. Like any novel intervention, the introduction of new performance standards must be monitored and adapted as needed based upon evaluation findings. Monitoring would lead to understanding of what works, what needs to be improved, and would also identify externalities and gaps in regulations. Adopting performance standards as a compulsory mandate nationwide will be a long term and likely contentious effort, requiring careful assessment of the relative benefits and harms of regulatory initiatives.

The value of a regulatory approach to achieving the performance standards would be both enforceability and an extended scope of application. Regulation also creates a level playing field which prevents some businesses from exploiting competitive advantages, if any, of non-participation.

Infeasibility is a common challenge levied at all new regulations, yet regulations have to balance the needs of industry and public welfare. We do not believe the proposed standards would be uniquely challenging for an industry that already has proven its ability to adhere to complex regulations regarding hygienic practices, building and safety codes. A typical annual restaurant inspection evaluates compliance on more than 100 practices covering food safety, food sources, quality, preparation, storage, disposal, equipment, etc.(89). Although restaurateurs may claim they lack resources to comply with potential standards, the proposed standards for portion control, for example, can be met by following a standard recipe and using measuring cups and a kitchen scale. Nutritional quality can be ascertained through easily accessible web based tools that analysis of recipes and meals based upon their ingredients (90, 91). Many restaurants and most chains already do nutritional analysis (92). Restaurants can develop a library of recipes that are consistent with performance standards. Public technical assistance could support menu analysis and conformance. Meals and menu items meeting standards could be shared publicly on the internet or in pamphlet form.

Environmental health bureaucracies already exist to ensure restaurants meet exacting requirements for food safety. Ensuring compliance with performance standards would not mean evaluating every restaurant and every meal item everyday. Effective compliance in most regulatory sectors may be achieved with a mix of reporting requirement and randomly

selected, targeted, and complaint-based inspections. Existing restaurants licensing fees could be used or increased to cover additional compliance costs.

Some may argue that performance standards would undermine individual responsibility for their health or would restrict free consumer choice. We are not suggesting reducing consumer choice whatsoever; rather, performance standards seek to change industry behavior and thus the environment of information and choices offered to individuals. Both individual responsibility and freedom of choice are enhanced by the provision of healthier meal options and a clear, understandable designation of the health risk or benefit of all choices. Under performance standards people would still be free to order what they want and order as many portions as they want.

Conclusion

It is critical to acknowledge the magnitude of the challenge for diet-related disease prevention and the limited scope and success of societal efforts to date. No population-level interventions have yet demonstrated effectiveness for reducing obesity. While there is clear urgency in the response to rapid rise in obesity, the development and advancement of successful interventions require both experimentation and evaluation as well as participation from the away-from-home food industry. Obesity and other diet-related diseases make dietary regulations for away-from-home foods a matter of shared health protection similar to interventions like fluoride supplementation and pesticide regulation.

Advancing performance standards first as a public-private partnership can avoid oppositional tactics, legal battles, limit the need for costly governmental compliance activities, and generate industry leadership and creativity for more nutritious food. Fundamentally, given the clear interest in controlling obesity, there is no apparent reason why providing healthy away-from-home foods cannot be a productive venue for market competition. Ultimately, adopting and enforcing stricter guidelines regulating away-from-home foods will not preclude our choosing or enjoying restaurant meals or limit individual freedoms. Instead, it will guide food outlets to routinely offer foods that promote our long-term health.

Acknowledgments

This paper was supported in part by NHLBI grant R01HL71244

References

1. Swinburn B, Sacks G, Ravussin E. Increased food energy supply is more than sufficient to explain the US epidemic of obesity. *The American Journal Of Clinical Nutrition*. 2009; 90(6):1453–1456. [PubMed: 19828708]
2. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *Jama*. 2004; 291(10):1238–1245. [PubMed: 15010446]
3. Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates. *Health Affairs*. 2009; 28(5):w822–w831. [PubMed: 19635784]
4. Sturm R, Cohen DA. Zoning for health? The year-old ban on new fast-food restaurants in South LA. *Health Affairs (Project Hope)*. 2009; 28(6):w1088–w1097. [PubMed: 19808703]
5. Ruggless, R. Calif. city links building permits to nutrition. *Nation's Restaurant News*; 2010. http://findarticles.com/p/articles/mi_m3190/is_22_44/ai_n56287820/
6. Richards, EP.; Rathbun, KC. *Public Health Law*. 14th ed.. Stamford, Ct: Appleton & Lange; 1998.
7. Rolls BJ, Morris EL, Roe LS. Portion size of food affects energy intake in normal-weight and overweight men and women. *Am J Clin Nutr*. 2002; 76(6):1207–1213. [PubMed: 12450884]

