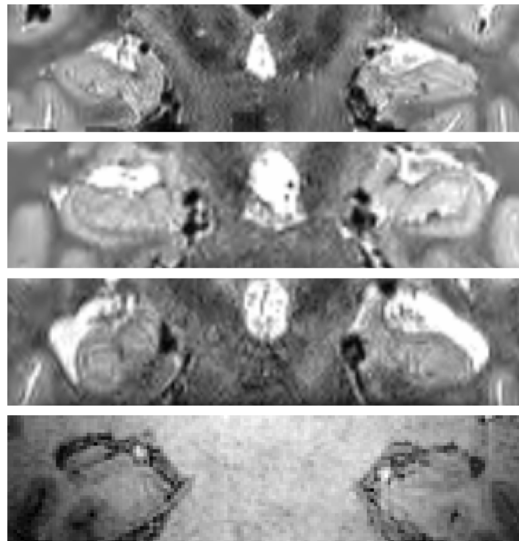


**Healthy control participant**



**Patients with hippocampal damage**



**Figure S1. MR images from one example control participant and each of the four patients. Related to the Experimental Model and Participant Details in the STAR Methods.** For the control participants and the top 3 patient panels, we show T2-weighted structural MR images (0.5mm isotropic voxels). For one patient (bottom panel), only a T1-weighted image (1mm isotropic voxels) was available. Images are displayed in native space corresponding approximately to the position of  $y = -10$  in the MNI coordinate system. Note the dilatation of the temporal horns that is associated with the hippocampal atrophy. As shown here and from the percentage volume loss in Table S1, patients suffered from selective bilateral hippocampal damage.

Group	Age	Chronicity	LHPC volume (mm <sup>3</sup> )	RHPC volume (mm <sup>3</sup> )	LHPC % volume loss relative to CTL <sup>a</sup>	RHPC % volume loss relative to CTL <sup>a</sup>	WASI	SWS%
CTL	59.20 (15.89)	n.a.	3173.18 <sup>a</sup> (338.89)	3285.91 <sup>a</sup> (300.81)	n.a.	n.a.	14.50 (2.37)	5.39 (4.57)
HPC1	61	6	2506	2803	-21.03%	-14.70%	12	0.10
HPC2	72	8	1736	1698	-45.29%	-48.32%	10	0.00
HPC3	72	11	2607	2755	-17.84%	-16.16%	12	0.27
HPC4	28	11	2819	2804	-11.16%	-14.67%	14	0.97

**Table S1. Summary of demographic characteristics and SWS. Related to the Experimental Model and Participant Details in the STAR Methods.** All control participants and patients were right-handed males. Mean and standard deviation in parentheses are shown for control participants and individual data for the 4 patients. Age and chronicity are expressed in years. <sup>a</sup>The control group consisted of eleven participants (mean age 55.64 years  $\pm$  16.47). LHPC = left hippocampus; RHPC = right hippocampus; WASI = Wechsler Abbreviated Scale of Intelligence [S1] Matrix Reasoning subtest scaled score; SWS = slow-wave sleep.

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	HPC		CTL <sup>a</sup>		<i>U</i>	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
<b>General Cognition</b>							
WASI Similarities scaled score [S1]	11.75 (0.96)	[10.23, 13.27]	11.83 (2.55)	[10.21, 13.46]	21.0	0.18	0.713
<b>Episodic Memory</b>							
Autobiographical Interview internal ('episodic') details <sup>b</sup> [S2]	32.55 (5.63)	[23.59, 41.51]	46.43 (12.82)	[38.80, 59.95]	3.0	1.65	<b>0.030</b>
WMS Logical Memory (immediate recall, units) [S3]	8.00 (2.71)	[3.69, 12.31]	12.58 (3.18)	[10.57, 14.6]	7.0	1.20	<b>0.038</b>
WMS Logical Memory (immediate recall, thematic)	8.00 (2.16)	[4.56, 11.44]	13.75 (2.96)	[11.87, 15.63]	3.0	1.65	<b>0.010</b>
WMS Logical Memory (delayed recall, units)	7.25 (2.87)	[2.68, 11.82]	13.17 (3.74)	[10.79, 15.54]	4.0	1.53	<b>0.015</b>
WMS Logical Memory (delayed recall, thematic)	7.25 (3.1)	[2.32, 12.18]	13.5 (3.18)	[11.48, 15.52]	3.5	1.59	<b>0.012</b>
WMS Wordlist (immediate recall) scaled score	9.50 (3.87)	[3.34, 15.66]	13.25 (3.17)	[11.24, 15.26]	11.5	0.82	0.126
WMS Wordlist (delayed recognition) scaled score	10.00 (2.71)	[5.69, 14.31]	11.67 (1.37)	[10.8, 12.54]	17.0	0.43	0.373
Rey-Osterrieth Complex Figure (immediate recall /36) [S4]	19.50 (6.61)	[8.99, 30.01]	23.8 (7.36)	[18.63, 29.17]	10.5	0.90	0.178
Rey-Osterrieth Complex Figure (delayed recall, /36)	19.75 (5.06)	[11.7, 27.8]	23.92 (7.75)	[18.99, 28.84]	11.0	0.86	0.113
Warrington Recognition Memory Test for Words scaled score [S5]	11.25 (0.96)	[9.73, 12.77]	12.00 (2.34)	[10.52, 13.48]	18.5	0.34	0.495
Warrington Recognition Memory Test for Faces scaled score	8.00 (2.16)	[4.56, 11.44]	11.33 (2.96)	[9.45, 13.22]	7.0	1.20	<b>0.036</b>
<b>Semantic Memory</b>							
Warrington Graded Naming Test scaled score [S6,S7]	11.00 (2.16)	[7.56, 14.44]	13.67 (2.42)	[12.13, 15.21]	9.0	1.02	0.065
Autobiographical Interview external ('semantic') details <sup>b</sup>	7.63 (3.74)	[1.68, 13.57]	5.90 (3.67)	[3.11, 9.46]	14.0	0.20	0.730
<b>Attention/Working Memory</b>							
WMS Digit Span (forward) scaled score	11.50 (3.11)	[6.55, 16.45]	13.25 (3.22)	[11.2, 15.3]	19.5	0.28	0.581
<b>Executive Functions</b>							
DKEFS Letter Fluency (FAS) scaled score [S8]	12.25 (2.87)	[7.68, 16.82]	14.33 (3.20)	[12.3, 16.37]	14.5	0.60	0.247
DKEFS Category Fluency scaled score	13.50 (5.74)	[4.36, 22.64]	13.92 (4.38)	[11.13, 16.7]	22.0	0.12	0.807
DKEFS Category Switch Test scaled score	13.00 (4.24)	[6.25, 19.75]	12.67 (2.93)	[10.8, 14.53]	22.0	0.12	0.806
DKEFS Stroop Word-Colour Interference Test scaled score	13.25 (2.5)	[9.27, 17.23]	12.42 (2.23)	[11, 13.84]	18.5	0.34	0.501
DKEFS Trails Test (visual scanning) scaled score	11.25 (0.96)	[9.73, 12.77]	12.00 (1.28)	[11.19, 12.81]	15.0	0.57	0.261
DKEFS Trails Test (number sequencing) scaled score	11.00 (1.41)	[8.75, 13.25]	11.83 (2.52)	[10.23, 13.43]	15.5	0.53	0.292
DKEFS Trails Test (letter sequencing) scaled score	10.50 (3)	[5.73, 15.27]	12.5 (1.51)	[11.54, 13.46]	15.5	0.53	0.280
DKEFS Trails Test (letter-number sequencing) scaled score	9.75 (2.06)	[6.47, 13.03]	12.83 (1.03)	[12.18, 13.49]	3.0	1.65	<b>0.008</b>

