

Table S1—Prevalence of atrial fibrillation (AF) identified using different methods in participants with high and low risk obstructive sleep apnea (OSA).

	High Risk OSA n = 5,359	Low Risk OSA n = 14,992
SR-AF (%)	467 (8.7)	1,023 (6.8)
ECG-AF (%)	50 (0.9)	177 (1.2)
SR-AF and ECG-AF (%)	35 (0.7)	123 (0.8)
SR-AF or ECG-AF (%) [our study definition]	482 (9.0)	1,077 (7.2)

SR-AF: self-reported atrial fibrillation

ECG-AF: ECG (electrocardiogram) based atrial fibrillation report

Table S2—Association between atrial fibrillation (AF) identified using different methods with obstructive sleep apnea (OSA). Odd ratios for OSA categories.

	Model 0	Model 1	Model 2	Model 3	Model 4
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Self-reported AF					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.30 (1.16, 1.46)	1.29 (1.15, 1.45)	1.36 (1.21, 1.53)	1.32 (1.17, 1.49)	1.28 (1.13, 1.44)
ECG evidence of AF					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	0.79 (0.58, 1.08)	0.79 (0.58, 1.09)	0.96 (0.70, 1.33)	0.95 (0.68, 1.34)	0.95 (0.67, 1.35)
Self-reported and ECG evidence of AF					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	0.80 (0.55, 1.16)	0.81 (0.55, 1.17)	0.96 (0.66, 1.41)	0.98 (0.65, 1.47)	1.00 (0.66, 1.50)

ECG (electrocardiogram)

Model 0 unadjusted model

Model 1 includes pulse pressure

Model 2 adjusts for age, sex, race, region, education, income

Model 3 adjusts for model 2 + stroke/transient ischemic attack, coronary heart disease, heart failure, left ventricular hypertrophy, diabetes

Model 4 adjusts for model 3 + albumin/creatinine ratio, total cholesterol, high density lipoprotein, C-reactive protein, smoking, alcohol use, use of sleep medications

Table S3—Atrial fibrillation (AF) by obstructive sleep apnea (OSA) among older (≥ 75) versus younger (< 75) participants (P value for interaction .6141).

	Model 0	Model 1	Model 2	Model 3	Model 4
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Age (≥ 75 years) n = 2,997					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.23 (0.93, 1.62)	1.26 (0.95, 1.67)	1.26 (0.95, 1.67)	1.27 (0.94, 1.71)	1.26 (0.93, 1.71)
Age (< 75 years) n = 17,354					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.38 (1.22, 1.56)	1.36 (1.20, 1.54)	1.36 (1.20, 1.54)	1.30 (1.14, 1.48)	1.26 (1.11, 1.44)

Model 0 unadjusted model

Model 1 includes pulse pressure

Model 2 adjusts for gender, race, region, education, income

Model 3 adjusts for model 2 + stroke/transient ischemic attack, coronary heart disease, heart failure, left ventricular hypertrophy, diabetes

Model 4 adjusts for model 3 + albumin/creatinine ratio, total cholesterol, high density lipoprotein, C-reactive protein, smoking, alcohol use, use of sleep medications

Table S4—Atrial fibrillation (AF) by obstructive sleep apnea (OSA) among males versus females
(*P* value for interaction .4666).

	Model 0	Model 1	Model 2	Model 3	Model 4
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Males n = 9,131					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.21 (1.02, 1.43)	1.19 (1.01, 1.41)	1.31 (1.10, 1.55)	1.26 (1.05, 1.51)	1.25 (1.04, 1.50)
Females n = 11,220					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.34 (1.15, 1.56)	1.33 (1.14, 1.54)	1.36 (1.16, 1.58)	1.32 (1.13, 1.54)	1.28 (1.09, 1.50)

Model 0 unadjusted model

Model 1 includes pulse pressure

Model 2 adjusts for age, race, region, education, income

Model 3 adjusts for model 2 + hypertension, stroke/transient ischemic attack, coronary heart disease, heart failure, left ventricular hypertrophy, diabetes

Model 4 adjusts for model 3 + albumin/creatinine ratio, total cholesterol, high density lipoprotein, C-reactive protein, smoking, alcohol use, use of sleep medications

Table S5—Atrial fibrillation (AF) by obstructive sleep apnea (OSA) among different regions
(*P* value for interaction .4818).

	Model 0	Model 1	Model 2	Model 3	Model 4
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Stroke Belt n = 7,005					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.24 (1.02, 1.49)	1.22 (1.01, 1.47)	1.25 (1.03, 1.52)	1.21 (1.00, 1.49)	1.15 (0.94, 1.41)
Stroke Buckle n = 4,390					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.47 (1.17, 1.84)	1.47 (1.17, 1.84)	1.61 (1.28, 2.03)	1.53 (1.20, 1.94)	1.51 (1.19, 1.93)
Non belt n = 8,956					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.20 (1.01, 1.44)	1.19 (0.99, 1.42)	1.29 (1.08, 1.54)	1.25 (1.03, 1.51)	1.24 (1.03, 1.50)

Model 0 unadjusted model

Model 1 includes pulse pressure

Model 2 adjusts for age, gender, race, education, income

Model 3 adjusts for model 2 + stroke/transient ischemic attack, coronary heart disease, heart failure, left ventricular hypertrophy, diabetes

Model 4 adjusts for model 3 + albumin/creatinine ratio, total cholesterol, high density lipoprotein, C-reactive protein, smoking, alcohol use, use of sleep medications

Table S6—Atrial fibrillation by OSA among BMI ≥ 30 versus BMI < 30 (*P* value for interaction .0028).*

	Model 0	Model 1	Model 2	Model 3	Model 4
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
BMI ≥ 30 kg/m² n = 7,678					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.00 (0.85, 1.19)	1.02 (0.86, 1.20)	1.04 (0.88, 1.24)	1.05 (0.88, 1.25)	1.03 (0.86, 1.22)
BMI < 30 kg/m² n = 12,595					
<u>OSA</u>					
Low risk	Ref	Ref	Ref	Ref	Ref
High risk	1.57 (1.24, 1.84)	1.53 (1.30, 1.79)	1.61 (1.37, 1.89)	1.51 (1.28, 1.79)	1.49 (1.25, 1.78)

Model 0 unadjusted model

Model 1 includes pulse pressure

Model 2 adjusts for gender, race, region, education, income

Model 3 adjusts for model 2 + stroke/transient ischemic attack, coronary heart disease, heart failure, left ventricular hypertrophy, diabetes

Model 4 adjusts for model 3 + albumin/creatinine ratio, total cholesterol, high density lipoprotein, C-reactive protein, smoking, alcohol use, use of sleep medications

*These results are not directly comparable. The OSA risk in high strata BMI (≥ 30 kg/m²) or obese participants, is whether the participant had “one” of the other two factors that determine OSA risk (snoring or daytime sleepiness) compared to none. In low strata BMI (< 30 kg/m²), the OSA risk is whether the participants had “both” of the other factors (snoring and daytime sleepiness) versus none.