Supplementary Table 4. Menu and Other Point-of-Sale Information on Calories and Nutrients

Author, y	Study Type	Population	Intervention/Evaluation	Findings
Seymour et al 2004[116]	Review of interventional studies to improve diet by changes in food availability, access, pricing, or point-of-purchase information in worksites, universities, grocery stores, and restaurants	A total of 38 intervention studies in adult populations, published between 1970 and June 2003	Point-of-purchase information on foods or beverages in worksites, universities, grocery stores, and restaurants	• Many interventions were not thoroughly evaluated or lacked important evaluation information, and direct comparison of studies across settings was not possible. • The authors concluded that worksite and university interventions (ie, "limited access" sites in which few other choices were available) had the greatest potential for success. Interventions in grocery stores appeared least effective. • Sustainability of diet changes was not addressed in these studies.
Bassett et al, 2008[114]	Observational, cross-sectional	N=7318 customers from 275 randomly selected restaurants in 11 fast-food chains in New York City	The authors randomly sampled a total of 300 chain restaurants from ≈1625 eligible locations from March to June 2007. Receipts of consenting customers were collected after their purchase, along with other self-reported information about the purchase. Calories were identified from an electronic database.	• The mean fast-food purchase contained 827 calories, and 34% of respondents purchased foods containing ≥1000 calories. • One chain (Subway) posted point-of-purchase calorie information. In comparison with the other 10 chains, Subway customers were more likely to report seeing calorie information (4% vs 32%, $P<0.001$). • Among Subway customers, those who reported seeing calorie information purchased 52 fewer calories than did other Subway customers ($P<0.01$).
Yamamoto et al, 2005[119]	Quasi-experimental comparison (pre- vs postintervention)	N=106 adolescents, age 11-18 y, students enrolled in band, orchestra, or tennis	Participants were shown menus with and without calorie/fat information from McDonald's, Denny's, and Panda Express. First, they were shown the regular menu, and then they were asked to select a dinner item and estimate their calorie/fat consumption. Next, they were shown the menus with calorie and fat information and asked again to select a dinner item and estimate consumption.	• Of the 106 subjects, 75 subjects chose the same meal after the revelation of calorie/fat information. • Significant declines were shown in calories and fat in meals ordered at McDonald's ($P=0.002$, $P=0.001$) and Panda Express ($P=0.005$, $P=0.004$), but these changes occurred in <20% of the study subjects. • Significant differences were not shown in meals ordered at Denny's.
Chu et al, 2009[117]	Quasi-experimental evaluation (pre- vs postintervention)	Students purchasing food at the study dining center at Ohio State University in 2004	This study sought to determine whether the display of nutrition information at the point of selection for all entrées available in a university dining hall would alter patrons' meal selection. A quasi-experimental design was used to test the hypotheses that (1) average energy content of entrées sold per day decreases when nutrition labels are present at point of selection, (2) entrées with the highest energy content have the greatest decrease in sales, and (3) this change can occur without any negative	• The average energy content of entrées sold decreased 12.4 kcal from the last day of pretreatment to the first day of the treatment period ($P=0.007$). A negative slope, small in magnitude, was observed during the treatment period (–0.3 kcal/d). At the beginning of the posttreatment period, the daily average energy content immediately began to increase. Across the posttreatment period, the daily average energy content increased at a rate of 1.5 kcal/d ($P=0.01$).