DKEFS Trails Test (motor speed) scaled score	12.00 (0.82)	[10.7, 13.3]	11.75 (1.14)	[11.03, 12.47]	19.5	0.28	0.568
Hayling Sentence Completion Test (coherent) [S9]	5.75 (0.5)	[4.95, 6.55]	6.08 (1.00)	[5.45, 6.72]	20.0	0.24	0.606
Hayling Sentence Completion Test (incoherent)	5.75 (0.5)	[4.95, 6.55]	5.75 (0.75)	[5.27, 6.23]	23.0	0.06	0.882
Hayling Sentence Completion Test (errors)	6.25 (2.22)	[2.72, 9.78]	6.83 (1.11)	[6.13, 7.54]	22.0	0.12	0.800
Hayling Sentence Completion Test (total)	17.75 (2.5)	[13.77, 21.73]	18.67 (1.56)	[17.68, 19.66]	22.5	0.09	0.851

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#### ***Visual Perception***

VOSP Dot Counting (/10) [S10,S11]	9.50 (1.00)	[7.91, 11.09]	10.00 (0.00)	[10, 10]	18.0	0.37	0.083
VOSP Position Discrimination (/20)	19.50 (1.00)	[17.91, 21.09]	20.00 (0.00)	[20, 20]	18.0	0.37	0.083
VOSP Cube Analysis (/10)	9.50 (1.00)	[7.91, 11.09]	9.58 (0.79)	[9.08, 10.09]	23.5	0.03	0.936
VOSP Overall (/40)	38.50 (3.00)	[33.73, 43.27]	39.58 (0.79)	[39.08, 40.09]	22.5	0.09	0.811

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#### ***Mood***

HADS Anxiety [S12]	2.75 (2.06)	[-0.53, 6.03]	4.33 (2.93)	[2.47, 6.2]	15.0	0.57	0.269
HADS Depression	1.25 (0.5)	[0.45, 2.05]	2.33 (2.74)	[0.59, 4.08]	22.5	0.09	0.852

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	Mean Difference	P-Value	95% CI
<b>Sleep Quality</b>			
<i>WatchPAT</i>			
Apnoea–Hypopnoea Index	7.445	0.432	[-4.09, 26.90]
<i>Actigraphy (Across 7 nights)</i>			
Sleep Efficiency (%)	-5.810	0.358	[-18.59, 1.83]
Total Sleep Time (minutes)	-6.700	0.897	[-115.38, 72.20]
Fragmentation Index	10.019	0.196	[-2.20, 24.15]
<b>Sleep Macroarchitecture</b>			
Total Sleep Time (min)	-15.706	0.754	[-117.09, 72.68]
Sleep Efficiency (%)	-2.717	0.737	[-17.31, 13.85]
Latency to Sleep Onset (min)	10.461	0.113	[-2.66, 20.15]
Latency to REM (min)	30.261	0.185	[-7.13, 75.67]
Wake After Sleep Onset (min)	-4.939	0.910	[-76.87, 45.42]
NREM Stage 1 (%)	7.486	0.488	[-11.31, 28.23]
NREM Stage 1 (min)	10.858	0.617	[-30.66, 52.31]
NREM Stage 2 (%)	1.688	0.813	[-18.22, 14.35]
NREM Stage 2 (min)	-3.579	0.932	[-91.52, 59.07]
NREM SWS (%)	-5.053	<b>0.020</b>	[-7.85, -2.37]
NREM SWS (min)	-16.704	<b>0.031</b>	[-27.03, -7.17]
REM Sleep (%)	-4.137	0.563	[-17.90, 9.04]
REM Sleep (min)	-13.667	0.651	[-63.62, 46.63]
<b>Sleep Stability and Fragmentation</b>			
Arousal Index Score Events/Hour	-2.123	0.797	[-15.29, 14.83]
Awakening Index Score Events/Hour	-1.398	0.454	[-4.81, 1.93]
State Transitions/Hour	-8.941	0.498	[-27.48, 16.38]
Functional Uncertainty (TFU/TST)	-0.055	0.207	[-0.13, 0.03]
Wake-Sleep Transitions (min)	-0.018	0.824	[-0.14, 0.13]
Stability NREM (min)	0.169	0.076	[0.03, 0.35]
Stability REM (min)	0.067	0.568	[-0.16, 0.24]

