Study Population Exclusion

In the NIH-AARP Health and Diet Study, 566,399 participants satisfactorily completed the baseline questionnaire in 1995-1996. Among them, 318,713 participants also completed a follow-up questionnaire between 2004-2006. Of these, we excluded those reporting no baseline address (N=321), missing or extreme (<15 kg/m^2 or >50 kg/m^2) BMI at baseline (N=7,441) or follow-up (N=47,010), or emphysema or end-stage renal disease at baseline (N=5,066).

Neighborhood Socioeconomic Deprivation Index

In brief, we selected 19 census tract-variables that were related to seven components of the neighborhood environment (housing characteristics, residential stability, poverty, employment, occupation, racial composition, and education). We performed principal component analysis (PCA) on these variables, stratified by state, and retained ten variables with consistent high loadings. The deprivation index was constructed for each census tract by summarizing the PCA scores of these ten variables. The list of census variables used to derive the deprivation index and their loadings and distribution across quintiles of the index are presented in Appendix Table 1. In total, there were 17,850 census tracts in our study and the median number of participants in each tract is 11 (interquartile range: 5-20).

Covariates

The original questionnaires used in the study can be found online (http://dietandhealth.cancer.gov/).The baseline questionnaire collected information on a broad range of covariates, including sociodemographic (age, sex, race and ethnicity, marital status and education) and lifestyle factors (vigorous physical activity, diet, smoking, alcohol consumption). Diet was measured at baseline using a 124-item food-frequency questionnaire, which was

calibrated against two non-consecutive 24-hour dietary recalls in a subgroup of participants. We further calculated the Healthy Eating Index–2005 (HEI-2005) to measure overall diet quality. In a risk factor questionnaire that was mailed to the cohort within 6 months after baseline, we obtained self-reported information on TV viewing and sleep duration. The baseline questionnaire also collected information on self-rated health. Medical history on conditions including cancer, cardiovascular disease, and diabetes were reported in both the baseline and follow-up questionnaire. Additionally, incident cancer cases were identified through linkage to 11 cancer registries. We further created a composite variable on chronic conditions, which had three categories: no chronic conditions at baseline and throughout follow up; no conditions at baseline but developed conditions during follow up; and had conditions at baseline.

Statistical Analysis

Except for excess weight gain in women, most of our outcomes occurred in less than 10% of the population. Therefore, to estimate the relative risk of excessive weight gain or loss, and developing obesity, we used multiple logistic regression to calculate the OR and 95% CI for each condition, comparing participants living in more deprived neighborhood (2nd through 5th quintile) at baseline with the reference group (1st quintile). For analysis of the risk of developing obesity, we restricted our analysis to those participants who were not obese at baseline. In addition, we used multiple logistic regression to examine the cross-sectional relationship between neighborhood deprivation and baseline BMI. We also used multiple linear regression to examine the relationship between neighborhood deprivation and change in weight as a continuous variable.

We found a statistically significant interaction between neighborhood SES and sex for excessive weight gain ($p<0.0001$) and the odds of developing obesity ($p=0.0003$), although we did not detect an interaction with sex for excessive weight loss ($p=0.57$). For consistency, we presented our results stratified by sex for all outcomes.

For our main analysis, we considered a series of multiple regression models: The base model was adjusted for age and baseline BMI alone, and the purpose is to show the minimally adjusted association between neighborhood and weight change. In a second model, we additionally adjusted for potential confounders, including indicators of individual-level SES (race and education) and medical conditions at baseline. We considered a large number of potential confounders, but we only retained those that had a substantial impact (>10% change in main effect estimates) on our results. Finally, we additionally adjusted for life-style factors that could potentially be both confounders and mediators, including smoking, physical activity, TV viewing, sleep duration, alcohol consumption, and diet. These factors were selected based on a priori hypothesis. Previous literature has linked these factors with neighborhood socioeconomic deprivation and weight change. Details about covariates are presented in table footnotes and figure legends. In all our models, we included robust variance estimation to account for clustering across census tracts. We performed sensitivity analysis by restricting the analysis to participants (54,460 women and 82,813 men) who did not move from their neighborhood between baseline and follow-up (defined as <1 kilometer in straight-line distance between the follow-up and baseline address). We also performed sensitivity analysis using multinomial logistic regression with a three-category outcome variable (losing 10% or more of baseline

weight, gaining 10% or more of baseline weight, and weight change less than 10% of baseline weight [reference]).

