Appendix Table 1. Baseline Characteristics of Included Compared to Excluded Participants

Appendix Table 2. Modifiable Lifestyle Risk Factors Correlation Matrix

Appendix Table 3. P for Interaction by Age, Gender, BMI, Waist Circumference, Fasting Plasma Glucose, Hemoglobin A1c, Baseline Diabetes Status (Normal Versus Prediabetes), Normal Waist Circumference Versus Central Obesity and BMI <30 vs. BMI ≥30 kg/m^2 at Baseline

Appendix Table 4. Baseline Characteristics of Participants in the Jackson Heart Study by Incident Diabetes Status

Appendix Figure1. Modifiable lifestyle risk factor scores and unadjusted incident diabetes rates per 1,000 person-years.

Appendix Table 1. Baseline Characteristics of Included Compared to Excluded Participants

Baseline characteristics[a]	Included n=3,252	Excluded n=897	*p*-value[a]
Age, years	**53.3 (12.5)**	**56.0 (14.8)**	***p*<0.001**
Female, N (%)	**2,066 (64)**	**532 (59)**	***p*=0.021**
Education ≥Bachelor's degree, N (%)	**1,217 (37)**	**195 (22)**	***p*<0.001**
Occupation, management/professional, N (%)	**1,287 (40)**	**235 (26)**	***p*<0.001**
Alcohol use, N (%)	1,616 (50)	414 (48)	*p*=0.270
Systolic blood pressure (mmHg)	**125 (17)**	**129 (21)**	***p*<0.001**
Diastolic blood pressure (mmHg)	79 (10)	79 (11)	*p*=0.401
Waist circumference (cm)	98.6 (15.7)	98.2 (15.7)	*p*<0.573
BMI (kg/m^2)	**31.2 (7.0)**	**30.6 (7.4)**	***p*=0.018**
Fasting plasma glucose (mmol/l, mg/dL)[b]	**5.0 (0.5), 90 (9)**	**5.1 (0.6), 91 (10)**	***p*<0.001**
Hemoglobin A1c (%)[b]	5.5 (0.5)	5.5 (0.5)	*p*=0.525
Homeostatic model assessment of insulin resistance (HOMA-IR) (3,125 included and 772 excluded)	3.6 (2.3)	3.5 (2.1)	*p*=0.558
Adiponectin (ng/mL) (3,193 included, 814 excluded)	**5,304 (3,866)**	**5,999 (4,827)**	***p*=0.003**
Current smoking, N (%)	**383 (12)**	**184 (22)**	***p*<0.001**
TV watching <1 hour/day, N (%)	**468 (14)**	**112 (13)**	***p*<0.001**
Sleep disordered breathing burden (None), N (%)[c]	351 (11)	91 (11)	*p*=0.211
Ideal AHA physical activity, N (%)[d]	**697 (21)**	**160 (18)**	***p*<0.001**
Ideal AHA dietary intake, N (%)[d]	24 (0.7)	7 (0.8)	*p*=0.192

Notes: Boldface indicates statistical significance (*p*<0.05).

[a] Mean (SD) or percentages are listed, *p*-values calculated using chi-square (categorical variables), ANOVA (parametric continuous variables), and Kruskal-Wallis test (non-parametric continuous variables).

[b]SI conversion factors: Fasting plasma glucose conversion to mmol/L (0.0555). Hemoglobin A1c conversion from % to mmol/mol = 10.93 x % - 23.5.

[c]The sleep disorder breathing burden score was quantified by first coding the responses to the sleep symptom questions ("Never," "Seldom," "Sometimes," "Often," or "Almost always") from 0 for "Never" to 4 for "Almost always" and then summing the individual scores, resulting in a sleep burden score that ranged from 0 to 20. Sleep burden will be classified as "None" (score: 0), "Mild" (score: 1–5), "Moderate" (score: 6–10), and "Severe" (score: >11)[20]

[d]AHA, American Heart Association, Ideal physical activity and dietary intake recommendations were defined by AHA "2020" guidelines. Physical Activity was considered ideal if participant achieved ≥150 minutes/week moderate intensity or ≥75 minutes/week vigorous intensity physical activity or ≥150 minutes/week moderate/vigorous physical activity, intermediate if participant performed 1–149 minutes/week moderate intensity or 1–74 minutes/week vigorous intensity physical activity or 1–149 minutes/week of moderate/vigorous intensity physical activity and poor if less than these levels. Dietary Intake was considered ideal (4–5 out of 5), intermediate (2–3 out of 5) or poor (0–1 out of 5) of the following recommendations: Fruits and vegetables ≥4.5 cups/day; fish ≥two 3.5 oz servings per week (non-fried fish); fiber-rich whole grains ≥three 1 oz-equivalent servings/day; sodium <1,500 mg/day; sugar-sweetened beverages ≤450 kcal (36 oz)/week.