	HPC		CTL		<i>U</i>	ES	P-Value
	M (SD)	95% CI	M	95% CI			
<b>Sleep Quality</b>							
<i>Sleep Questionnaires</i>							
PSQI	3.67 (1.15)	[0.8, 6.54]	3.88 (1.89)	[2.3, 5.45]	11.5	0.06	0.914
ESS	5.33 (3.51)	[-3.39, 14.06]	5.13 (4.05)	[1.74, 8.51]	11.0	0.12	0.834
MEQ	53.00 (7.00)	[35.61, 70.39]	59.00 (6.00)	[53.98, 64.02]	5.5	0.87	0.183
<i>WatchPAT</i>							
Apnoea–Hypopnoea Index	10.13 (3.86)	[0.56, 19.71]	7.28 (3.20)	[4.6, 9.95]	7.0	0.65	0.316
<i>Actigraphy (Across 7 nights)</i>							
Sleep Efficiency (%)	87.95 (3.37)	[79.56, 96.33]	89.58 (3.07)	[87.01, 92.15]	7.0	0.65	0.307
Total Sleep Time (minutes)	453.12 (49.20)	[330.91, 575.33]	421.43 (30.63)	[395.82, 447.04]	6.0	0.8	0.221
Fragmentation Index	23.59 (10.46)	[-2.39, 49.56]	17.67 (6.79)	[11.99, 23.34]	10.0	0.25	0.776
Night-to-night Variability	10.35 [5.85]	[-4.19, 24.89]	7.20 (2.44)	[5.16, 9.23]	8.0	0.51	0.414
Bedtime	23:22 (00:28)	[22:12, 00:32]	23:27 (00:33)	[22:59, 23:54]	10.0	0.25	0.683
Midpoint	3:28 (0:28)	[2:18, 4:37]	3:13 (0:36)	[2:43, 3:44]	7.0	0.65	0.307
<b>Sleep Macroarchitecture</b>							
Total Sleep Time (min)	311.28 (84.85)	[100.5, 522.06]	339.83 (59.49)	[290.1, 389.57]	8.0	0.51	0.414
Sleep Efficiency (%)	68.50 (13.61)	[34.7, 102.3]	73.20 (11.64)	[63.47, 82.92]	10.0	0.25	0.683
Latency to Sleep Onset (min)	25.28 (10.35)	[-0.43, 50.98]	14.92 (9.77)	[6.75, 23.09]	3.0	1.33	0.066
Latency to REM (min)	114.28 (37.44)	[21.27, 207.29]	79.25 (21.15)	[61.57, 96.93]	4.0	1.13	0.102
Wake After Sleep Onset (min)	111.28 (55.24)	[-25.94, 248.49]	108.92 (48.83)	[68.09, 149.74]	10.5	0.19	0.759
NREM Stage 1 (%)	21.11 (22.23)	[-34.12, 76.34]	17.14 (6.30)	[11.88, 22.41]	9.0	0.38	0.540
NREM Stage 1 (min)	51.61 (39.57)	[-46.7, 149.92]	55.40 (13.45)	[44.15, 66.64]	9.0	0.38	0.540
NREM Stage 2 (%)	56.03 (17.71)	[12.04, 100.03]	55.96 (4.82)	[51.93, 59.99]	11.0	0.12	0.838
NREM Stage 2 (min)	183 (83.08)	[-23.38, 389.38]	191.15 (41.40)	[156.53, 225.76]	10.0	0.25	0.683
NREM SWS (%)	0.41 (0.50)	[-0.83, 1.65]	6.43 (4.53)	[2.65, 10.22]	2.0	1.56	<b>0.041</b>
NREM SWS (min)	1.67 (2.20)	[-3.81, 7.14]	21.73 (16.80)	[7.69, 35.77]	2.0	1.56	<b>0.041</b>

REM Sleep (%)	22.44 (10.34)	[-3.24, 48.13]	20.48 (4.93)	[16.36, 24.6]	10.0	0.25	0.683
REM Sleep (min)	75.00 (52.1)	[-54.42, 204.42]	71.35 (21.70)	[53.21, 89.5]	10.0	0.25	0.683

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#### **Sleep Stability and Fragmentation**