8. Rolls BJ, Rowe EA, Rolls ET. How sensory properties of foods affect human feeding behavior. *Physiol Behav.* 1982; 29(3):409–417. [PubMed: 7178247]
9. Rolls BJ, Van Duijvenvoorde PM, Rowe EA. Variety in the diet enhances intake in a meal and contributes to the development of obesity in the rat. *Physiol Behav.* 1983; 31(1):21–27. [PubMed: 6634975]
10. Wansink B, Kim J. Bad popcorn in big buckets: portion size can influence intake as much as taste. *J Nutr Educ Behav.* 2005; 37(5):242–245. [PubMed: 16053812]
11. Wansink B, Painter JE, North J. Bottomless bowls: why visual cues of portion size may influence intake. *Obes Res.* 2005; 13(1):93–100. [PubMed: 15761167]
12. Milliman RE. Using background music to affect the behavior of supermarket shoppers. *Journal of Marketing.* 1982; 46(3):86–91.
13. Milliman RE. The influence of background music on the behavior of restaurant patrons. *Journal of Consumer Research.* 1986; 13(2):286–289.
14. Curhan RC. The relationship between shelf space and unit sales in supermarkets. *Journal of Marketing Research.* 1972; 9:406–412.
15. Thaler, R.; Sunstein, C. *Nudge.* New York: Penguin Group; 2008.
16. He FJ, MacGregor GA. A comprehensive review on salt and health and current experience of worldwide salt reduction programmes. *Journal Of Human Hypertension.* 2009; 23(6):363–384. [PubMed: 19110538]
17. Dall TM, Fulgoni VL, Zhang Y, Reimers KJ, Packard PT, Astwood JD. Potential health benefits and medical cost savings from calorie, sodium, and saturated fat reductions in the American diet. *American Journal Of Health Promotion: AJHP.* 2009; 23(6):412–422. [PubMed: 19601481]
18. Schulze MB, Manson JE, Ludwig DS, et al. Sugar-sweetened beverages, weight gain, and incidence of type 2 diabetes in young and middle-aged women. *JAMA.* 2004; 292(8):927–934. [PubMed: 15328324]
19. Pereira MA, O'Reilly E, Augustsson K, et al. Dietary fiber and risk of coronary heart disease: a pooled analysis of cohort studies. *Archives Of Internal Medicine.* 2004; 164(4):370–376. [PubMed: 14980987]
20. Huxley RR, Ansary-Moghaddam A, Clifton P, Czernichow S, Parr CL, Woodward M. The impact of dietary and lifestyle risk factors on risk of colorectal cancer: a quantitative overview of the epidemiological evidence. *International Journal Of Cancer. Journal International Du Cancer.* 2009; 125(1):171–180. [PubMed: 19350627]
21. Levitsky DA. The non-regulation of food intake in humans: hope for reversing the epidemic of obesity. *Physiol Behav.* 2005; 86(5):623–632. [PubMed: 16263145]
22. Rolls BJ, Roe LS, Kral TV, Meengs JS, Wall DE. Increasing the portion size of a packaged snack increases energy intake in men and women. *Appetite.* 2004; 42(1):63–69. [PubMed: 15036784]
23. Wansink B, Cheney MM. Super Bowls: serving bowl size and food consumption. *Jama.* 2005; 293(14):1727–1728. [PubMed: 15827310]
24. Orlet Fisher J, Rolls BJ, Birch LL. Children's bite size and intake of an entree are greater with large portions than with age-appropriate or self-selected portions. *Am J Clin Nutr.* 2003; 77(5):1164–1170. [PubMed: 12716667]
25. Levitsky DA, Youn T. The more food young adults are served, the more they overeat. *J Nutr.* 2004; 134(10):2546–2549. [PubMed: 15465745]
26. Diliberti N, Bordi PL, Conklin MT, Roe LS, Rolls BJ. Increased portion size leads to increased energy intake in a restaurant meal. *Obes Res.* 2004; 12(3):562–568. [PubMed: 15044675]
27. Rolls BJ, Roe LS, Meengs JS. The effect of large portion sizes on energy intake is sustained for 11 days. *Obesity (Silver Spring).* 2007; 15(6):1535–1543. [PubMed: 17557991]
28. Madar Z, Thorne R. Dietary fiber. *Progress In Food & Nutrition Science.* 1987; 11(2):153–174. [PubMed: 2819947]
29. Wing RR, Phelan S. Long-term weight loss maintenance. *The American journal of clinical nutrition.* 2005; 82 Suppl(1):222S–225S. [PubMed: 16002825]