We performed subgroup analysis by age, sex, race, education, baseline BMI, smoking, physical activity, and chronic conditions. *P*-values for two-way interactions were derived from the likelihood ratio test comparing a model with the cross-product term to one without. Due to the relatively large number of total tests for interaction (n=28), we used a Bonferroni corrected threshold of $p<0.0018$ (0.05/28) as our criteria for statistical significance. We also examined excessive weight gain and loss in relation to each individual census variable used to derive the deprivation index. All the analysis was performed in 2015 using SAS 9.3 (SAS Institute, Cary, North Carolina).

Appendix Table 1. Neighborhood Characteristics According to Quintiles of Deprivation Index Among 17,969 Census Tracts, NIH-AARP Diet and Health Study, 1995-1996

	Neighborhood socioeconomic deprivation index					Loading
Neighborhood characteristics,[a] mean (SD)	**Q1 (high SES)**	**Q2**	**Q3**	**Q4**	**Q5 (low SES)**	
Unemployed, % total population	2.8 (1.8)	3.6 (2.1)	4.4 (2.6)	5.4 (3.1)	10.3 (6.0)	0.30
<High school, % total population	4.9 (2.6)	9.1 (3.4)	13.6 (4.3)	19.6 (6.2)	34.4 (13.2)	0.33
Management occupations, % male	60.7 (9.4)	45.2 (8.9)	34.8 (8.7)	26.5 (8.3)	17.4 (8.3)	0.30
Management occupations, % female	56.9 (8.0)	46.3 (7.3)	39.2 (7.0)	33.1 (7.4)	25.0 (8.2)	0.30
Income <$30k, % total households	12.1 (5.3)	19.0 (6.6)	26.0 (7.3)	34.3 (8.2)	50.1 (12.9)	0.35
Income below poverty, % total households	3.2 (2.1)	4.8 (2.8)	6.5 (3.3)	9.4 (3.8)	21.0 (10.2)	0.36
No car, % total households	2.9 (3.1)	4.5 (4.5)	5.8 (4.7)	7.7 (5.8)	18.2 (13.6)	0.30
Living on public assistance, % total households	0.8 (0.8)	1.3 (1.1)	1.8 (1.3)	2.8 (2.0)	7.2 (5.2)	0.33
Female headed with dependent children, % total households	3.0 (1.6)	4.0 (2.1)	4.8 (2.3)	6.0 (2.9)	11.5 (6.6)	0.32
Non-Hispanic blacks, % total population	2.4 (3.3)	3.9 (5.6)	5.2 (8.2)	8.0 (12.4)	28.5 (31.0)	0.24

[a]Assessed by variables from Census 2000.

Appendix Table 2. Study Characteristics at Baseline According to Quintiles of Deprivation in Women