Appendix Table 2. Modifiable Lifestyle Risk Factors Correlation Matrix Using Spearman's Correlation

	Smoking	**TV watching**	**Physical activity**	**Dietary intake**	**Sleep disordered breathing burden**
Smoking	1.0000				
TV watching	**0.0700**	1.0000			
Physical activity	**0.0672**	**0.1147**	1.0000		
Dietary intake	**0.0833**	**0.0442**	**0.1137**	1.0000	
Sleep disordered breathing burden	0.0238	0.0207	0.0124	**0.0684**	1.0000

Notes: Boldface indicates statistical significance ($p<0.05$).A Spearman's correlation was run to assess the relationship between modifiable lifestyle risk factors as ordinal variables. Spearman's rho coefficients.

Appendix Table 3. P for Interaction by Age, Gender, BMI, Waist Circumference, Fasting Plasma Glucose, Hemoglobin A1c, Baseline Diabetes Status (Normal Versus Prediabetes), Normal Waist Circumference Versus Central Obesity and BMI <30 vs. BMI ≥30 kg/m^2 at Baseline

P for interaction[a]	**Continuous variables**						**Dichotomous variables**		
Variables	**Age**	**Gender**	**BMI**	**Waist circumference**	**Fasting plasma glucose**	**Hemoglobin A1c (HbA1c)**	**Normal vs prediabetes[b]**	**Normal waist circumference vs central obesity[c]**	**BMI <30 vs BMI ≥30 kg/m^2**
Modifiable lifestyle risk factor score	*p*=0.26	*p*=0.94	***p*=0.005**	***p*<0.001**	***p*<0.001**	***p*<0.001**	***p*=0.055**	***p*=0.045**	***p*=0.095**

[a]P for interaction calculated using multiplicative interaction terms with application of the likelihood ratio test (*p*-value <0.10 for statistical significance highlighted in boldface).
[b]Normal = fasting plasma glucose <100 mg/dl and HbA1c <5.7% (<39 mmol/mol), Prediabetes fasting blood glucose 100–125 mg/dl or HbA1c 5.7–6.4% (39 mmol/mol–46 mmol/mol) based on ADA criteria.[40]
[c]Central obesity waist circumference ≥102 cm or 40 inches (male), ≥88 cm or 35 inches(female) based on U.S. National Cholesterol Education Program Adult Treatment Panel III (2001)[24]

ADA, American Diabetes Association

Appendix Table 4. Baseline Characteristics of Participants in the Jackson Heart Study by Incident Diabetes Status