30. Subar AF, Kipnis V, Troiano RP, et al. Using intake biomarkers to evaluate the extent of dietary misreporting in a large sample of adults: the OPEN study. *Am J Epidemiol.* 2003; 158(1):1–13. [PubMed: 12835280]
31. Baumeister RF, Bratslavsky E, Muraven M, Tice DM. Ego depletion: is the active self a limited resource? *Journal of personality and social psychology.* 1998; 74(5):1252–1265. [PubMed: 9599441]
32. Masicampo EJ, Baumeister RF. Toward a physiology of dual-process reasoning and judgment: Lemonade, willpower, and expensive rule-based analysis. *Psychological Science.* 2008; 19(3): 255–260. [PubMed: 18315798]
33. Baumeister RF, Vohs KD, Tice DM. The strength model of self-control. *Current Directions in Psychological Science.* 2007; 16(6):351–355.
34. Kahneman D, Tversky A. Choices, Values, and Frames. *American Psychologist.* 1984; 39(4):341–350.
35. Laibson D, Zeckhauser R. Amos Tversky and the Ascent of Behavioral Economics. *Journal of Risk and Uncertainty.* 1998; 16(1):7–47.
36. Shiv B, Fedorikhin A. Heart and mind in conflict: The interplay of affect and cognition in consumer decision making. *Journal of Consumer Research.* 1999; 26(3):278–292.
37. Baumeister RF, Vohs KD. Self-regulation, ego depletion, and motivation. *Social and Personality Psychology Compass.* 2007; 1(1):115–128.
38. Jones N, Rogers PJ. Preoccupation, food, and failure: an investigation of cognitive performance deficits in dieters. *The International journal of eating disorders.* 2003; 33(2):185–192. [PubMed: 12616585]
39. Spears, D. Economic decision-making in poverty depletes behavioral control. CEPS Working Paper; Princeton: 2010.
<http://www.princeton.edu/ceps/workingpapers/213spears.pdf>
<http://www.princeton.edu/ceps/workingpapers/213spears.pdf>.
40. Bellisle F, Dalix AM. Cognitive restraint can be offset by distraction, leading to increased meal intake in women. *Am J Clin Nutr.* 2001; 74(2):197–200. [PubMed: 11470720]
41. Hetherington MM. Cues to overeat: psychological factors influencing overconsumption. *Proc Nutr Soc.* 2007; 66(1):113–123. [PubMed: 17343777]
42. Bellisle F. Effects of diet on behaviour and cognition in children. *Br J Nutr.* 2004; 92(Suppl 2):S227–S232. [PubMed: 15522161]
43. Volkow ND. This is your brain on food. Interview by Kristin Leutwyler-Ozelli. *Sci Am.* 2007; 297(3):84–85. [PubMed: 17784628]
44. Rolls BJ, Roe LS, Meengs JS. Larger portion sizes lead to a sustained increase in energy intake over 2 days. *J Am Diet Assoc.* 2006; 106(4):543–549. [PubMed: 16567150]
45. Nielsen SJ, Popkin BM. Patterns and trends in food portion sizes, 1977–1998. *JAMA : the journal of the American Medical Association.* 2003; 289(4):450–453. [PubMed: 12533124]
46. Young LR, Nestle M. The contribution of expanding portion sizes to the US obesity epidemic. *American journal of public health.* 2002; 92(2):246–249. [PubMed: 11818300]
47. Smiciklas-Wright H, Mitchell DC, Mickel SJ, Goldman JD, Cook A. Foods commonly eaten in the United States, 1989–1991 and 1994–1996: are portion sizes changing? *J Am Diet Assoc.* 2003; 103(1):41–47. [PubMed: 12525792]
48. Hedden, J. Maximize Menu Merchandising Power In: Restaurants USA. 1997.
<http://www.restaurant.org/business/magarticle.cfm?ArticleID=477>;
49. Dayan E, Bar-Hillel M. Nudge to nobesity II: Menu positions influence food orders. *Judgment and Decision Making.* 2011; 6(4):333–342.
50. Downs JS, Loewenstein G, Wisdom J. Strategies for Promoting Healthier Food Choices. *American Economic Review: Papers & Proceedings.* 2009; 99(2):159–164.
51. Vartanian LR, Herman CP, Wansink B. Are we aware of the external factors that influence our food intake? *Health Psychology: Official Journal Of The Division Of Health Psychology, American Psychological Association.* 2008; 27(5):533–538.