		Neighborhood deprivation				
Characteristics	**Overall**	**Q1 (high SES)**	**Q2**	**Q3**	**Q4**	**Q5 (low SES)**
Age at baseline, mean (SD)	61.7 (5.4)	61.3 (5.4)	61.5 (5.4)	61.8 (5.4)	62.1 (5.3)	61.9 (5.3)
BMI, kg/m^2, mean (SD)	26.7 (5.3)	25.5 (4.7)	26.1 (5.0)	26.7 (5.2)	27.0 (5.3)	27.7 (5.6)
BMI, kg/m^2, %						
15-<18.5	1.1	1.4	1.2	1.0	1.1	1.0
18.5-<25	43.8	53.7	48.6	43.8	40.6	35.8
25-<30	32.9	30.0	31.7	33.3	33.8	34.7
30-<35	14.4	10.4	12.3	14.2	16.1	17.8
35-50	7.8	4.6	6.2	7.7	8.5	10.8
White, non-Hispanic, %	91.2	95.2	94.7	94.9	93.7	80.0
College and post-college, %	33.2	51.6	38.5	31.1	25.9	23.8
Married, %	45.9	51.9	47.1	46.7	46.1	39.9
Smoking, %						
Never	46.5	45.0	45.8	46.0	47.6	47.6
Former	39.0	43.0	40.6	39.7	37.3	35.6
Current	11.6	8.9	10.6	11.6	12.3	13.6
Vigorous physical activity, %						
Never/rarely	19.9	15.5	17.8	20.1	20.8	23.9
<3 times/month	14.5	13.2	14.3	14.7	14.7	15.1
1-2 times/week	21.6	21.3	22.1	22.0	21.8	21.0
3-4 times/week	26.2	29.7	27.4	26.2	25.4	23.6
≥5 times/week	16.9	19.7	17.7	16.1	16.4	15.2
TV viewing, %						
≤2 hours/day	36.3	46.6	39.7	35.0	32.2	30.7
3-4 hours/day	42.4	39.1	42.2	43.9	43.9	42.4
5-6 hours/day	15.6	11.1	13.7	15.8	17.4	18.5
≥7 hours/day	5.3	2.8	4.1	4.9	6.1	7.8
Nighttime sleep, %						
<5 hours	3.0	1.7	2.3	2.9	3.2	4.3
6-7 hours	32.2	27.9	30.7	31.4	33.0	36.6
7-8 hours	61.2	66.5	63.2	61.9	60.2	55.4
≥9 hours	3.3	3.6	3.2	3.5	3.3	3.1
Alcohol consumption, g/d, mean (SD)	6.1 (16.9)	7.9 (16.6)	6.6 (16.0)	6.3 (17.5)	5.4 (4.7)	4.7 (17.8)

Fruits and vegetables, servings/1,000 kcal, mean (SD)	4.4 (1.9)	4.6 (1.9)	4.5 (1.9)	4.4 (1.9)	4.4 (1.9)	4.3 (2.0)
Whole grains, servings per 1,000 kcal, mean (SD)	0.69 (0.45)	0.70 (0.43)	0.70 (0.44)	0.69 (0.44)	0.69 (0.44)	0.68 (0.46)
Total fat, % of energy, mean (SD)	0.30 (0.08)	0.29 (0.07)	0.29 0.08)	0.30 (0.08)	0.30 (0.08)	0.31 (0.08)
Red meat, g/1,000 kcal, mean (SD)	29.0 (18.9)	26.0 (17.6)	27.7 (18.2)	29.5 (18.9)	30.43 (19.2)	30.4 (19.7)
Total energy, kcal/d, mean (SD)	1,579 (748)	1,514 (1538)	1,538 (642)	1,565 (675)	1,577 (709)	1,672 (971)
HEI-2005 total score	69.8 (10.4)	71.1 (9.8)	70.5 (10.1)	69.8 (10.4)	69.4 (10.5)	68.6 (10.8)
Self-reported health, excellent, %	18.3	25.6	20.9	17.9	15.7	13.4
Chronic conditions						
Heart disease	6.9	5.1	5.9	6.8	7.7	8.5
Stroke	1.3	0.9	1.0	1.2	1.4	1.8
Cancer	12.9	14.0	13.2	12.8	12.7	12.1
Diabetes	5.8	3.3	4.4	5.3	6.5	8.6

HEI, health eating index

Appendix Table 3. Study Characteristics at Baseline According to Quintiles of Deprivation in Women

