

Table S1. Correlations between baseline apnea-hypopnea index (AHI) and baseline mean sleep parameters

| | AHI | DIARY: SOL | DIARY: WASO | DIARY: TWT | DIARY: SE | ACTIGRAPHY: SE | PSQI |
|-------------------------|-------|---------------|----------------|---------------|--------------|-------------------|------|
| AHI <i>r</i> | 1.00 | | | | | | |
| p-value | -- | | | | | | |
| N | 134 | | | | | | |
| DIARY: SOL <i>r</i> | 0.04 | 1.00 | | | | | |
| p-value | 0.64 | -- | | | | | |
| N | 134 | 134 | | | | | |
| DIARY: WASO <i>r</i> | -0.02 | 0.22 | 1.00 | | | | |
| p-value | 0.86 | 0.01 | -- | | | | |
| N | 134 | 134 | 134 | | | | |
| DIARY: TWT <i>r</i> | 0.04 | 0.66 | 0.68 | 1.00 | | | |
| p-value | 0.62 | <.001 | <.001 | -- | | | |
| N | 134 | 134 | 134 | 134 | | | |
| DIARY: SE <i>r</i> | -0.05 | -0.62 | -0.68 | -0.96 | 1.00 | | |
| p-value | 0.59 | <.001 | <.001 | <.001 | -- | | |
| N | 134 | 134 | 134 | 134 | 134 | | |
| ACTIGRAPHY: SE <i>r</i> | -0.06 | -0.31 | -0.25 | -0.36 | 0.31 | 1.00 | |
| p-value | 0.51 | <.001 | .004 | <.001 | <.001 | -- | |
| N | 134 | 134 | 134 | 134 | 134 | 134 | |
| PSQI <i>r</i> | -0.02 | 0.48 | 0.25 | 0.49 | -0.53 | -0.06 | 1.00 |
| p-value | 0.80 | <.001 | .004 | <.001 | <.001 | 0.51 | -- |
| N | 134 | 134 | 134 | 134 | 134 | 134 | 134 |

AHI=apnea-hypopnea index; SOL=sleep onset latency; WASO=wake after sleep onset; TWT=total wake time at night; SE=sleep efficiency; PSQI=Pittsburgh Sleep Quality Index

Table S2. Correlations between baseline apnea-hypopnea index (AHI) and the change in sleep parameters (baseline to 6 months follow-up) for participants randomized to cognitive behavioral therapy for insomnia

| | AHI | DIARY: SOL | DIARY: WASO | DIARY: TWT | DIARY: SE | ACTIGRAPHY: SE | PSQI |
|----------------------------|-------|---------------|----------------|---------------|--------------|-------------------|------|
| AHI <i>r</i> | 1.00 | | | | | | |
| p-value | -- | | | | | | |
| N | 86 | | | | | | |
| DIARY: SOL <i>r</i> | 0.03 | 1.00 | | | | | |
| p-value | 0.81 | -- | | | | | |
| N | 66 | 66 | | | | | |
| DIARY: WASO <i>r</i> | -0.04 | 0.39 | 1.00 | | | | |
| p-value | 0.77 | .001 | -- | | | | |
| N | 66 | 66 | 66 | | | | |
| DIARY: TWT <i>r</i> | 0.00 | 0.74 | 0.73 | 1.00 | | | |
| p-value | 0.99 | <.001 | <.001 | -- | | | |
| N | 66 | 66 | 66 | 66 | | | |
| DIARY: SE <i>r</i> | -0.01 | -0.73 | -0.76 | -0.95 | 1.00 | | |
| p-value | 0.92 | <.001 | <.001 | <.001 | -- | | |
| N | 66 | 66 | 66 | 66 | 66 | | |
| ACTIGRAPHY: SE <i>r</i> | -0.03 | -0.21 | -0.24 | -0.23 | 0.13 | 1.00 | |
| p-value | 0.82 | 0.09 | 0.06 | 0.07 | 0.32 | -- | |
| N | 67 | 64 | 64 | 64 | 64 | 67 | |
| PSQI <i>r</i> | 0.06 | 0.61 | 0.45 | 0.55 | -0.60 | 0.04 | 1.00 |
| p-value | 0.63 | <.001 | .002 | <.001 | <.001 | 0.76 | -- |
| N | 73 | 65 | 65 | 65 | 65 | 66 | 73 |

AHI=apnea-hypopnea index; SOL=sleep onset latency; WASO=wake after sleep onset; TWT=total wake time at night; SE=sleep efficiency; PSQI=Pittsburgh Sleep Quality Index

Table S3. Correlations between baseline apnea-hypopnea index (AHI) and the change in sleep parameters (baseline to 6 months follow-up) for participants randomized to control condition

| | AHI | DIARY: SOL | DIARY: WASO | DIARY: TWT | DIARY: SE | ACTIGRAPHY: SE | PSQI |
|-------------------------|-------|---------------|----------------|---------------|--------------|-------------------|------|
| AHI <i>r</i> | 1 | | | | | | |
| p-value | -- | | | | | | |
| N | 48 | | | | | | |
| DIARY: SOL <i>r</i> | -0.17 | 1 | | | | | |
| p-value | 0.26 | -- | | | | | |
| N | 44 | 44 | | | | | |
| DIARY: WASO <i>r</i> | -0.02 | 0.00 | 1 | | | | |
| p-value | 0.89 | 1.00 | -- | | | | |
| N | 44 | 44 | 44 | | | | |
| DIARY: TWT <i>r</i> | -0.18 | 0.45 | 0.73 | 1 | | | |
| p-value | 0.24 | 0.002 | <.001 | -- | | | |
| N | 44 | 44 | 44 | 44 | | | |
| DIARY: SE <i>r</i> | 0.12 | -0.40 | -0.76 | -0.98 | 1 | | |
| p-value | 0.42 | 0.01 | <.001 | <.001 | -- | | |
| N | 44 | 44 | 44 | 44 | 44 | | |
| ACTIGRAPHY: SE <i>r</i> | 0.01 | -0.22 | 0.05 | -0.20 | 0.17 | 1 | |
| p-value | 0.93 | 0.15 | 0.75 | 0.18 | 0.28 | -- | |
| N | 46 | 44 | 44 | 44 | 44 | 46 | |
| PSQI <i>r</i> | -0.05 | 0.34 | 0.28 | 0.43 | -0.37 | 0.09 | 1 |
| p-value | 0.75 | 0.03 | 0.06 | 0.004 | 0.01 | 0.55 | -- |
| N | 46 | 43 | 43 | 43 | 43 | 45 | 46 |

AHI=apnea-hypopnea index; SOL=sleep onset latency; WASO=wake after sleep onset; TWT=total wake time at night; SE=sleep efficiency; PSQI=Pittsburgh Sleep Quality Index