52. Kahneman D. A perspective on judgment and choice: mapping bounded rationality. *Am Psychol.* 2003; 58(9):697–720. [PubMed: 14584987]
53. Lin, BH.; Frazao, E. ERS/USDA. 1999. Away-from-home foods increasingly important to quality of American diet.
54. Rosenheck R. A systematic review of a trajectory towards weight gain and obesity risk. *Obes Rev.* 2008; 9(6):535–547. [PubMed: 18346099]
55. Todd, JE.; Mancino, L.; Biing-Hwan, Lin. The impact of food away from home on adult diet quality. 2010. <http://www.ers.usda.gov/Publications/ERR90/ERR90.pdf>
56. Edmonds J, Baranowski T, Baranowski J, Cullen K, Myres D. Ecological and socioeconomic correlates of fruit, juice, and vegetable consumption among African-American boys. *Prev Med.* 2001; 32(6):476–481. [PubMed: 11394951]
57. Saelens BE, Glanz K, Sallis JF, Frank LD. Nutrition environment measures study in restaurants (NEMS-R) - Development and evaluation. *Am J Prev Med.* 2007; 32(4):273–281. [PubMed: 17383558]
58. Ayala GX, Rogers M, Arredondo EM, et al. Away-from-home food intake and risk for obesity: examining the influence of context. *Obesity (Silver Spring, Md.).* 2008; 16(5):1002–1008.
59. McCrory MA, Fuss PJ, Hays NP, Vinken AG, Greenberg AS, Roberts SB. Overeating in America: association between restaurant food consumption and body fatness in healthy adult men and women ages 19 to 80. *Obes Res.* 1999; 7(6):564–571. [PubMed: 10574515]
60. Jeffery RW, French SA. Epidemic obesity in the United States: are fast foods and television viewing contributing? *American journal of public health.* 1998; 88(2):277–280. [PubMed: 9491022]
61. Hornick BA, Krester AJ, Nicklas TA. Menu modeling with MyPyramid food patterns: incremental dietary changes lead to dramatic improvements in diet quality of menus. *Journal Of The American Dietetic Association.* 2008; 108(12):2077–2083. [PubMed: 19027412]
62. Variyam, JN. Nutrition Labeling in the Food-Away-From-Home Sector: An Economic Assessment. 2005. <http://www.ers.usda.gov/publications/err4/err4.pdf>;
63. Kant AK, Graubard BI. Eating out in America, 1987–2000: trends and nutritional correlates. *Prev Med.* 2004; 38(2):243–249. [PubMed: 14715218]
64. Roberto CA, Larsen PD, Agnew H, Baik J, Brownell KD. Evaluating the impact of menu labeling on food choices and intake. *American Journal Of Public Health.* 2010; 100(2):312–318. [PubMed: 20019307]
65. Tandon PS, Wright J, Zhou C, Rogers CB, Christakis DA. Nutrition menu labeling may lead to lower-calorie restaurant meal choices for children. *Pediatrics.* 125(2):244–248. [PubMed: 20100765]
66. Bollinger, B.; Leslie, P.; Sorensen, A. Calorie Posting in Chain Restaurants. 2010. <http://www.gsb.stanford.edu/news/StarbucksCaloriePostingStudy.pdf>.
67. Harnack LJ, French SA. Effect of point-of-purchase calorie labeling on restaurant and cafeteria food choices: A review of the literature. *The International Journal Of Behavioral Nutrition And Physical Activity.* 2008; 5:51–51. [PubMed: 18950529]
68. Harnack LJ, French SA, Oakes JM, Story MT, Jeffery RW, Rydell SA. Effects of calorie labeling and value size pricing on fast food meal choices: Results from an experimental trial. *The International Journal Of Behavioral Nutrition And Physical Activity.* 2008; 5:63–63. [PubMed: 19061510]
69. Elbel B, Kersh R, Brescoll VL, Dixon LB. Calorie Labeling And Food Choices: A First Look At The Effects On Low-Income People In New York City. *Health Affairs.* 2009; 28(6):w1110–w1121. [PubMed: 19808705]
70. Farley, T. personal communication, April, 2010. 2010.
71. Variyam, JN. Nutrition Labeling in the Food-Away-From-Home Sector An Economic Assessment. 2005. <http://www.ers.usda.gov/publications/err4/err4.pdf>;
72. Colorado's Smart Meal™ Restaurant Program. 2011. <http://www.smartmealcolorado.com/home/about/background-history.aspx>.
73. Kummerow FA. The negative effects of hydrogenated trans fats and what to do about them. *Atherosclerosis.* 2009; 205(2):458–465. [PubMed: 19345947]