		Neighborhood deprivation				
Characteristics	**Overall**	**Q1 (high SES)**	**Q2**	**Q3**	**Q4**	**Q5 (low SES)**
Age at baseline, mean (SD)	62.1 (5.3)	61.8 (5.3)	61.9 (5.3)	62.2(5.3)	62.4 (5.3)	62.1 (5.3)
BMI, kg/m^2, mean (SD)	27.1 (3.9)	26.6 (3.7)	27.0 (3.8)	27.2 (4.0)	27.4 (4.0)	27.5 (4.2)
BMI, kg/m^2, %						
15-<18.5	0.4	0.5	0.4	0.5	0.42	0.48
18.5-<25	29.9	34.5	30.5	29.1	27.1	27.1
25-<30	49.8	49.8	50.2	49.5	50.5	48.8
30-<35	15.8	12.5	15.4	16.5	17.2	18.2
35-50	4.1	2.7	3.6	4.4	4.7	5.5
White, non-Hispanic, %	93.7	95.7	95.3	95.4	94.6	86.5
College and post-college, %	50.1	72.3	56.7	45.5	38.1	32.8
Married, %	87.1	90.7	88.5	87.4	86.5	81.4
Smoking, %						
Never	32.6	38.1	33.8	31.5	29.7	28.9
Former	55.9	53.3	55.9	57.1	57.7	56.0
Current	8.0	5.4	6.9	8.1	9.0	11.1
Vigorous physical activity, %						
Never/rarely	12.3	9.4	11.4	12.7	13.0	15.6
<3 times/month	12.9	12.4	13.1	12.8	12.8	13.4
1-2 times/week	22.5	23.1	22.9	22.6	22.1	21.5
3-4 times/week	29.3	31.4	29.9	29.2	28.8	26.7
≥5 times/week	22.4	23.3	22.2	22.1	22.5	21.8
TV viewing, %						
≤2 hours/day	38.0	47.4	40.1	35.9	32.9	31.8
3-4 hours/day	44.5	41.0	44.4	45.6	46.8	45.4
5-6 hours/day	13.5	9.3	12.1	14.5	15.7	16.7
≥7 hours/day	3.6	2.0	3.0	3.6	4.2	5.6
Nighttime sleep, %						
<5 hours	2.0	1.2	2.0	2.0	2.2	2.9
6-7 hours	30.0	28.4	29.5	29.7	30.0	32.9

7-8 hours	64.5	67.0	65.3	64.8	64.1	60.1
≥9 hours	3.3	3.2	3.0	3.2	3.4	3.6
Alcohol consumption, g/d, mean (SD)	17.3 (41.5)	17.7 (34.5)	17.6 (38.7)	17.5 (43.0)	17.3 (44.7)	16.5 (47.2)
Fruits and vegetables, servings/1,000 kcal, mean (SD)	3.6 (1.6)	3.8 (1.6)	3.7 (1.6)	3.6 (1.6)	3.6 (1.6)	3.5 (1.6)
Whole grains, servings per 1,000 kcal, mean (SD)	0.69 (0.47)	0.71 (0.45)	0.69 (0.45)	0.69 (0.46)	0.68 (0.47)	0.67 (0.49)
Total fat, % of energy, mean (SD)	0.30 (0.08)	0.29 (0.07)	0.30 (0.07)	0.30 (0.07)	0.31 (0.08)	0.31 (0.08)
Red meat, g/1,000 kcal, mean (SD)	37.1 (21.8)	34.5 (21.3)	36.6 (21.3)	38.0 (21.8)	38.5 (21.9)	38.5 (22.5)
Total energy, kcal/d, mean (SD)	2,030 (925)	1,944 (775)	1,998 (856)	2,038 (931)	2,067 (991)	2,121 (1,074)
HEI-2005 total score	65.7 (11.3)	67.3 (10.6)	66.1 (11.1)	65.5 (11.3)	65.0 (11.5)	64.4 (11.7)
Self-reported health, excellent, %	19.3	26.1	20.9	17.9	15.8	14.2
Chronic conditions						
Heart disease	15.4	13.8	14.9	15.7	16.6	16.2
Stroke	1.6	1.2	1.3	1.6	1.9	2.1
Cancer	11.6	12.2	11.3	11.6	11.7	11.1
Diabetes	8.2	6.1	7.3	8.4	9.2	10.6

HEI, health eating index

Appendix Table 4. Cross-sectional Associations Between Baseline Neighborhood Socioeconomic Deprivation Index and BMI and Obesity[a] at Baseline, by Sex