Baseline characteristics[a]	All n=3,252	(-) Diabetes n=2,692	(+) Diabetes n=560	*p*-value[a]
Age, years	**53.3 (12.5)**	**53.0 (12.7)**	**55.0 (11.1)**	***p*<0.001**
Female, sex, N (%)	2,066 (64)	1,717 (64)	349 (62)	*p*=0.514
Education ≥Bachelor's degree, N (%)	**1,217 (37)**	**1,036 (39)**	**181 (32)**	***p*=0.006**
Occupation, management/professional, N (%)	**1,287 (40)**	**1,089 (41)**	**198 (35)**	***p*=0.025**
Alcohol use, N (%)	**1,616 (50)**	**1,362 (51)**	**254 (45)**	***p*=0.024**
Systolic blood pressure (mmHg)	**125 (17)**	**124 (17)**	**128 (18)**	***p*<0.001**
Diastolic blood pressure (mmHg)	**79 (10)**	**79 (10)**	**80 (10)**	***p*=0.006**
Waist circumference (cm)	**98.6 (15.7)**	**97.2 (15.6)**	**105.0 (14.2)**	***p*<0.001**
BMI (kg/m^2)	**31.2 (7.0)**	**30.7 (6.9)**	**33.6 (7.1)**	***p*<0.001**
Fasting plasma glucose (mmol/l, mg/dl)[b]	**5.0 (0.5), 90 (9)**	**4.9 (0.4), 89 (8)**	**5.4 (0.6), 97 (11)**	***p*<0.001**
Hemoglobin A1c (%)[b] (n=3,176)	**5.5 (0.5)**	**5.4 (0.4)**	**5.9 (0.4)**	***p*<0.001**
Homeostatic model assessment of insulin resistance (HOMA-IR) (n=3,125)	**3.6 (2.3)**	**3.3 (2.1)**	**5.0 (2.8)**	***p*<0.001**
Adiponectin (ng/mL) (n=3,193)	**5,304 (3,866)**	**5,563 (4,021)**	**4,058 (2,685)**	***p*<0.001**
Current smoking, N (%)	383 (12)	315 (12)	68 (12)	*p*=0.955
TV watching <1 hour/day, N (%)	468 (14)	14.9	12.1	*p*=0.095
Sleep disordered breathing burden (None), N (%)[c]	**351 (11)**	**11.0**	**10.0**	***p*=0.008**
Ideal AHA physical activity, N (%)[d]	**697 (21)**	**597 (22)**	**100 (18)**	***p*=0.023**
Ideal AHA dietary intake, N (%)[d]	24 (1)	21 (1)	3 (1)	*p*=0.813

Notes: Boldface indicates statistical significance ($p<0.05$).

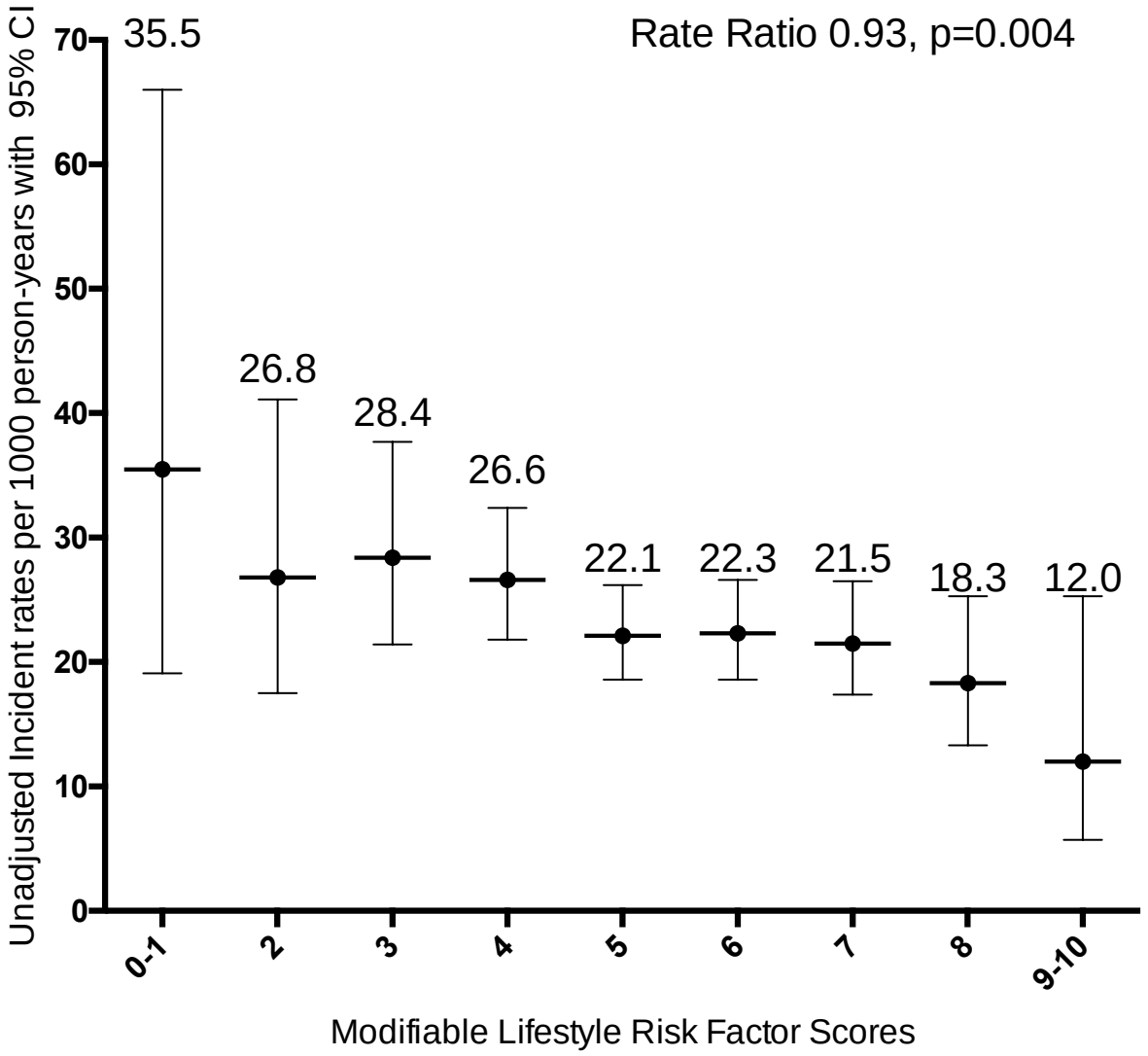
[a]Mean (SD) or percentages are listed, *p*-values calculated using chi-square (categorical variables), ANOVA (parametric continuous variables), and Kruskal-Wallis test (non-parametric continuous variables).