74. Otten, JJ.; Hekler, EB.; Krukowski, RA., et al. Food Marketing to Children Through Toys Response of Restaurants to the First U.S. Toy Ordinance. 2011. http://www.ajpmonline.org/webfiles/images/journals/amepre/AMEPRE_3267-stamped.pdf. AJPM online
75. USDA. Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010. 2010. <http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm>.
76. USDHHS. Dietary Guidelines for Americans, 2005. Washington DC: USDHHS; 2005. Report No.: Stock Number 001-000-04719-1).
77. IOM. Nutrition Standards for Foods in Schools:Leading the Way Toward Healthier Youth. Washington, D.C.: THE NATIONAL ACADEMIES PRESS; 2007.
78. Kant AK, Graubard BI. Secular trends in patterns of self-reported food consumption of adult Americans: NHANES 1971–1975 to NHANES 1999–2002. The American Journal Of Clinical Nutrition. 2006; 84(5):1215–1223. [PubMed: 17093177]
79. Popkin BM, Duffey KJ. Does hunger and satiety drive eating anymore? Increasing eating occasions and decreasing time between eating occasions in the United States. Am J Clin Nutr. 2010; 91(5):1342–1347. [PubMed: 20237134]
80. Levitsky DA, Obarzanek E, Mrdjenovic G, Strupp BJ. Imprecise control of energy intake: absence of a reduction in food intake following overfeeding in young adults. Physiol Behav. 2005; 84(5): 669–675. [PubMed: 15885242]
81. NHTSA. Preventing Over-consumption of Alcohol – Sales to the Intoxicated and “Happy Hour” (Drink Special) Laws. 2005. <http://www.nhtsa.dot.gov/people/injury/alcohol/PIREWeb/images/2240PIERFINAL.pdf>;
82. Jones G, Richardson M. An objective examination of consumer perception of nutrition information based on healthiness ratings and eye movements. Public Health Nutrition. 2007; 10(3):238–244. [PubMed: 17288620]
83. Wilcox K, Vallen B, Block L, Fitzsimons GJ. Vicarious Goal Fulfillment: When the Mere Presence of a Healthy Option Leads to an Ironically Indulgent Decision. Journal of Consumer Research. 2009; 36(3):380–393.
84. Raghunathan R, Walker RE, Hoyer WD. The Unhealthy=Tasty Intuition and Its Effects on Taste Inferences, Enjoyment, and Choice of Food Products. Advances in Consumer Research. 2006; 33(1):450–451.
85. Pomeranz JL, Teret SP, Sugarman SD, Rutkow L, Brownell KD. Innovative legal approaches to address obesity. The Milbank Quarterly. 2009; 87(1):185–213. [PubMed: 19298420]
86. Pomeranz JL, Brownell KD. Legal and public health considerations affecting the success, reach, and impact of menu-labeling laws. American Journal Of Public Health. 2008; 98(9):1578–1583. [PubMed: 18633081]
87. Raper KC, Wanzala MN, Nayga RM Jr. Food Expenditures and Household Demographic Composition in the US: A Demand Systems Approach. Applied Economics. 2002; 34(8):981–992.
88. Davis, LW.; Kilian, L. The Allocative Cost of Price Ceilings in the U.S. Residential Market for Natural Gas. 2010. <http://faculty.haas.berkeley.edu/ldavis/ng.pdf>
89. CountyofLosAngeles. RETAIL FOOD INSPECTION GUIDE. In: Health, E., editor. Los Angeles: 2007.
90. Recipe nutrition analysis. 2011. http://www.menucalc.com/?gclid=CNqwrNOTx6YCFcVOHAod_A8w3w.
91. Food finder nutrition calculator. 2011. <http://recipenutrition.com/>.
92. Food & Diet In Diabetes. 2011. http://www.diabetesnet.com/diabetes_food_diet/fast_foods.php#axzz1BW7goMBE.
93. Johnston RB Jr. Will increasing folic acid in fortified grain products further reduce neural tube defects without causing harm?: consideration of the evidence. Pediatric Research. 2008; 63(1):2–8. [PubMed: 18043498]
94. CDC. Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States. MMWR. 2001; 50(RR14):1–42.
95. Pischon T, Boeing H, Hoffmann K, et al. General and abdominal adiposity and risk of death in Europe. The New England Journal Of Medicine. 2008; 359(20):2105–2120. [PubMed: 19005195]