	Neighborhood deprivation				
	Q1 (high SES)	**Q2**	**Q3**	**Q4**	**Q5 (low SES)**
Men (N=153,690)					
BMI, kg/m^2					
Mean (SD)	26.6 (3.7)	27.0 (3.8)	27.2 (4.0)	27.4 (4.0)	27.5 (4.2)
β coefficient (95% CI)					
Base model[b]	ref	0.42 (0.36, 0.49)	0.66 (0.60, 0.73)	0.86 (0.79, 0.93)	0.99 (0.23, 0.51)
Full model[c]	ref	0.18 (0.12, 0.24)	0.28 (0.22, 0.33)	0.38 (0.32, 0.44)	0.39 (0.33, 0.45)
Obesity					
No. (%)	5,162 (15.3)	6,102 (19.0)	6,453 (20.8)	6,511 (22.0)	6,406 (23.7)
OR (95% CI)					
Base model[b]	ref	1.31 (1.25, 1.36)	1.49 (1.43, 1.55)	1.60 (1.54, 1.67)	1.75 (1.68, 1.83)
Full model[c]	ref	1.17 (1.12, 1.22)	1.25 (1.20, 1.31)	1.30 (1.24, 1.36)	1.33 (1.27, 1.39)
Women (N=105,179)					
BMI, kg/m^2					
Mean (SD)	25.5 (4.7)	26.1 (5.0)	26.7 (5.2)	27.0 (5.3)	27.7 (5.6)
β coefficient (95% CI)					
Base model[b]	ref	0.62 (0.51, 0.73)	1.21 (1.10, 1.32)	1.57 (1.46, 1.67)	2.21 (2.11, 2.32)
Full model[c]	ref	0.31 (0.21, 0.41)	0.66 (0.57, 0.76)	0.84 (0.74, 0.94)	1.04 (0.94, 1.14)
Obesity					
No. (%)	2,686 (15.0)	3,622 (18.5)	4,563 (21.9)	5,428 (24.5)	7,062 (28.6)
OR (95% CI)					
Base model[b]	ref	1.30 (1.22, 1.37)	1.60 (1.52, 1.70)	1.87 (1.77, 1.98)	2.30 (2.18, 2.43)
Full model[c]	ref	1.16 (1.09, 1.23)	1.33 (1.26, 1.41)	1.47 (1.39, 1.56)	1.56 (1.47, 1.65)

[a]Defined as BMI $\geq$30 kg/m^2.
[b]Adjusted for age.
[c]Adjusted for age, race/ethnicity, education, history of heart disease, stroke, cancer and diabetes, smoking status, smoking dose, year since quitting, vigorous physical activity, TV viewing, sleep duration, alcohol drinking, total caloric intake, and intake of fruits and vegetables, whole grain, and dietary fat.

Appendix Table 5. Prospective Association Between Baseline Neighborhood Socioeconomic Deprivation Index and Weight Change From 1995-1996 to 2004-2006, by Sex

	Neighborhood deprivation				
Changes in weight, kg	**Q1 (high SES)**	**Q2**	**Q3**	**Q4**	**Q5 (low SES)**
Men					
Mean (SD)	0.00 (6.68)	0.20 (7.23)	0.19 (7.51)	0.19 (7.74)	0.29 (8.16)
β coefficient (95% CI)[a]	ref	0.24 (0.13, 0.34)	0.29 (0.18, 0.40)	0.33 (0.22, 0.45)	0.36 (0.24, 0.49)
Women					
Mean (SD)	1.02 (6.89)	1.12 (7.30)	0.95 (7.62)	0.94 (7.92)	0.80 (8.27)
β coefficient (95% CI)[a]	ref	0.16 (0.02, 0.31)	0.14 (-0.01, 0.29)	0.23 (0.08, 0.37)	0.15 (0.00, 0.30)

[a]Adjusted for age, baseline BMI, race/ethnicity, education, history of heart disease, stroke, cancer and diabetes, smoking status, smoking dose, year since quitting, vigorous physical activity, TV viewing, sleep duration, alcohol drinking, total caloric intake, and intake of fruits and vegetables, whole grain, and dietary fat.

Appendix Table 6. Prospective Associations[a] Between Baseline Deprivation Index and Weight Gain and Weight Loss During Follow-up Among Participants Who Reported in the Same Neighborhood[b] at Baseline and Follow-up

	Neighborhood deprivation				
Weight change	**Q1 (high SES)**	**Q2**	**Q3**	**Q4**	**Q5 (low SES)**
Men (N=54,460)					
Weight gain, ≥10%	ref	1.20 (1.11, 1.31)	1.28 (1.17, 1.39)	1.37 (1.26, 1.50)	1.39 (1.27, 1.52)
Weight loss, ≥10%	ref	1.05 (0.96, 1.15)	1.07 (0.98, 1.18)	1.12 (1.02, 1.22)	1.15 (1.05, 1.27)
Women (N=82,813)					
Weight gain, ≥10%	ref	1.16 (1.07, 1.27)	1.18 (1.08, 1.28)	1.24 (1.14, 1.35)	1.31 (1.20, 1.42)
Weight loss, ≥10%	ref	1.12 (1.00, 1.25)	1.11 (1.00, 1.24)	1.16 (1.05, 1.29)	1.26 (1.13, 1.40)