Arousal Index Score Events/Hour	19.3 (14.48)	[-16.67, 55.27]	19.77 (6.8)	[14.08, 25.45]	11.0	0.12	0.838
Awakening Index Score Events/Hour	7.88 (2.75)	[1.05, 14.7]	8.72 (2.91)	[6.29, 11.15]	10.0	0.25	0.683
State Transitions/Hour	36.79 (20.49)	[-14.11, 87.69]	43.75 (11.8)	[33.89, 53.61]	8.0	0.51	0.414
Functional Uncertainty (TFU/TST)	0.12 (0.07)	[-0.05, 0.29]	0.16 (0.06)	[0.1, 0.21]	8.0	0.51	0.414
Wake-Sleep Transitions (min)	0.20 (0.12)	[-0.11, 0.5]	0.20 (0.09)	[0.12, 0.28]	12.0	0.00	1.000
Stability NREM (min)	1.94 (0.15)	[1.57, 2.3]	1.78 (0.09)	[1.7, 1.85]	5.0	0.96	0.153
Stability REM (min)	1.75 (0.19)	[1.27, 2.23]	1.69 (0.09)	[1.61, 1.77]	7.0	0.65	0.307

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F3							
	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.62(0.49)	[0.41, 2.83]	1.76(0.33)	[1.49, 2.04]	9.0	0.38	0.540
Amplitude (μV)	18.59(8.99)	[-3.74, 40.92]	22.07(3.28)	[19.32, 24.81]	11.0	0.12	0.838
Duration (s)	0.74(0.05)	[0.62, 0.86]	0.77(0.05)	[0.73, 0.8]	9.0	0.38	0.540
Core frequency (Hz)	9.78(0.52)	[8.5, 11.06]	9.88(0.4)	[9.55, 10.21]	11.0	0.12	0.838
Fast Spindles							
Density (1/epoch)	1.77(0.55)	[0.39, 3.15]	1.85(0.39)	[1.53, 2.18]	11.0	0.12	0.838
Amplitude (μV)	11.91(5.57)	[-1.92, 25.74]	14.99(3.89)	[11.74, 18.25]	8.0	0.51	0.414
Duration (s)	0.77(0.04)	[0.67, 0.87]	0.75(0.03)	[0.72, 0.78]	9.0	0.38	0.540
Core frequency (Hz)	13.2(0.28)	[12.5, 13.89]	13.06(0.29)	[12.82, 13.3]	10.0	0.25	0.683
Slow Oscillations							
Density (1/epoch)	1.03(0.17)	[0.6, 1.46]	1.4(0.36)	[1.11, 1.7]	4.0	1.13	0.102
Duration (s)	1.36(0.04)	[1.26, 1.46]	1.32(0.07)	[1.26, 1.38]	8.0	0.51	0.414
Amplitude (μV)	99.17(25.59)	[35.61, 162.72]	125.03(23.32)	[105.53, 144.52]	5.0	0.96	0.153
Slope (μV/s)	-449.09(119.02)	[-744.76, -153.42]	-601.84(135.6)	[-715.21, -488.48]	4.0	1.13	0.102
Coupling Fast spindles-SO	51.56(55.35)	[-85.95, 189.06]	88.33(51.2)	[45.53, 131.14]	6.0	0.80	0.221

F4							
	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	2(1.09)	[-0.7, 4.7]	1.77(0.34)	[1.49, 2.05]	11.0	0.12	0.838
Amplitude (μV)	21.03(9.93)	[-3.63, 45.69]	22.51(3.63)	[19.47, 25.55]	10.0	0.25	0.683
Duration (s)	0.79(0.09)	[0.56, 1.01]	0.76(0.04)	[0.73, 0.8]	11.0	0.12	0.838
Core frequency (Hz)	9.88(0.61)	[8.36, 11.4]	9.87(0.41)	[9.52, 10.21]	12.0	0.00	1.000
Fast Spindles							
Density (1/epoch)	1.74(0.48)	[0.55, 2.93]	1.94(0.36)	[1.64, 2.24]	8.0	0.51	0.414
Amplitude (μV)	12.16(5.45)	[-1.37, 25.69]	15.86(4.37)	[12.21, 19.51]	7.0	0.65	0.307
Duration (s)	0.77(0.04)	[0.66, 0.87]	0.74(0.03)	[0.72, 0.77]	8.0	0.51	0.414
Core frequency (Hz)	13.15(0.32)	[12.37, 13.94]	13.06(0.28)	[12.82, 13.3]	10.0	0.25	0.683
Slow Oscillations							
Density (1/epoch)	1.08(0.18)	[0.64, 1.52]	1.4(0.37)	[1.08, 1.71]	6.0	0.80	0.221
Duration (s)	1.36(0.04)	[1.26, 1.47]	1.31(0.07)	[1.25, 1.37]	6.0	0.80	0.221
Amplitude (μV)	101.95(29.41)	[28.88, 175.02]	124.86(22.82)	[105.78, 143.95]	6.0	0.80	0.221
Slope (μV/s)	-458.8(129.7)	[-781, -136.6]	-597.07(118.4)	[-696.06, -498.09]	3.0	1.33	0.066
Coupling Fast spindles-SO	47.78(44.79)	[-63.48, 159.03]	87.13(46.31)	[48.41, 125.84]	5.0	0.96	0.153