96. Sun Q, Ma J, Campos H, et al. A prospective study of trans fatty acids in erythrocytes and risk of coronary heart disease. *Circulation*. 2007; 115(14):1858–1865. [PubMed: 17389261]
97. Batty GD, Kivimaki M, Smith GD, Marmot MG, Shipley MJ. Obesity and overweight in relation to mortality in men with and without type 2 diabetes/impaired glucose tolerance: the original Whitehall Study. *Diabetes Care*. 2007; 30(9):2388–2391. [PubMed: 17623818]
98. Fung TT, Willett WC, Stampfer MJ, Manson JE, Hu FB. Dietary patterns and the risk of coronary heart disease in women. *Archives Of Internal Medicine*. 2001; 161(15):1857–1862. [PubMed: 11493127]
99. Law MR, Morris JK. By how much does fruit and vegetable consumption reduce the risk of ischaemic heart disease? *European Journal Of Clinical Nutrition*. 1998; 52(8):549–556. [PubMed: 9725654]
100. Park Y, Hunter DJ, Spiegelman D, et al. Dietary fiber intake and risk of colorectal cancer: a pooled analysis of prospective cohort studies. *JAMA: The Journal Of The American Medical Association*. 2005; 294(22):2849–2857. [PubMed: 16352792]
101. Schulze MB, Manson JE, Ludwig DS, et al. Sugar-sweetened beverages, weight gain, and incidence of type 2 diabetes in young and middle-aged women. *JAMA: The Journal Of The American Medical Association*. 2004; 292(8):927–934. [PubMed: 15328324]
102. Halton TL, Willett WC, Liu S, Manson JE, Stampfer MJ, Hu FB. Potato and french fry consumption and risk of type 2 diabetes in women. *The American Journal Of Clinical Nutrition*. 2006; 83(2):284–290. [PubMed: 16469985]
103. Boffetta P, Nyberg F. Contribution of environmental factors to cancer risk. *British Medical Bulletin*. 2003; 68:71–94. [PubMed: 14757710]
104. CDC. Lung Cancer Statistics. CDC. 2005. <http://www.cdc.gov/cancer/lung/statistics/index.htm>;
105. Bates MN, Smith AH, Cantor KP. Case-control study of bladder cancer and arsenic in drinking water. *American Journal Of Epidemiology*. 1995; 141(6):523–530. [PubMed: 7900719]
106. CDC. United States Cancer Statistics (USCS). 2005. <http://wonder.cdc.gov/controller/datarequest/D40>;

Table 1

Recent Local and Industry Initiatives to Encourage Healthy Away-from-home Food Choices