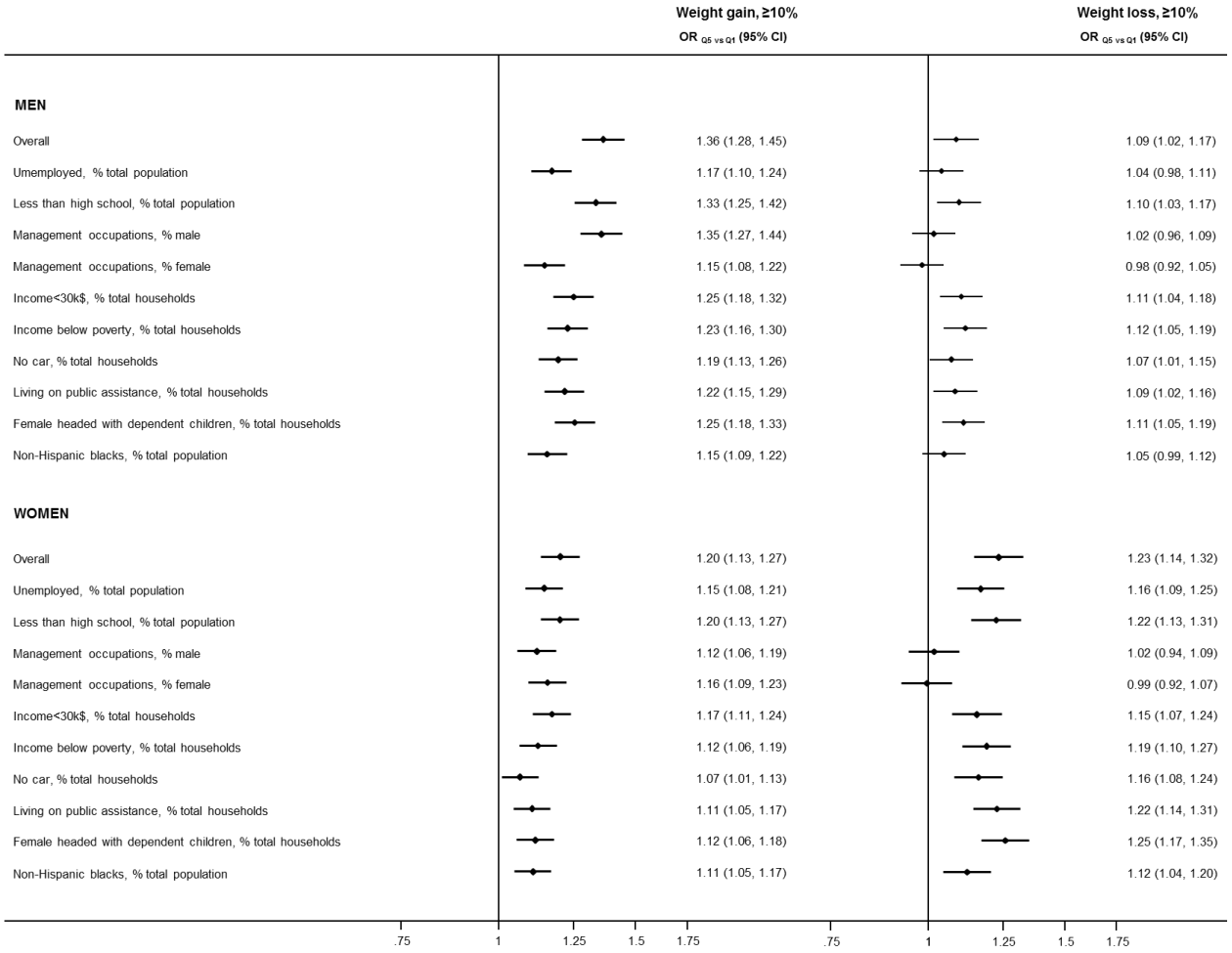
[a]Calculated as OR and 95% CI in parentheses, adjusted for age, baseline BMI, race/ethnicity, education, history of heart disease, stroke, cancer and diabetes, smoking status, smoking dose, year since quitting, vigorous physical activity, TV viewing, sleep duration, alcohol drinking, total caloric intake, and intake of fruits and vegetables, whole grain, and dietary fat.
[b]Defined as <1 kilometer in distance between the follow-up address and baseline address.

