Caffeine intake alters recovery sleep after sleep deprivation

Supplementary data

Table S1. Mixed linear model results for sleep parameters

	Effects	F	Degrees of freedom (Df))		P
TST	Treatment (TTT)	6.31	1	70.5	**0.01**
	Night	197.64	1	35.9	**0.001**
	Caff. habitual consumption	3.94	1	65.3	0.08
	TTT x Night	3.65	1	70.0	**0.04**
	TTT x Caff. habitual consumption	0.64	1	102.2	0.42
	Night x Caff. habitual consumption	3.94	1	95.4	**0.04**
	TTT x Night x Caff. habitual consumption	0.750	1	101.9	0.39
N1	Treatment (TTT)	1.89	1	93.9	0.17
	Night	9.68	1	93.5	**0.002**
	Caff. habitual consumption	2.50	1	118.4	0.11
	TTT x Night	0.07	1	93.9	0.78
	TTT x Caff. habitual consumption	0.11	1	119.6	0.73
	Night x Caff. Habitual consumption	0.27	1	114.9	0.60
	TTT x Night x Caff. Habitual Consumption	0.51	1	118.2	0.47
N2	Treatment (TTT)	0.08	1	97.9	0.77
	Night	2.17	1	97.6	0.14
	Caff. habitual consumption	0.01	1	131.7	0.75
	TTT x Night	0.27	1	97.9	0.60
	TTT x Caff. habitual Consumption	1.17	1	110.4	0.28
	Night x Caff. habitual consumption	0.001	1	110.1	0.94
	TTT x Night x Caff. habitual consumption	0.31	1	109.6	0.57
N3	Treatment (TTT)	0.98	1	128.71	0.32
	Night	**30.28**	**1**	**100.52**	**0.001**
	Caff. habitual consumption	2.16	1	100.49	0.14
	TTT x Night	**4.22**	**1**	**100.47**	**0.04**
	TTT x Caff. habitual cConsumption	2.64	1	105.18	0.10
	Night x Caff. habitual cConsumption	0.03	1	105.26	0.85
	TTT x Night x Caff. habitual consumption	0.11	1	104.56	0.74
REM	Treatment (TTT)	1.01	1	132.00	0.316
	Night	**13.27**	**1**	**104.06**	**0.001**
	Caff. habitual consumption	1.12	1	104.62	0.292
	TTT x Night	0.06	1	104.60	0.804
	TTT x Caff. habitual consumption	5.10	1	109.85	0.026
	Night x Caff. habitual consumption	1.77	1	111.08	0.186
	TTT x Night x Caff. habitual consumption	0.04	1	110.17	0.846

Table S2. Mixed linear model results for sleep parameters, in % TST

	Effects	F	Degrees of freedom (Df))		P
N1 (%TST)	Treatment (TTT)	1.76	1	93.91	0.18
	Night	**11.59**	**1**	**93.51**	**0.001**
	Caff. habitual consumption	2.75	1	118.41	0.10
	TTT x Night	0.14	1	93.92	0.71
	TTT x Caff. habitual consumption	0.07	1	119.61	0.79
	Night x Caff. habitual consumption	0.56	1	114.92	0.45
	TTT x Night x Caff. habitual consumption	0.49	1	118.21	0.48
N2 (%TST)	Treatment (TTT)	0.00	1	97.93	0.98
	Night	**9.16**	**1**	**97.62**	**0.003**
	Caff. habitual consumption	0.09	1	131.74	0.76
	TTT x Night	0.75	1	97.91	0.39
	TTT x Caff. habitual consumption	1.17	1	110.43	0.28
	Night x Caff. habitual consumption	0.29	1	110.1	0.59
	TTT x Night x Caff. habitual consumption	0.47	1	109.61	0.49
N3 (%TST)	Treatment (TTT)	3.60	1	97.92	0.06
	Night	**46.36**	**1**	**97.63**	**0.001**
	Caff. habitual consumption	0.90	1	131.74	0.34
	TTT x Night	**5.02**	**1**	**97.91**	**0.02**
	TTT x Caff. habitual consumption	0.02	1	110.42	0.89
	Night x Caff. habitual consumption	3.53	1	110.13	0.06
	TTT x Night x Caff. habitual consumption	0.24	1	109.61	0.62
REM (%TST)	Treatment (TTT)	0.25	1	97.94	0.62
	Night	0.06	1	97.68	0.80
	Caff. habitual consumption	0.61	1	131.78	0.43
	TTT x Night	0.19	1	97.92	0.66
	TTT x Caff. habitual consumption	2.32	1	110.49	0.13
	Night x Caff. habitual consumption	**4.71**	**1**	**110.11**	**0.03**
	TTT x Night x Caff. habitual consumption	0.02	1	109.62	0.88