C3							
	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.51(0.28)	[0.8, 2.21]	1.62(0.22)	[1.44, 1.8]	9.0	0.38	0.540
Amplitude (μV)	16.52(7.23)	[-1.43, 34.47]	19.93(1.07)	[19.04, 20.83]	12.0	0.00	1.000
Duration (s)	0.72(0.03)	[0.65, 0.79]	0.75(0.03)	[0.73, 0.77]	5.0	0.96	0.153
Core frequency (Hz)	9.69(0.49)	[8.47, 10.92]	9.83(0.36)	[9.53, 10.13]	9.0	0.38	0.540
Fast Spindles							
Density (1/epoch)	2.2(0.63)	[0.63, 3.76]	2.11(0.32)	[1.85, 2.38]	9.0	0.38	0.540
Amplitude (μV)	13.57(6.5)	[-2.57, 29.7]	16.04(2.91)	[13.6, 18.47]	12.0	0.00	1.000
Duration (s)	0.79(0.06)	[0.64, 0.94]	0.74(0.02)	[0.73, 0.76]	5.0	0.96	0.153
Core frequency (Hz)	13.42(0.35)	[12.54, 14.29]	13.31(0.3)	[13.06, 13.56]	9.0	0.38	0.540
Slow Oscillations							
Density (1/epoch)	0.83(0.28)	[0.13, 1.53]	1.09(0.3)	[0.84, 1.34]	6.0	0.80	0.221
Duration (s)	1.38(0.03)	[1.31, 1.45]	1.32(0.08)	[1.25, 1.39]	6.0	0.80	0.221
Amplitude (μV)	86.51(22.95)	[29.49, 143.53]	101.39(15.63)	[88.32, 114.46]	7.0	0.65	0.307
Slope (μV/s)	-374.81(100.3)	[-623.96, -125.66]	-466.32(78.9)	[-532.28, -400.36]	4.0	1.13	0.102
Coupling Fast spindles-SO	42.78(50.2)	[-81.94, 167.49]	63.58(30.45)	[38.12, 89.04]	7.0	0.65	0.307

C4							
	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.7(0.54)	[0.35, 3.05]	1.63(0.24)	[1.43, 1.83]	11.0	0.12	0.838
Amplitude (μV)	17.41(6.84)	[0.41, 34.41]	20.1(1.46)	[18.88, 21.32]	12.0	0.00	1.000

Duration (s)	0.74(0.03)	[0.67, 0.81]	0.74(0.02)	[0.73, 0.76]	10.0	0.25	0.683
Core frequency (Hz)	9.77(0.56)	[8.38, 11.17]	9.82(0.35)	[9.53, 10.12]	10.0	0.25	0.683
Fast Spindles							
Density (1/epoch)	2.14(0.51)	[0.88, 3.4]	2.09(0.34)	[1.81, 2.38]	11.0	0.12	0.838
Amplitude (μV)	13.22(5.29)	[0.08, 26.36]	15.77(2.78)	[13.44, 18.1]	10.0	0.25	0.683
Duration (s)	0.78(0.06)	[0.63, 0.93]	0.74(0.02)	[0.72, 0.75]	4.0	1.13	0.102
Core frequency (Hz)	13.39(0.38)	[12.45, 14.33]	13.28(0.3)	[13.03, 13.53]	9.0	0.38	0.540
Slow Oscillations							
Density (1/epoch)	0.87(0.2)	[0.37, 1.38]	1.13(0.34)	[0.84, 1.41]	5.0	0.96	0.153
Duration (s)	1.39(0.05)	[1.26, 1.52]	1.34(0.08)	[1.27, 1.41]	8.0	0.51	0.414
Amplitude (μV)	88.52(20.32)	[38.05, 139]	102.62(15.92)	[89.31, 115.92]	8.0	0.51	0.414
Slope (μV/s)	-379.84(91.15)	[-606.28, -153.41]	-459.07(75.94)	[-522.56, -395.59]	6.0	0.80	0.221
Coupling Fast spindles-SO	42.56(42.53)	[-63.11, 148.22]	57.71(29.68)	[32.89, 82.52]	7.0	0.65	0.307

### P3

	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.4(0.19)	[0.92, 1.88]	1.47(0.19)	[1.31, 1.63]	11.0	0.12	0.838
Amplitude (μV)	14.6(5.91)	[-0.08, 29.29]	17.2(1.86)	[15.65, 18.76]	10.0	0.25	0.683
Duration (s)	0.74(0.02)	[0.69, 0.79]	0.74(0.02)	[0.72, 0.76]	10.0	0.25	0.683
Core frequency (Hz)	9.61(0.46)	[8.46, 10.75]	9.74(0.31)	[9.48, 10]	9.0	0.38	0.540
Fast Spindles							
Density (1/epoch)	2.53(0.63)	[0.98, 4.09]	2.23(0.41)	[1.88, 2.58]	8.0	0.51	0.414
Amplitude (μV)	13.35(6.63)	[-3.12, 29.82]	15.2(2.96)	[12.73, 17.68]	10.0	0.25	0.683
Duration (s)	0.81(0.07)	[0.63, 0.99]	0.75(0.03)	[0.72, 0.78]	5.0	0.96	0.153
Core frequency (Hz)	13.44(0.3)	[12.7, 14.18]	13.43(0.29)	[13.18, 13.67]	11.0	0.12	0.838
Slow Oscillations							
Density (1/epoch)	0.66(0.2)	[0.15, 1.16]	0.93(0.45)	[0.56, 1.31]	7.0	0.65	0.307
Duration (s)	1.41(0.04)	[1.32, 1.51]	1.35(0.08)	[1.28, 1.42]	5.0	0.96	0.153
Amplitude (μV)	75.38(13.36)	[42.18, 108.57]	89.99(17.14)	[75.66, 104.32]	6.0	0.80	0.221
Slope (μV/s)	-314.77(65.51)	[-477.5, -152.05]	-391.94(75.19)	[-454.8, -329.09]	4.0	1.13	0.102
Coupling Fast spindles-SO	32.78(34.27)	[-52.35, 117.91]	47.79(35.8)	[17.86, 77.72]	8.0	0.51	0.414