Appendix Table 7. Prospective Association[a] Between Baseline Neighborhood Socioeconomic Deprivation Index and Excessive Weight Gain and Excessive Weight Loss From 1995-1996 to 2004-2006, by Sex

	Neighborhood deprivation				
Weight change	**Q1 (high SES)**	**Q2**	**Q3**	**Q4**	**Q5 (low SES)**
Men					
Weight gain, ≥10%	ref	1.19 (1.12, 1.26)	1.23 (1.16, 1.30)	1.31 (1.24, 1.39)	1.38 (1.29, 1.46)
Weight loss, ≥10%	ref	1.02 (0.96, 1.09)	1.06 (1.00, 1.13)	1.09 (1.02, 1.16)	1.12 (1.05, 1.20)
Women					
Weight gain, ≥10%	ref	1.14 (1.08, 1.21)	1.14 (1.07, 1.20)	1.24 (1.17, 1.31)	1.23 (1.16, 1.30)
Weight loss, ≥10%	ref	1.10 (1.01, 1.18)	1.14 (1.05, 1.23)	1.21 (1.13, 1.31)	1.27 (1.18, 1.37)

[a]Results presented as OR (95% CIs) obtained using multinomial logistic regression. The outcome variable had three categories (losing 10% or more of baseline weight, gaining 10% or more of baseline weight, and weight change less than 10% of baseline weight [reference]). The models were adjusted for age, baseline BMI, race/ethnicity, education, history of heart disease, stroke, cancer and diabetes, smoking status, smoking dose, year since quitting, vigorous physical activity, TV viewing, sleep duration, alcohol drinking, total caloric intake, and intake of fruits and vegetables, whole grain, and dietary fat.

Appendix Figure 1. Prospective association between individual neighborhood characteristics at baseline and excessive weight gain and weight loss from 1995-1996 to 2004-2006, by sex. The OR and 95% CIs were calculated comparing the 5th quintile of neighborhood characteristics (most deprived) with the 1st quintile (least deprived), adjusted for age, baseline BMI, race/ethnicity, education, history of heart disease, stroke, cancer and diabetes, smoking status, smoking dose, year since quitting, vigorous physical activity, TV viewing, sleep duration, alcohol drinking, total caloric intake, and intake of fruits and vegetables, whole grain, and dietary fat.



Appendix Figure 2. Multivariable OR and 95% CI for developing obesity during follow-up for quintiles of baseline neighborhood socioeconomic deprivation index. Analysis included men (n=97,726) and women (n=73,605) who were not obese at baseline. The number (%) of participants who developed obesity in Q1 through Q5 were: 1,691 (5.9), 1,807 (6.9), 1,378 (7.1), 1,876 (7.7), and 1,955 (8.5) in men and 980 (6.4), 1,359 (8.5), 1,458 (9.0), 1,716 (10.3), and 1,922 (10.9) in women. Multivariable models adjusted for age (continuous), baseline BMI (continuous), race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, Asian or Pacific Islander or American Indian/Alaskan Native, other), education (<12 years, 12 years, post high school, some college, college/post graduate, unknown), history of heart disease (yes, no), stroke (yes, no), cancer (yes, no) and diabetes (yes, no), smoking status (never, former, current, unknown), smoking dose (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, >60 cigarettes per day, unknown), year since quitting (never quit, >10, 5-9, 1-4, <1, unknown), vigorous physical activity (never/rarely, <3 times/month, 1-2, 3-4, >5 times/week, unknown), TV viewing (≤2, 3-4, 5-6, 7+ hours, unknown), sleep duration (<5, 5-6, 7-8, 9+ hours, unknown), alcohol drinking (continuous), total caloric intake (continuous), and intake of fruits and vegetables, whole grain, and dietary fat (all continuous and adjusted for total energy intake by dividing intake amount by total calories). *P*-value for trend was <0.0001 for men and 0.01 for women.