

Supplemental Information

**Supplemental Table 1.** PRT Accuracy as a Function of Stimulus, Block, and Sleep Condition

Condition	Block Number	Rich Trial Accuracy	Lean Trial Accuracy	Overall Accuracy
US	1	.72 (.15)	.6 (.12)	.67 (.1)
	2	.76 (.12)	.58 (.13)	.67 (.1)
	3	.78 (.12)	.57 (.14)	.66 (.14)
FA	1	.73 (.11)	.61 (.13)	.67 (.08)
	2	.76 (.1)	.54 (.12)	.65 (.08)
	3	.77 (.1)	.54 (.13)	.67 (.08)

**Supplemental Table 2.** PRT Quality Control Results

Condition	Block Number	Trials Excluded for <150ms RT	Trials Excluded for >150ms RT	Trials Excluded for RT +/- 3SD
US	1	.22 (.72)	.24 (.53)	.59 (1.2)
	2	.54 (1.7)	.88 (2.7)	.49 (.75)
	3	1.39 (5.91)	1.22 (3.13)	.95 (1.05)
FA	1	.39 (1.14)	.51 (2.05)	.32 (.69)
	2	.51 (1.4)	1.46 (3.4)	.78 (1.13)
	3	1.27 (3.3)	1.93 (4.12)	.83 (1.14)

**Supplemental Table 3.** Differences in sleep architecture and sustained attention between sleep conditions

	US	FA	<i>p</i>
TST	426.98 (66.89)	262.13 (26.83)	<.001
Stage N1	18.67 (12.11)	19.81 (11.41)	.792
Stage N2	192.11 (54.56)	115.86 (23.61)	<.001
Stage N3 (SWS)	114.05 (48.65)	73.16 (26.95)	.792
Stage REM	102.15 (31.59)	53.30 (21.64)	<.001
Mean RRT	3.49 (0.57)	3.60 (0.53)	.021
Lapses	5.89 (7.59)	7.21 (9.89)	.25

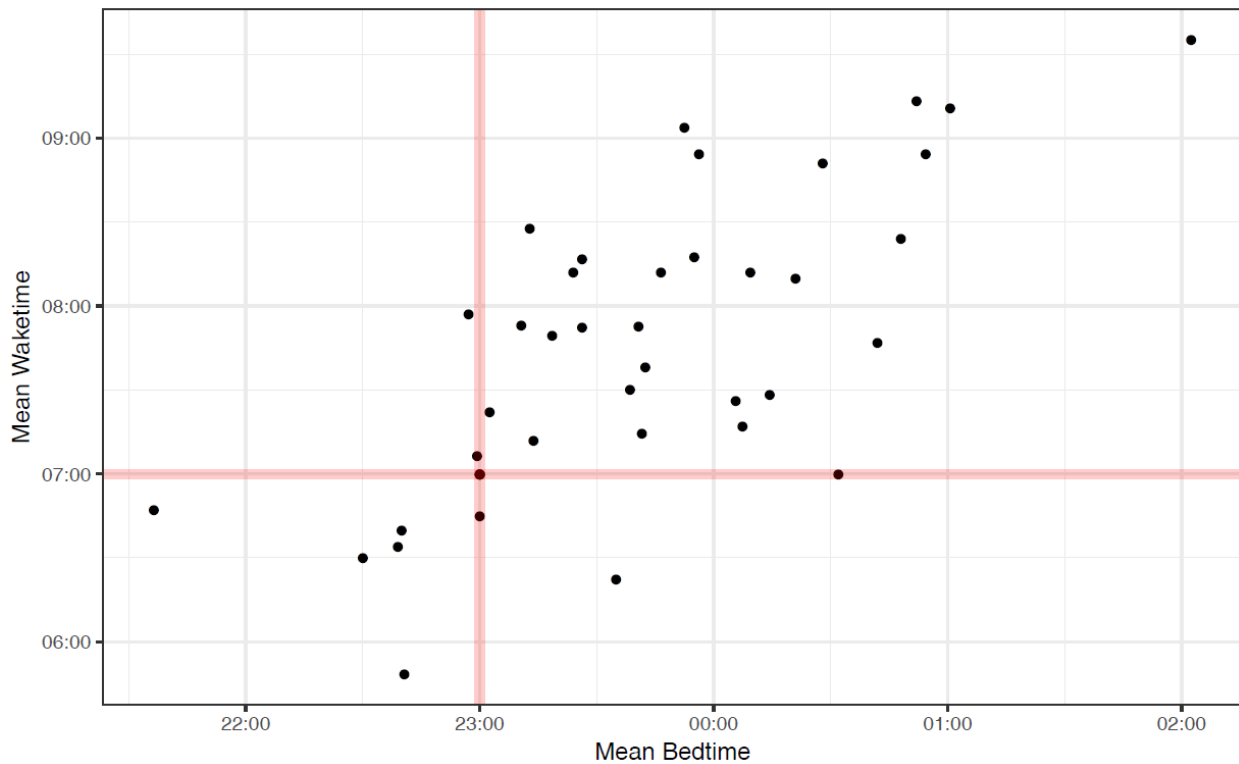
Note. US= Uninterrupted Sleep; FA=Forced Awakenings; TST=Total sleep time; N1-3=non-rapid eye movement stages 1-3; SWS = slow wave sleep; REM = rapid eye movement; all polysomnography measures reported in minutes. RRT= reciprocal response time (seconds) on the psychomotor vigilance task; Lapses = number of attentional lapses on the psychomotor vigilance task.

**Supplemental Table 4.** Differences in Vigilance by Positive Affect Response Groups

	<i>US</i>		<i>FA</i>	
	Reduced Positive Affect	Preserved Positive Affect	Reduced Positive Affect	Preserved Positive Affect
PVT RRT	3.43 (.61)	3.60 (.46)	3.31 (.62)	3.44 (.33)
PVT Lapses	6.50 (8.89)	4.86 (4.72)	8.44 (12.01)	4.50 (2.98)

**Note.** Groups were not significantly different for any comparison,  $p$ 's > .05.

**Supplemental Figure 1.** Scatterplot of Bedtimes and Waketimes at Baseline



**Note.** Crosshair drawn to highlight the Bedtime (11pm) and Waketime (7am) fixed in each participant's inpatient schedule.