### P4

	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.42(0.19)	[0.96, 1.88]	1.49(0.23)	[1.3, 1.69]	10.0	0.25	0.683
Amplitude (μV)	14.57(5.53)	[0.83, 28.31]	17.27(1.83)	[15.74, 18.81]	9.0	0.38	0.540
Duration (s)	0.74(0.02)	[0.69, 0.78]	0.74(0.02)	[0.72, 0.75]	11.0	0.12	0.838
Core frequency (Hz)	9.63(0.45)	[8.52, 10.75]	9.73(0.31)	[9.47, 9.99]	10.0	0.25	0.683
Fast Spindles							
Density (1/epoch)	2.36(0.49)	[1.15, 3.57]	2.23(0.4)	[1.89, 2.57]	9.0	0.38	0.540
Amplitude (μV)	12.63(5.33)	[-0.61, 25.88]	14.87(2.47)	[12.8, 16.93]	8.0	0.51	0.414
Duration (s)	0.8(0.07)	[0.63, 0.97]	0.75(0.04)	[0.72, 0.78]	5.0	0.96	0.153
Core frequency (Hz)	13.41(0.31)	[12.65, 14.18]	13.39(0.31)	[13.14, 13.65]	11.0	0.12	0.838
Slow Oscillations							
Density (1/epoch)	0.66(0.17)	[0.23, 1.09]	0.92(0.45)	[0.54, 1.29]	9.0	0.38	0.540
Duration (s)	1.42(0.05)	[1.29, 1.54]	1.37(0.09)	[1.3, 1.44]	7.0	0.65	0.307
Amplitude (μV)	76.24(13.21)	[43.44, 109.05]	89.82(17.61)	[75.1, 104.55]	7.0	0.65	0.307
Slope (μV/s)	-312.56(55.92)	[-451.46, -173.65]	-379.07(74.69)	[-441.51, -316.62]	4.0	1.13	0.102
Coupling Fast spindles-SO	28.22(30.16)	[-46.69, 103.13]	45.71(33.15)	[17.99, 73.43]	6.0	0.80	0.221

## A

	F3		CTL		U	ES	P-Value
	HPC		CTL				
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.59(0.4)	[0.95, 2.23]	1.78(0.31)	[1.56, 2]	12.0	0.63	0.258
Amplitude (μV)	19.97(7.84)	[7.5, 32.44]	21.84(3.04)	[19.66, 24.01]	19.0	0.08	0.888
Duration (s)	0.73(0.04)	[0.67, 0.8]	0.76(0.04)	[0.74, 0.79]	13.0	0.55	0.322
Core frequency (Hz)	9.73(0.43)	[9.04, 10.42]	10(0.47)	[9.66, 10.33]	14.0	0.47	0.396
Fast Spindles							
Density (1/epoch)	1.92(0.55)	[1.05, 2.79]	1.85(0.37)	[1.58, 2.11]	17.0	0.23	0.671
Amplitude (μV)	14.5(6.9)	[3.53, 25.48]	15.05(3.52)	[12.53, 17.57]	20.0	0.00	1.000
Duration (s)	0.74(0.06)	[0.65, 0.84]	0.75(0.03)	[0.73, 0.77]	20.0	0.00	1.000
Core frequency (Hz)	13.18(0.23)	[12.81, 13.55]	12.98(0.35)	[12.73, 13.22]	13.0	0.55	0.322
Slow Oscillations							
Density (1/epoch)	1.27(0.5)	[0.48, 2.07]	1.41(0.32)	[1.18, 1.64]	13.0	0.55	0.322
Duration (s)	1.33(0.07)	[1.22, 1.44]	1.32(0.06)	[1.28, 1.37]	20.0	0.00	1.000
Amplitude (μV)	104.86(23.79)	[67, 142.71]	122.24(21.91)	[106.57, 137.91]	12.0	0.63	0.258
Slope (μV/s)	-478.44(113.54)	[-659.1, -297.77]	-585.66(124.61)	[-674.79, -496.52]	11.0	0.72	0.204
Coupling Fast spindles-SO	46.17(46.46)	[-27.77, 120.1]	81.67(47.81)	[47.46, 115.87]	9.0	0.91	0.120

	F4		CTL		U	ES	P-Value
	HPC						
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.84(0.94)	[0.34, 3.34]	1.77(0.3)	[1.55, 1.99]	15.0	0.39	0.480
Amplitude (μV)	21.73(8.23)	[8.64, 34.82]	22.29(3.44)	[19.83, 24.75]	17.0	0.23	0.671
Duration (s)	0.76(0.09)	[0.61, 0.91]	0.76(0.04)	[0.74, 0.79]	17.0	0.23	0.671
Core frequency (Hz)	9.85(0.5)	[9.05, 10.65]	10(0.49)	[9.65, 10.35]	17.0	0.23	0.671
Fast Spindles							
Density (1/epoch)	2.01(0.66)	[0.96, 3.06]	1.94(0.34)	[1.69, 2.18]	19.0	0.08	0.888
Amplitude (μV)	14.73(6.79)	[3.92, 25.54]	15.85(3.89)	[13.07, 18.63]	18.0	0.15	0.777
Duration (s)	0.75(0.05)	[0.66, 0.83]	0.74(0.02)	[0.73, 0.76]	20.0	0.00	1.000
Core frequency (Hz)	13.12(0.27)	[12.69, 13.54]	12.97(0.35)	[12.73, 13.22]	15.0	0.39	0.480
Slow Oscillations							
Density (1/epoch)	1.08(0.14)	[0.85, 1.31]	1.41(0.33)	[1.17, 1.65]	8.0	1.02	0.090
Duration (s)	1.31(0.11)	[1.14, 1.48]	1.32(0.06)	[1.27, 1.36]	18.0	0.15	0.777
Amplitude (μV)	110.76(29.78)	[63.36, 158.15]	122.41(22.29)	[106.47, 138.35]	16.0	0.31	0.572
Slope (μV/s)	-525.61(170.49)	[-796.9, -254.32]	-583.62(111.08)	[-663.08, -504.16]	14.0	0.47	0.396
Coupling Fast spindles-SO	42.33(38.15)	[-18.38, 103.05]	81.07(43.03)	[50.29, 111.85]	7.0	1.13	0.066

