**eAppendix Tables 1-5**

**eTable 1** Sensitivity analysis of the hazard ratios associated with normal weight relative to overweight/obese, US adults with dysglycemiaa,b

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Model 1: Socio-Demographic | | Model 2: Socio-Demographic and Smoking History | | Model 3: Socio-Demographic, Smoking History and Ever-Smoking Interaction | | | |
|  |  |  |  |  | Never Smokers | | Ever Smokers | |
| Exclusion Criteria (Cumulative) | HR, Normal Weight | 95% CI | HR, Normal Weight | 95% CI | HR, Normal Weight | 95% CI | HR, Normal Weight | 95% CI |
| *Sensitivity Analysis 1* |  |  |  |  |  |  |  |  |
| No Exclusions | 1.39 | (1.10-1.75) | 1.19 | (0.91-1.56) | 0.93 | (0.57-1.50) | 1.30 | (0.97-1.75) |
| 3-Yr Delayed Entry | 1.32 | (1.00-1.74) | 1.07 | (0.77-1.48) | 0.90 | (0.49-1.69) | 1.13 | (0.82-1.58) |
| Baseline Condition | 1.32 | (0.95-1.82) | 1.03 | (0.69-1.54) | 0.92 | (0.49-1.74) | 1.07 | (0.70-1.63) |
| Weight Loss | 1.03 | (0.71-1.50) | 0.81 | (0.51-1.29) | 0.88 | (0.41-1.89) | 0.79 | (0.47-1.32) |
| *Sensitivity Analysis 2* |  |  |  |  |  |  |  |  |
| No Exclusions | 1.21 | (1.00-1.47) | 1.09 | (0.87-1.36) | 0.66 | (0.43-1.00) | 1.31 | (1.00-1.72) |
| 3-Yr Delayed Entry | 1.21 | (0.97-1.52) | 1.00 | (0.77-1.30) | 0.64 | (0.37-1.09) | 1.18 | (0.88-1.58) |
| Baseline Condition | 1.17 | (0.92-1.48) | 0.91 | (0.67-1.24) | 0.65 | (0.38-1.12) | 1.04 | (0.73-1.46) |
| Weight Loss | 0.94 | (0.71-1.26) | 0.77 | (0.53-1.10) | 0.61 | (0.30-1.23) | 0.84 | (0.55-1.28) |

Abbreviations: HR, Hazard Ratio; CI, Confidence Interval

a See Table 5 in the main text for definitions of dysglycemia and weight status (normal-weight and overweight/obese) and for descriptions of models and sample exclusions.

b Sensitivity analysis 1: Dysglycemic population restricted to individuals with HbA1c greater than or equal to 6.0%; sensitivity analysis 2: Exclusion of individuals with BMI between 25.0 and 30.0 kg/m2

Sources: NHANES baseline data are derived from NHANES III (1988-1994) and continuous (1999-2004) and are linked to mortality follow-up through 2006.

**eTable 2**. Joint distribution of population by weight status and smoking: source population and dysglycemic population. Replication of text table 2 using NHISa,b,c,d

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Source Population | | | |  | Dysglycemic Population | | | |
|  | All | Normal Weight | Overweight/ Obese | Odds Ratio |  | All | Normal Weight | Overweight/ Obese | Odds Ratio |
| Smoking, % |  |  |  |  |  |  |  |  |  |
| Never | 0.49 | 0.47 | 0.50 | 0.89 |  | 0.45 | 0.41 | 0.45 | 0.82 |
| Former | 0.27 | 0.24 | 0.29 | 0.79 |  | 0.30 | 0.22 | 0.31 | 0.62 |
| Current | 0.24 | 0.29 | 0.21 | 1.49 |  | 0.26 | 0.38 | 0.24 | 1.94 |

Abbreviations: NHIS, National Health Interview Survey

a Dysglycemia is defined as ever having received a diagnosed of diabetes or borderline diabetes.

b Normal-weight: BMI 18.5-25 kg/m2; Overweight/Obese: BMI >= 25 kg/m2. BMI is calculated using self-reported data after correcting height and weight for reporting errors. The correction equation was developed using NHANES 1999-2004. We estimate sex-specific linear regressions in which the dependent variable was measured height (weight) and covariates included self-reported height (weight), the square of self-reported height (weight), age and age-squared. We apply the parameters of the equation to data in NHIS to obtain corrected values of weight and height for each individual in the sample. The parameters of the correction equations are available upon request.

c Proportions are age- and sex-standardized to the US 2000 census using five-year age-groups between ages 35-74.

d Odds ratios compare the odds of being in a particular smoking category among normal-weight individuals to the odds among the overweight/obese.

Sources: NHIS baseline data include survey years 1997-2004.

**eTable 3** Frequency of illness and poor health in the source population compared to the dysglycemic population. Replication of text table 3 using NHISa,b,c,d,e

|  |  |  |
| --- | --- | --- |
|  | Source Population (%) | Dysglycemic Population (%) |
| Medical Condition |  |  |
| Dysglycemia | 7.9 | 100.0 |
| Emphysema | 1.8 | 2.8 |
| Cancer, smoking-related | 0.7 | 0.9 |
| Cancer, other | 6.9 | 7.8 |
| Heart attack | 3.6 | 8.8 |
| Coronary heart disease | 4.1 | 9.8 |
| Angina | 3.0 | 7.0 |
| Stroke | 2.3 | 5.4 |
| Heart condition, other | 7.8 | 12.9 |
| Poor self-rated health | 3.2 | 10.6 |

Abbreviations: NHIS, National Health Interview Survey

a Dysglycemia is defined as ever having received a diagnosed of diabetes or borderline diabetes.

b Medical conditions at baseline are based upon self-reports data of a prior diagnosis.

c The category of smoking-related cancers is based upon relative risks in a recent large study (see text for reference) and includes cancers of the lung, larynx, mouth/tongue/lip, esophagus, bladder, kidney and pancreas.

d Self-rated health is measured on a five-point scale with “poor” being the least healthy category.

e Estimates are age- and sex-standardized to the US 2000 census using five-year age-groups between ages 35-74.

