

## Supplementary Online Content

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**eTable 1.** Multiple Linear Regression Model Estimates for Predicted  $\Delta$ PiB (SUVR)

**eTable 2.** Multiple Linear Regression Model Estimates for Baseline Self-reported Sleep Symptoms

**eTable 3.** Multiple Linear Regression Model Estimates for Witnessed Apneas

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Multiple Linear Regression Model Estimates for Predicted  $\Delta$ PiB (SUVR)

Model	Estimates for baseline EDS					
	Global PiB (+)		Cognitively-normal		No witnessed apneas	
	B (95% CI)	P Value	B (95% CI)	P Value	B (95% CI)	P Value
Prefrontal	.044 (-.007; .095)	.093	.023 (-.009; .054)	.153	.032 (.000; .064)	.052
Anterior Cingulate	<b>.056 (.006; .106)</b>	<b>.028</b>	.028 (-.003; .059)	.077	<b>.034 (.002; .067)</b>	<b>.038</b>
Cingulate/Precuneus	<b>.064 (.010; .118)</b>	<b>.021</b>	<b>.034 (.001; .068)</b>	<b>.045</b>	<b>.044 (.009; .078)</b>	<b>.013</b>
Parietal	.051 (-.006; .108)	.078	.026 (-.008; .059)	.134	<b>.038 (.003; .073)</b>	<b>.035</b>

$\Delta$ PiB was calculated as the difference between consecutive scans (PiB2-PiB1) in A $\beta$ -susceptible regions for different groups: 1) all participants with global PiB positivity (PiB SUVR  $\geq$  1.4) at baseline; 2) only cognitively-normal individuals; 3) limited to individuals without witnessed apneas. Models were controlled for only up to 9 other variables - baseline age, interval between scans, baseline PiB, global PiB positivity (for “Cognitively-normal” and “No witnessed apnea” models) sex, APOE4, hypertension, diabetes, and depression.

eTable 2. Multiple Linear Regression Model Estimates for Baseline Self-reported Sleep Symptoms

Models	Estimates for baseline self-reported sleep symptoms			
	Reduced Sleep		Respiratory symptoms	
	B (95% CI)	P Value	B (95% CI)	P Value
<b>1 – All</b>				
Prefrontal	-.008 (-.040; .025)	.637	.001 (-.025; .027)	.918
Anterior Cingulate	-.012 (-.044; .021)	.485	.000 (-.026; .025)	.973
Cingulate/Precuneus	-.014 (-.049; .020)	.408	-.004 (-.031; .023)	.777
Parietal	-.013 (-.048; .022)	.471	-.003 (-.031; .025)	.824
<b>2 – Global PiB (+)</b>				
Prefrontal	-.019 (-.081; .043)	.544	.005 (-.041; .052)	.814
Anterior Cingulate	-.013 (-.074; .048)	.664	.004 (-.042; .049)	.869
Cingulate/Precuneus	-.025 (-.092; .041)	.449	.005 (-.044; .055)	.830
Parietal	-.019 (-.088; .050)	.589	.002 (-.050; .053)	.952

$\Delta$ PiB was calculated as the difference between consecutive scans (PiB2-PiB1). Includes all non-demented elderly individuals (All model) or individuals with baseline global PiB positivity (Global PiB[+] model). Models were controlled for baseline age, interval between scans, sex, APOE4, years of education, baseline regional PiB, baseline global PiB positivity (All model only), midlife physical activity, cardiovascular comorbidities (obesity, hypertension, hyperlipidemia, diabetes), and depression.

eTable 3. Multiple Linear Regression Model Estimates for Witnessed Apneas

Estimates for Witnessed Apneas		
Models	B (95% CI)	<i>P</i> Value
<b>1 – All</b>		
Prefrontal	-.006 (-.039; .026)	.702
Anterior Cingulate	-.004 (-.036; .029)	.831
Cingulate/Precuneus	-.014 (-.049; .021)	.420
Parietal	-.009 (-.045; .027)	.621
<b>2 – Global PiB (+)</b>		
Prefrontal	-.024 (-.082; .035)	.426
Anterior Cingulate	-.015 (-.073; .043)	.612
Cingulate/Precuneus	-.026 (-.088; .037)	.423
Parietal	-.020 (-.085; .046)	.556

$\Delta$ PiB was calculated as the difference between consecutive scans (PiB2-PiB1) in A $\beta$  susceptible regions of non-demented elderly for all individuals (All model) or individuals with baseline global PiB positivity (Global PiB[+] model). In this model, the compound variable respiratory symptoms was replaced by witnessed apneas only. Models were controlled for baseline age, interval between scans, sex, APOE4, years of education, baseline regional PiB, baseline global PiB positivity (All model only), midlife physical activity, cardiovascular comorbidities (obesity, hypertension, hyperlipidemia, diabetes), reduced sleep duration, and depression