	C3		CTL		U	ES	P-Value
	HPC						
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.47(0.24)	[1.09, 1.86]	1.59(0.23)	[1.43, 1.75]	14.0	0.47	0.396
Amplitude (μV)	17.39(6.15)	[0.68, 0.76]	19.68(1.65)	[0.73, 0.77]	19.0	0.08	0.888
Duration (s)	0.72(0.02)	[7.6, 27.18]	0.75(0.03)	[18.5, 20.86]	7.0	1.13	0.066
Core frequency (Hz)	9.62(0.43)	[8.95, 10.3]	9.93(0.44)	[9.61, 10.25]	11.0	0.72	0.203
Fast Spindles							
Density (1/epoch)	2.35(0.6)	[1.4, 3.29]	2.16(0.32)	[1.93, 2.39]	12.0	0.63	0.258
Amplitude (μV)	16.34(7.67)	[4.14, 28.53]	16.58(2.85)	[14.54, 18.62]	18.0	0.15	0.777
Duration (s)	0.76(0.08)	[0.64, 0.88]	0.74(0.03)	[0.72, 0.76]	17.0	0.23	0.671
Core frequency (Hz)	13.38(0.3)	[12.9, 13.85]	13.25(0.33)	[13.01, 13.49]	16.0	0.31	0.572
Slow Oscillations							

## B

	F3			F4		
	Mean Difference	P-Value	95% CI	Mean Difference	P-Value	95% CI
Slow Spindles						
Density (1/epoch)	-0.188	0.408	[-0.61, 0.26]	0.071	0.866	[-0.64, 1.06]
Amplitude (μV)	-1.870	0.675	[-12.96, 4.26]	-0.561	0.896	[-12.32, 5.30]
Duration (s)	-0.029	0.249	[-0.08, 0.02]	-0.006	0.912	[-0.09, 0.10]
Core frequency (Hz)	-0.269	0.318	[-0.71, 0.27]	-0.148	0.625	[-0.64, 0.45]
Fast Spindles						
Density (1/epoch)	0.077	0.805	[-0.51, 0.57]	0.072	0.847	[-0.58, 0.79]
Amplitude (μV)	-0.543	0.885	[-7.53, 6.37]	-1.118	0.756	[-7.82, 5.76]
Duration (s)	-0.003	0.907	[-0.07, 0.06]	0.003	0.918	[-0.05, 0.06]
Core frequency (Hz)	0.203	0.224	[-0.10, 0.53]	0.142	0.427	[-0.17, 0.50]
Slow Oscillations						
Density (1/epoch)	-0.138	0.632	[-0.55, 0.48]	-0.328	<b>0.029</b>	[-0.58, -0.10]
Duration (s)	0.003	0.923	[-0.08, 0.07]	-0.005	0.929	[-0.14, 0.08]
Amplitude (μV)	-17.386	0.194	[-43.25, 6.76]	-11.651	0.467	[-43.24, 18.02]
Slope (μV/s)	107.215	0.101	[-20.05, 233.79]	58.014	0.509	[-134.60, 227.09]
Coupling Fast spindles-SO	-35.500	0.196	[-79.27, 30.82]	-38.733	0.112	[-76.06, 15.68]

	C3			C4		
	Mean Difference	P-Value	95% CI	Mean Difference	P-Value	95% CI
Slow Spindles						
Density (1/epoch)	-0.113	0.402	[-0.37, 0.16]	0.005	0.982	[-0.39, 0.53]
Amplitude (μV)	-2.291	0.523	[-11.33, 1.48]	-1.361	0.638	[-9.87, 2.41]
Duration (s)	-0.027	0.112	[-0.06, 0.00]	-0.020	0.417	[-0.07, 0.02]
Core frequency (Hz)	-0.308	0.235	[-0.71, 0.23]	-0.195	0.487	[-0.61, 0.37]
Fast Spindles						
Density (1/epoch)	0.188	0.597	[-0.52, 0.64]	0.111	0.693	[-0.41, 0.47]
Amplitude (μV)	-0.241	0.956	[-8.71, 7.14]	-0.660	0.825	[-7.56, 5.66]
Duration (s)	0.021	0.590	[-0.06, 0.11]	0.028	0.388	[-0.02, 0.10]
Core frequency (Hz)	0.123	0.497	[-0.24, 0.50]	0.134	0.463	[-0.25, 0.50]
Slow Oscillations						
Density (1/epoch)	-0.131	0.468	[-0.50, 0.20]	-0.239	0.113	[-0.50, -0.01]
Duration (s)	0.029	0.380	[-0.04, 0.09]	0.005	0.921	[-0.10, 0.09]
Amplitude (μV)	-11.425	0.310	[-34.12, 8.65]	-10.894	0.270	[-30.49, 6.87]
Slope (μV/s)	58.653	0.274	[-29.60, 159.38]	41.505	0.390	[-44.27, 140.03]
Coupling Fast spindles-SO	-21.825	0.377	[-54.69, 37.94]	-16.067	0.456	[-45.90, 32.89]