Sources: NHIS baseline data include survey years 1997-2004.

**eTable 4** Age-standardized mortality rates (per 1,000 person-years) for individuals with dysglycemia by smoking and weight status. Replication of text table 4 using NHISa,b,c

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Population** | |  | **Never Smokers** | |  | **Ever Smokers** | |
| *All* |  |  |  |  |  |  |  |  |
| Mortality Rate | 19.78 | 18.65, 20.91 |  | 15.04 | 13.47, 16.61 |  | 23.22 | 21.55, 24.88 |
|  |  |  |  |  |  |  |  |  |
| *Overweight/Obese* |  |  |  |  |  |  |  |  |
| Mortality Rate | 18.64 | 17.44, 19.84 |  | 14.98 | 13.27, 16.69 |  | 21.32 | 19.60, 23.03 |
| Relative Risk | 1.00 |  |  | 1.00 |  |  | 1.00 |  |
|  |  |  |  |  |  |  |  |  |
| *Normal-weight* |  |  |  |  |  |  |  |  |
| Mortality Rate | 26.68 | 23.25, 30.11 |  | 15.27 | 11.02, 19.52 |  | 34.50 | 29.30, 39.71 |
| Relative Risk | 1.43 | 1.22, 1.64 |  | 1.02 | 0.71, 1.33 |  | 1.62 | 1.34, 1.89 |

Abbreviations: NHIS, National Health Interview Survey

a Dysglycemia is defined as ever having received a diagnosed of diabetes or borderline diabetes.

b Normal-weight: BMI 18.5-25 kg/m2; Overweight/Obese: BMI >= 25 kg/m2. BMI is calculated using self-reported data after correcting height and weight for reporting errors. See Table A2 for additional information.

c Mortality rates are age-standardized (using age at exposure) to the US 2000 Census with age categories 40-59 and 60+. Relative risks are based on age-standardized mortality rates and are otherwise unadjusted.

Sources: NHIS baseline data include survey years 1997-2004 and are linked to mortality follow-up through 2006.

**eTable 5** Hazard ratios associated with normal weight relative to overweight/obese, US adults with dysglycemia. Replication of text table 5 using NHISa,b,c,d,e.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Model 1: Socio-Demographic | | Model 2: Socio-Demographic and Smoking History | | Model 3: Socio-Demographic, Smoking History and Ever-Smoking Interaction | | | | Deaths (n) |
|  |  |  |  |  | Never Smokers | | Ever Smokers | |  |
| Exclusion Criteria (Cumulative) | HR, Normal Weight | 95% CI | HR, Normal Weight | 95% CI | HR, Normal Weight | 95% CI | HR, Normal Weight | 95% CI |  |
|  |  |  |  |  |  |  |  |  |  |
| No Exclusions | 1.34 | (1.16-1.55) | 1.28 | (1.10-1.47) | 0.90 | (0.67-1.20) | 1.47 | (1.24-1.73) | 1,646 |
| 3-Yr Delayed Entry | 1.26 | (1.03-1.53) | 1.19 | (0.98-1.44) | 0.82 | (0.55-1.23) | 1.38 | (1.11-1.73) | 903 |
| Baseline Condition | 1.19 | (0.97-1.47) | 1.13 | (0.92-1.39) | 0.83 | (0.55-1.24) | 1.31 | (1.03-1.68) | 818 |

Abbreviations: NHIS, National Health Interview Survey; HR, Hazard Ratio; CI, Confidence Interval

a Dysglycemia is defined as ever having received a diagnosed of diabetes or borderline diabetes.

b Normal-weight: BMI 18.5-25 kg/m2; Overweight/Obese: BMI >= 25 kg/m2. BMI is calculated using self-reported data after correcting height and weight for reporting errors. See Table A2 for additional information.

c Model 1 adjusts for social and demographic variables (sex, race/ethnicity, education) and diabetes duration. Model 2 additionally adjusts for detailed smoking intensity; Model 3 introduces an interaction term between normal-weight and ever-smoking (the combination of former and current smokers). Race/ethnicity categories are non-Hispanic black, Hispanic, and other race/ethnicities. Educational attainment categories are less than high school, high school or equivalent and some college or greater. Detailed smoking categories are never smoker, former smoker < 1 pack/day, former smoker 1 to < 2 packs/day, former smoker 2+ packs/day, current smoker < 1 pack/day, current smoker 1 to < 2 packs/day and current smoker 2+ packs/day.

d Sample exclusions: *3-Yr delayed entry*: exposure to risk begins accumulating after three years of follow-up; *Baseline condition*: individuals who report a prior diagnosis of a smoking-related cancer (cancer of the bladder, esophagus, kidney, larynx, lung, mouth/tongue/lip and pancreas) or emphysema are excluded from the sample;

e The hazard ratio of the interaction term between normal weight and ever smoking in Model 3 is not shown. The hazard ratio associated with ever smoking is calculated based on the parameter estimates for normal weight and the interaction term between normal-weight and ever smoking.

Sources: NHIS baseline data include survey years 1997-2004 and are linked to mortality follow-up through 2006.