Caff. is caffeine

Table S3. Mixed linear model results for sleep latencies

	Effects	F	Degrees of freedom (Df))		P
Sleep Onset	Treatment (TTT)	0.82	1	103.78	0.36
Latency (SOL)	**Night**	**11.83**	**1**	**103.78**	**0.001**
	Caff. habitual consumption	0.01	1	109.94	0.94
	TTT x Night	1.35	1	103.78	0.24
	TTT x Caff. habitual consumption	3.61	1	125.10	0.06
	Night x Caff. habitual consumption	3.01	1	125.33	0.09
	TTT x Night x Caff. habitual consumption	1.02	1	125.10	0.32
N2 Latency	Treatment (TTT)	0.68	**1**	103.78	0.41
	Night	2.93	**1**	103.79	0.09
	Caff. habitual consumption	0.00	**1**	109.94	0.98
	TTT x Night	0.02	**1**	103.78	0.90
	TTT x Caff. habitual consumption	1.34	**1**	125.10	0.24
	Night x Caff. habitual consumption	1.26	**1**	125.33	0.26
	TTT x Night x Caff. habitual consumption	0.23	**1**	125.10	0.63
N3 Latency	Treatment (TTT)	1.94	1	103.78	0.16
	Night	**57.96**	**1**	103.79	**0.001**
	Caff. habitual consumption	0.22	1	109.94	0.64
	TTT x Night	0.86	1	103.78	0.51
	TTT x Caff. habitual consumption	3.18	1	125.10	0.07
	Night x Caff. habitual consumption	1.47	1	125.33	0.18
	TTT x Night x Caff. habitual consumption	0.03	1	125.10	0.85
REM latency	Treatment (TTT)	0.57	1	103.78	0.45
	Night	**5.91**	**1**	103.79	**0.02**
	Caff. habitual consumption	0.20	1	109.94	0.65
	TTT x Night	0.07	1	103.78	0.76
	TTT x Caff. habitual consumption	0.24	1	125.10	0.62
	Night x Caff. habitual consumption	3.46	1	125.33	0.06
	TTT x Night x Caff. habitual consumption	0.40	1	125.10	0.52

Caff. is caffeine

Table S4. Mixed linear model results for sleep quality

	Effects	F	Degrees of freedom (Df))		P
WASO	Treatment (TTT)	0.67	1	78.2	0.41
(min)	Night	0.16	1	100.7	0.68
	Caff. habitual consumption	2.98	1	92.5	0.08
	TTT x Night	0.27	1	104.9	0.60
	TTT x Caff. habitual consumption	1.79	1	104.9	0.18
	Night x Caff. habitual consumption	2.32	1	100.0	0.13
	TTT x Night x Caff. habitual consumption	1.16	1	109.6	0.28
WASO	Treatment (TTT)	0.57	1	78.2	0.40
(n)	Night	3.16	1	100.7	0.18
	Caff. habitual consumption	3.98	1	92.5	0.07
	TTT x Night	**5.31**	**1**	**104.9**	**0.04**
	TTT x Caff. habitual consumption	**5.79**	**1**	**104.9**	**0.04**
	Night x Caff. habitual consumption	2.22	1	100.0	0.11
	TTT x Night x Caff. habitual consumption	3.26	1	109.6	0.12
SEI	Treatment (TTT)	0.14	1	103.66	0.71
(%)	**Night**	**4.60**	**1**	**103.66**	**0.03**
	Caff. habitual consumption	0.33	1	124.05	0.56
	TTT x Night	0.02	1	103.66	0.88
	TTT x Caff. habitual consumption	3.03	1	121.00	0.08
	Night x Caff. habitual consumption	1.04	1	122.02	0.30
	TTT x Night x Caff. habitual consumption	0.27	1	121.00	0.60

Caff. is caffeine; SEI is sleep efficiency index