

Supplementary Table S1. Impact of a 10 events per hour increase in REM-AHI on the prevalence of comorbidities.

	Metabolic Syndrome		Diabetes		Hypertension		Depression	
	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
REM-AHI, events/h								
Entire cohort	1.10 (1.02 - 1.18)	0.012	1.08 (1.00 - 1.18)	0.127	1.04 (1.00 - 1.11)	0.258	1.10 (1.00 - 1.25)	0.160
NREM-AHI<10 subgroup	1.26 (1.12 - 1.40)	<0.0001	1.26 (1.07 - 1.46)	0.007	1.08 (1.00 - 1.21)	0.195	1.18 (1.00 - 1.40)	0.117
AHI<10 subgroup	1.31 (1.08 - 1.55)	0.009	1.41 (1.05 - 1.79)	0.024	1.10 (0.99 - 1.30)	0.317	1.20 (0.98 - 1.60)	0.302

Definition of abbreviations: AHI = apnoea–hypopnoea index; CI = confidence interval; OR = Odds ratio; REM = rapid eye movement.

Data analyzed by multivariable-adjusted logistic regression. Cardiovascular and metabolic comorbidities were adjusted for age, sex, body mass index, waist-to-hip ratio, total sleep time, smoking, alcohol consumption (weekly) and non-REM AHI (NREM-AHI). Depression was adjusted for age, gender, consumption of benzodiazepines and antidepressants and log-NREM-AHI.

Number of participants with missing data in the models (entire cohort, NREM-AHI<10, AHI<10): systolic blood pressure and diastolic blood pressure (16, 6, 5).

Number of participants with missing data in the models of the entire cohort (REM-AHI, REM-AHI in supine, REM-AHI non-supine): metabolic syndrome (entire cohort: 35, 424, 35; NREM-AHI<10 subgroup: 13, 223, 13; AHI<10 subgroup: 11, 203, 11); diabetes (entire cohort: 37, 426, 37; NREM-AHI<10 subgroup: 13, 223, 13; AHI<10 subgroup: 11, 203, 11); hypertension (entire cohort: 37, 426, 37; NREM-AHI<10 subgroup: 14, 224, 14; AHI<10 subgroup: 11, 203, 11); depression (entire cohort: 389, 720, 389; NREM-AHI<10 subgroup: 226, 410, 226; AHI<10 subgroup: 189, 358, 189).

Supplementary Table S2. Associations between REM-AHI and blood pressure in participants free of antihypertensive drug use.

	Entire cohort n=1531		NREM-AHI<10 subgroup n=1004		AHI<10 subgroup n=866	
	β	p-value	β	p-value	β	p-value
Systolic blood pressure	0.02	0.285	0.00	0.864	0.01	0.772
REM-AHI (continuous)	0.01	0.785	-0.01	0.886	0.04	0.499
5-9.9/h	1.27	0.274	1.03	0.393	0.96	0.422
10-19.9/h	0.81	0.469	1.90	0.125	2.02	0.108
≥ 20 /h	0.47	0.680	0.33	0.815	0.18	0.925
Diastolic blood pressure						
REM-AHI (continuous)	0.02	0.285	0.00	0.864	0.01	0.772
5-9.9/h	0.92	0.229	1.02	0.202	0.96	0.225
10-19.9/h	0.56	0.446	1.04	0.202	1.06	0.196
≥ 20 /h	1.00	0.183	0.29	0.754	-0.35	0.779

Definition of abbreviations: AHI = apnoea–hypopnoea index; β = linear regression coefficient beta; NREM = non-rapid eye movement; REM = rapid eye movement.

Data analyzed by linear regression using REM-AHI as continuous or dummy variable with adjustment for age, sex, body mass index, waist-to-hip ratio, total sleep time, smoking, alcohol consumption (weekly), and log-NREM-AHI.

Number of participants with missing data in the models (entire cohort, NREM-AHI<10, AHI<10): systolic blood pressure and diastolic blood pressure (11, 5, 4).