Initiative	
Colorado's Smart Meals Voluntary recognition program for restaurant meals	<ul style="list-style-type: none"> ■ Two servings or more of beans, whole grains, fruits, and vegetables. May substitute one serving for a serving of low-fat or fat-free milk or equivalent milk product (<i>only one serving for a side dish</i>) ■ 700 or fewer calories (<i>300 calories for a side dish</i>) ■ 30 percent or less of total calories from fat or 23 grams or less of total fat (<i>10 grams for a side dish</i>) ■ 10 percent or less of calories from saturated fat or 8 grams or less of saturated fat (<i>3 grams for a side dish</i>) ■ 0.5 grams or fewer of trans fat (<i>no added or artificial trans fat</i>) ■ 1,350 mg or fewer of sodium (<i>650 mg for a side dish</i>) ■ Participating restaurants are required to have at least two qualifying menu items
San Antonio's "Por Vida" Initiative Voluntary recognition program for restaurant meals	<ul style="list-style-type: none"> • 700 Total Calories • 23 g Total Fat • 8 g Saturated Fat • 0.5 g Trans-fat • 750 mg Sodium • No Fried Food
Watsonville Healthy Eating Options Ordinance City law specifying conditions of permit approval	<p>Restaurant must have 6/19 point; 2 points for any of the following: At least four choices of fruits or vegetables prepared in a low fat way, Water free of charge, Meat, fish, poultry, or meat alternative with visible fat removed and prepared in a low fat way, Calorie information visible at the point of purchase or provide healthier option stickers on the menu</p> <p>1 point for any: Fruits or vegetables as a substitute for less healthy side dishes such as fries, At least one fat free or low fat salad dressing, Skim or 1% milk, Whole grain bread instead of white bread, offer at least one healthier dessert option (fruit), At least one vegetarian dish not exceeding 500 calories, Butter, margarine, sour cream, salad dressing, or mayonnaise on the side or not at all, Smaller portions or half portion meals at a lower cost and allowing customers to split a meal, Training for staff members about knowing the menu thoroughly, including portion sizes, ingredients and preparation methods, Corn tortillas instead of flour tortillas, Whole beans instead of refried beans</p>
San Francisco Nutritional Standards for Restaurant Food Sold Accompanied by Toys City law	<ul style="list-style-type: none"> • 600 Total Calories • 35% Total Fat • 10% Saturated Fat • 0.5 g Trans-fat • 640 mg Sodium • ½ cup Fruit • ¾ cup Vegetable • No beverage with >35% calories from fat or >10% calories from caloric sweeteners

Table 2

Health Problems Associated with Food Consumption

Conditions where environmental interventions changed nutrient exposures to promote health			
<i>Condition</i>	<i>Missing nutrient</i>	<i>Action taken</i>	<i>Consequence</i>
Goiter	Lack of Iodine	Iodine added to salt	Prevents goiter and mental retardation, US adopted salt iodization in 1924
Neural tube defects (NTD)	Lack of folate	Enrichment of flour;	Increasing folate to 140 micrograms reduced NTD by 27% (93)
Dental Caries	Lack of fluoride	Fluoride added to water	Reduction in cavities by 50–60% in children (94). The prevented fraction for water fluoridation was 27.2% (95% CI, 19.4–34.3%). adults
Growth, Anemia, Mortality	Lack of, niacin, thiamine, riboflavin, folic acid, iron	Enrichment of flour	Flour enrichment credited with increased height of Americans, reduced anemia, and greater longevity

* banned in a limited number of localities

Table 3

a. Conditions where away-from-home exposures that increase their risk are not uniformly regulated			
<i>Disease</i>	<i>Toxin/Nutrient/condition causing disease</i>	<i>Relative risk</i>	<i>Prevalence/Incidence</i>
Total Mortality	Obesity; (waist-to hip ratio) Men Women Excess refined grains	2.0, 1.8 (95) ¹ 1.16 ²	2.4 million
Coronary Artery disease	Transfats* Obesity Western style diet (women) Dietary fiber Fruits and vegetables	1.23 (96) ³ 1.28 ⁴ (97) 1.46 (98) ⁵ 0.86 (19) ⁶ 0.85 (99) ⁷	12 million (17)
Hypertension	Excess Salt; Lack of whole grains	62% of strokes 49% of CHD (16)	42 million (17)
Cancers	Too much red meat Insufficient fiber	1.14–1.21 (20) 1.18 (100) ⁸	12 million (17) 141,405 with colon cancer
Diabetes	Sugar sweetened beverages; French fries	1.83 (101) ⁹ 1.16 (102) ¹⁰	14.5 million (17)