[b]SI conversion factors: Fasting plasma glucose conversion to mmol/L (0.0555). Hemoglobin A1c conversion from % to mmol/mol = 10.93 x % - 23.5

[c]The sleep disorder breathing burden score was quantified by first coding the responses to the sleep symptom questions ("Never," "Seldom," "Sometimes," "Often," or "Almost always") from 0 for "Never" to 4 for "Almost always" and then summing the individual scores, resulting in a sleep burden score that ranged from 0 to 20. Sleep burden will be classified as "None" (score: 0), "Mild" (score: 1–5), "Moderate" (score: 6–10), and "Severe" (score: >11)[20]

[d]AHA, American Heart Association, Ideal physical activity and dietary intake recommendations were defined by AHA "2020" guidelines. Physical activity was considered ideal if participant achieved ≥150 minutes/week moderate intensity or ≥75 minutes/week vigorous intensity physical activity or ≥150 minutes/week moderate/vigorous physical activity, intermediate if participant performed 1–149 minutes/week moderate intensity or 1–74 minutes/week vigorous intensity physical activity or 1–149 minutes/week of moderate/vigorous intensity physical activity and poor if less than these levels. Dietary Intake was considered ideal (4–5 out of 5), intermediate (2–3 out of 5) or poor (0–1 out of 5) of the following recommendations: Fruits and vegetables ≥4.5 cups/day; fish ≥two 3.5 oz servings per week (non-fried fish); fiber-rich whole grains ≥three 1 oz-equivalent servings/day; sodium <1,500 mg/day; sugar-sweetened beverages ≤450 kcal (36 oz)/week.

Appendix Figure 1. Modifiable lifestyle risk factor scores and unadjusted incident diabetes rates per 1,000 person-years.



Notes: The unadjusted incident rates decreased in a monotonic fashion with a Mantel-Haenszel estimated rate ratio of 0.93 (95% CI 0.88, 0.98, p=0.004) per 1 unit in increase in score (0–1 and 9–10 were combined due to a low number of participants in each group). Error bars represent 95% CIs.

Modifiable Lifestyle Risk Factor Score, Total No. Participants (Incident Diabetes Cases)
Score 0–1, 37(10), Score 2, 106(21), Score 3, 222(48), Score 4, 494(98), Score 5, 793(132), Score 6, 721(121), Score 7, 536(86), Score 8, 267(37), Score 9–10 76(7)

The modifiable lifestyle risk factor scores were calculated by combining the individuals scores for smoking, TV watching, AHA physical activity, AHA health diet and sleep disordered breathing burden. *(Smoking: Current smoker (0 points), Former ≤12 months (1 point), Never or quit ≥12 months (2 points); TV watching: >4 hours/day (0 points), 1–4 hours/day (1 point), <1 hour/day (2 points)*; *AHA physical activity: poor (0 points), intermediate (1 point), ideal (2 points)*; *AHA Healthy Diet: poor (0 points), intermediate (1 point), ideal (2 points)*; *Sleep Disordered Breathing Burden: Severe (0 points), Moderate (1 point), Mild (2 points), None (3 points)*