			impact on overall sales. Nutrition information was posted for 14 d, with sales tracked immediately before, during, and after the intervention.	• The sale of the entrées with the highest energy content significantly decreased during the treatment period compared with the pretreatment period (P=0.007). • The difference in total sales between the study periods was not significant and revenue remained consistent.
Elbel et al, 2009[120]	Quasi-experimental comparison (pre- vs postintervention)	N=1156 receipts from customers in fast-food restaurants in low-income, minority communities in New York City and Newark (control) before and after institution of menu labeling in New York City	Receipts were collected from willing customers at McDonald's, Burger King, Wendy's, and KFC in New York City (14 stores) and control stores in Newark (5 stores). A set of questions was also given to participants to collect age, sex, race, education, whether food was for dining in or to go, whether calorie information was posted, whether calorie information influenced their choice, and whether calorie information caused them to purchase fewer or more calories.	• Postlabeling, 54% of participants in New York City reported noticing calorie information. • Participants in New York City purchased a mean of 825 calories (95% CI, 779-870) before labeling and 846 calories (95% CI, 758-889) after labeling. • Participants in Newark purchased a mean of 823 calories (95% CI, 802-890) before labeling and 826 calories (95% CI, 746-906) after labeling. • Overall, no change in calories chosen was detected.
Dumanovsky et al, 2010[115]	Quasi-experimental comparison (pre- vs postintervention)	N=2417 customers from 45 fast-food restaurants representing the 15 largest fast-food chains in New York City	Consumer awareness of menu calorie information was evaluated in separate cross-sectional surveys in the 3 mo before and 3 mo after enforcement of a city health code requiring fast-food chains to display food-item calories on menus/menu boards. Customers reported whether they had seen calorie information and, if so, whether it had affected their purchase. Data were weighted to the number of city locations for each chain.	• The percentage of customers who reported seeing calorie information rose from 38% pre- to 72% postenforcement (P<0.001). • Among customers who reported seeing calorie information postenforcement, 27% reported using the information, a 2-fold increase in the overall proportion of customers making calorie-informed choices (10% vs 20%, P<.001).
Pulos and Leng, 2010[118]	Quasi-experimental comparison (pre- vs postintervention)	6 full-service restaurants in Pierce County, Washington state	Restaurants added nutrition information including calories, fat, sodium, and carbohydrates to their menus for all regular items, excluding beverages and daily specials. Data on entrée sales were provided for 30 d before and 30 d after the information was added.	• 71% of consumers (95% CI, 65-77) reported noticing the nutrition information. • Postlabeling, entrées sold contained an average of 15 fewer calories, 1.5 g less fat, and 45 fewer milligrams of sodium. • The most frequent change after viewing nutrition information was choosing an entrée containing lower calories (20.4%, 95% CI, 15.2, 25.6) and lower fat (16.5%, 95% CI, 11.6, 21.4).
Harnack and French, 2008[32]	RCT, short-term (1 meal)	N=594 adolescents (>16 y) and adults in the Minneapolis/St Paul metropolitan area who	Two hotel conference rooms and 1 church basement were set up as dining rooms where meals were consumed from 4:50 to 7:30 PM. Participants were shown 1 of the following 4 menus: Control menu: No calories; value pricing is in accordance with McDonald's pricing. Price menu: No calories; value pricing was removed. Price was standardized per ounce.	• No significant differences were found in the average number of calories consumed by the 4 groups (P=0.25). • Taste was rated as a very important/most important aspect by 97.6% of participants for buying fast food and 98.5% of participants for buying groceries. • Nutrition was rated as a very important/most important aspect by 58.2% of participants for buying

		regularly (once or more per week) eat at fast-food restaurants	Calorie menu: Calories were added to the value price menu. The background of the calorie column was bright yellow to draw attention to it. The average calorie needs for adults were also shown in the calories count box. Calorie plus price menu: Calories were added as in the calorie menu, value pricing was removed, and price was standardized per ounce as in the price menu.	fast food and 83.5% of participants for buying groceries. • 54% of participants in the calorie menu group and 59% in the calorie plus price menu group reported noticing calorie information on their menu. • However, providing calorie information at point of purchase had little effect on food selection or consumption.
Engbers et al, 2006,[122] 2007[123]	Nonrandomized controlled trial (1 y)	N=515 office workers at 2 government worksites	Intervention worksite: Product information sheets were available near cafeteria foods, including calorie values in terms of exercise. Every 4 wk, 1 of 6 food groups was highlighted. Leaflets were available in the canteen with information on healthy food, blood pressure, and cholesterol. Control worksite: No treatment. Brief dietary questionnaire given at 3 and 12 mo.	At 1 y: • No significant effects on consumption of fruits, vegetables, or dietary fat

CI indicates confidence interval.

Note: Reference numbers (eg, Seymour et al, 2004[110]) appearing in this supplementary table correspond with those listed in the reference section of the statement. For the purposes of this supplementary table, these meta-analyses or systematic reviews (see "Author, y" column) are considered the primary citation. Additional studies mentioned in the primary citation may be included in the "Intervention/Exposure" and "Findings" columns. The additional studies can be accessed through the primary citation.