b. Conditions where away-from-home exposures are currently regulated; exposure reduced			
<i>Disease</i>	<i>Toxin/Nutrient/condition causing disease</i>	<i>Relative risk</i>	<i>Prevalence/Incidence</i>
Total Mortality	Particulate air pollution (PM 2.5)	1.10 ¹¹	2.4 million
Lung cancer	Second hand smoke	1.13–1.47 (103) ¹²	196,687 (104)
Bladder cancer	Arsenic in drinking water	1.14 (105)*	61,449 (106)

¹For highest quintile

²Multivariate adjusted hazard rate ratio, 5th quintile of consumption

³For every 2% energy intake from transfat

⁴Overweight compared to normal, for CHD mortality

⁵Highest quintile of consumption

⁶For 10 g/day increment

⁷For 90th percentile of consumption

⁸For less than 10g/day (11% of population)

⁹women drinking 1 daily compared to women drinking <1/month

¹⁰Eating fries twice a week

¹¹Per 10 µg/m³ increase in PM_{2.5}, Reference California Air Resources Board 2008

¹²Work place and spousal exposures. Respectively; about 3,000 cases attributable to environmental smoke annually

Table 4

Tentative Restaurant Performance Standards

Element	Performance Criteria
Provide at least one meal conforming to USDA DGA guidelines	<ul style="list-style-type: none"> • Identified meals would conform to the USDA DGA guidelines by containing no more than 25–35% of recommended daily nutrients for which over consumption creates harm, (e.g., calories, fats, sodium) • Meals would contain at least 25% or more of nutrients (e.g. fiber) for which under consumption is associated with chronic diseases (e.g. contain at least one cup of vegetables and one cup of fruit)
To offer foods in portion sizes that are consistent with the serving sizes recommended in the Dietary Guidelines for Americans,	<p>The default portion size should conform to DGA. E.g.</p> <ul style="list-style-type: none"> • Fruits and vegetables are served in ½-1 cup portions • Meats served in portions 5.5 oz. • Grains served in 1 oz. portion sizes <p>Patrons can order more than 1 portion</p>
Label all foods that do and do not conform to the DGA recommended quantity and quality with appropriate cautionary symbols and icons	<ul style="list-style-type: none"> • Identify meals conforming to the US DGA guidelines • Identify meals that contain > 50% of recommended daily needs of calories, fats, sodium • Identify meals or menu items that contain greater than 100% of daily allowance of meats • Identify items high in solid oils, fats, and added sugars (SoFAS)
To preferentially place information about the healthiest options on menus and menu boards where customers would notice them first,	<ul style="list-style-type: none"> • Conforming items would be placed first, or featured on menu “sweet spot”
Competitively price conforming meals	<ul style="list-style-type: none"> • Average price of conforming meals should be not more than 100% of the average price of all meals on the menu

Table 5

Examples of Eco-labeling programs

Ecolabel	Products	Criteria	Certifying Organization
Design for Environment	Cleaning products, printing inks	Products contain least toxic chemicals	USEPA
Energy Star	Electronics, major appliances, heating and cooling systems	Products meet standards for energy efficiency	USEPA
USDA Certified Organic	Food	Produced without using most conventional pesticides; fertilizers made with synthetic ingredients or sewage sludge; bioengineering; or ionizing radiation; animals raised without no antibiotics or growth hormones.	U.S. Department of Agriculture
FairTrade	Food, Consumer Products	Product supports the sustainable development and empowerment of disadvantaged producers & workers	Fairtrade Labeling Organizations International (FLO)
FSC	Lumber	Product produced under sustainable forest management	Forest Stewardship Council
LEED	Residential and commercial buildings	Building includes best practices for energy savings, water efficiency, CO ₂ emissions reduction, improved indoor environmental quality, and stewardship of resources	US Green Building Council