

**Supplementary Table E1.** Apneas, hypopneas, snoring, and arousals during sleep

Subject	Period	AHI <sub>TST</sub>		AHI <sub>NREM</sub>		AHI <sub>REM</sub>		Snoring <sub>%TST</sub>		Arousals <sub>RE</sub>	
		#/hr	%	#/hr	%	#/hr	%	%	#/hr	%	
A	Pre	3.6±0.9	100.0±24.0	2.24±0.7	100.0±32.4	7.5±1.8	100.0±23.3	23.4±4.1	100.0±17.3	2.2±0.6	100.0±26.4
	μG	0.4±0.2	9.9±4.8	0.0±0.0	0.0±0.0	1.5±0.6	20.1±8.2	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0
	Post	3.2±0.4	89.1±10.4	1.4±0.6	63.9±27.8	6.6±1.4	88.3±18.4	31.2±2.0	133.4±8.5	1.4±0.1	61.7±4.0
B	Pre	22.7±3.9	100.0±17.0	22.7±3.9	100.0±17.1	22.7±4.8	100.0±20.9	32.6±9.7	100.0±29.7	16.3±2.3	100.0±14.0
	μG	9.7±1.2	42.5±5.2	8.1±1.8	35.6±7.9	14.3±1.3	63.1±5.7	0.7±0.7	2.2±2.2	6.3±1.1	38.4±6.5
	Post	24.6±2.7	108.6±11.8	23.2±4.5	102.1±19.8	28.7±3.3	126.1±14.7	21.6±8.2	66.2±25.2	18.6±3.5	114.3±21.7
C	Pre	3.6±0.8	100.0±21.3	3.1±3.9	100.0±23.0	5.3±1.4	100.0±25.7	11.6±2.2	100.0±19.3	1.7±0.5	100.0±25.8
	μG	4.3±0.1	118.9±2.5	2.5±0.5	82.4±14.6	10.6±1.5	198.8±28.9	2.5±2.5	21.7±21.7	1.6±0.6	93.2±37.1
	Post	5.3±1.2	146.5±33.7	3.0±0.5	96.1±16.1	11.0±2.6	206.9±48.7	18.9±1.4	162.8±11.7	1.9±0.9	110.9±51.3
D	Pre	6.1±1.1	100.0±17.6	6.3±1.3	100.0±36.9	5.4±1.0	100.0±18.0	2.8±0.9	100.0±34.0	4.3±0.8	100.0±19.7
	μG	2.4±0.5	40.2±9.0	2.6±0.7	41.8±11.8	2.0±0.3	37.6±6.0	0.2±0.2	6.9±6.9	1.4±0.5	31.5±10.6

	Post	10.3±1.1	170.9±18.8	8.3±1.2	132.1±19.6	14.5±2.0	265.9±36.7	7.2±2.1	260.5±74.2	6.3±0.7	147.0±15.2
E	Pre	3.6±1.1	100.0±29.2	2.9±1.1	100.0±36.7	5.8±1.4	100.0±23.9	8.7±2.2	100.0±25.5	1.1±0.1	100.0±9.2
	μG	0.4±0.1	12.3±3.6	0.1±0.1	1.8±1.8	1.8±0.5	31.2±8.9	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0
	Post	4.0±1.8	110.6±50.1	4.2±1.7	142.4±59.1	3.8±1.9	65.3±32.5	12.1±8.6	139.0±98.1	1.9±1.2	168.9±103
Mean	Pre	8.3±1.6	100.0±8.9	7.9±1.7	100.0±10.7	9.7±1.7	100.0±9.5	16.5±3.0	100.0±11.1	5.5±1.2	100.0±9.1
	μG	3.4±0.8*	44.8±9.3*	2.7±0.8*	32.3±7.8*	6.1±1.3*	70.2±16.2*	0.7±0.5*	6.1±4.5*	1.8±0.6*	31.3±10.1*
	Post	9.5±2.2†	125±13.5†	8.0±2.3†	107±14.4†	12.9±2.5*†	150±23.6*†	18.2±3.0†	152±27.2†	6.0±1.9†	121±22.2†

*Definition of abbreviations:* Pre = preflight; μG = microgravity; Post = postflight; AHI = apnea-hypopnea index; TST = total sleep time; REM = rapid eye movement sleep; NREM = non-rapid eye movement sleep; Snoring<sub>%TST</sub> = snoring above a predefined threshold as a percentage of TST (see text for details); Arousals<sub>RE</sub> = arousals associated with a respiratory event (see text for details).

Columns labeled % show the parameter as a percentage of the preflight average (control) for that subject. For the purposes of correlation with other publications, the following subject codes apply: A:23, B:34, C:35, D:36, E:38.

\*Significantly different from preflight value.

†Significantly different from inflight value.