	P3			P4		
	Mean Difference	P-Value	95% CI	Mean Difference	P-Value	95% CI
Slow Spindles						
Density (1/epoch)	-0.054	0.621	[-0.27, 0.16]	-0.127	0.507	[-0.51, 0.22]
Amplitude (μV)	-1.648	0.552	[-8.56, 2.13]	-0.773	0.764	[-8.29, 3.41]
Duration (s)	-0.017	0.436	[-0.07, 0.02]	-0.004	0.716	[-0.03, 0.02]
Core frequency (Hz)	-0.304	0.224	[-0.70, 0.21]	-0.247	0.285	[-0.62, 0.23]
Fast Spindles						
Density (1/epoch)	0.257	0.404	[-0.34, 0.79]	0.108	0.650	[-0.35, 0.55]
Amplitude (μV)	-0.322	0.924	[-7.78, 5.87]	-0.342	0.914	[-6.97, 5.63]
Duration (s)	0.030	0.469	[-0.04, 0.11]	0.027	0.467	[-0.04, 0.11]
Core frequency (Hz)	0.096	0.523	[-0.23, 0.41]	0.086	0.574	[-0.25, 0.40]
Slow Oscillations						

Density (1/epoch)	0.95(0.33)	[0.43, 1.47]	1.08(0.27)	[0.89, 1.27]	15.0	0.39	0.480
Duration (s)	1.36(0.04)	[1.29, 1.43]	1.33(0.08)	[1.27, 1.39]	17.0	0.23	0.671
Amplitude (μV)	88(18.98)	[57.8, 118.2]	99.42(16.16)	[87.87, 110.98]	13.0	0.55	0.322
Slope (μV/s)	-388.63(86.43)	[-526.15, -251.1]	-447.28(84.34)	[-507.61, -386.95]	13.0	0.55	0.322
Coupling Fast spindles-SO	36.21(43.05)	[-32.29, 104.7]	58.03(29.3)	[37.08, 78.99]	9.0	0.91	0.120

Density (1/epoch)	-0.235	0.200	[-0.57, 0.04]	-0.226	0.192	[-0.53, 0.05]
Duration (s)	0.009	0.844	[-0.10, 0.09]	0.022	0.524	[-0.04, 0.09]
Amplitude (μV)	-11.940	0.176	[-28.39, 1.65]	-10.435	0.232	[-27.25, 2.92]
Slope (μV/s)	63.515	0.142	[0.54, 140.28]	45.654	0.244	[-13.09, 117.96]
Coupling Fast spindles-SO	-16.150	0.384	[-46.33, 25.27]	-18.817	0.261	[-45.05, 19.12]

	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.6(0.49)	[0.82, 2.38]	1.59(0.24)	[1.42, 1.77]	17.0	0.23	0.671
Amplitude (μV)	18.3(5.86)	[0.65, 0.8]	19.66(1.93)	[18.28, 21.04]	17.0	0.23	0.671
Duration (s)	0.72(0.05)	[8.97, 27.63]	0.74(0.02)	[0.73, 0.75]	13.0	0.55	0.322
Core frequency (Hz)	9.73(0.46)	[8.99, 10.47]	9.93(0.44)	[9.61, 10.24]	14.0	0.47	0.396
Fast Spindles							
Density (1/epoch)	2.23(0.45)	[1.51, 2.94]	2.12(0.32)	[1.89, 2.35]	15.0	0.39	0.480
Amplitude (μV)	15.54(6.34)	[5.45, 25.62]	16.2(2.73)	[14.25, 18.15]	19.0	0.08	0.888
Duration (s)	0.76(0.06)	[0.67, 0.85]	0.74(0.02)	[0.72, 0.75]	11.0	0.72	0.203
Core frequency (Hz)	13.37(0.31)	[12.87, 13.86]	13.23(0.32)	[13, 13.47]	14.0	0.47	0.396
Slow Oscillations							
Density (1/epoch)	0.87(0.17)	[0.61, 1.14]	1.11(0.3)	[0.9, 1.33]	8.0	1.02	0.090
Duration (s)	1.36(0.08)	[1.23, 1.48]	1.35(0.08)	[1.29, 1.41]	20.0	0.00	1.000
Amplitude (μV)	90.12(16.89)	[63.23, 117]	101.01(15.11)	[90.2, 111.82]	14.0	0.47	0.396
Slope (μV/s)	-401.11(85.72)	[-537.51, -264.71]	-442.61(80.17)	[-499.96, -385.26]	17.0	0.23	0.671
Coupling Fast spindles-SO	37.17(36.36)	[-20.69, 95.03]	53.23(28.1)	[33.13, 73.34]	9.0	0.91	0.119

	P3						
	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.36(0.17)	[1.09, 1.64]	1.42(0.2)	[1.28, 1.56]	19.0	0.08	0.888
Amplitude (μV)	15.11(4.93)	[7.26, 22.95]	16.75(2.3)	[15.11, 18.4]	18.0	0.15	0.777
Duration (s)	0.72(0.04)	[0.65, 0.78]	0.74(0.02)	[0.72, 0.75]	18.0	0.15	0.777
Core frequency (Hz)	9.53(0.41)	[8.87, 10.18]	9.83(0.43)	[9.52, 10.14]	10.0	0.82	0.157
Fast Spindles							
Density (1/epoch)	2.58(0.52)	[1.75, 3.41]	2.32(0.42)	[2.02, 2.63]	12.0	0.63	0.258
Amplitude (μV)	15.47(6.88)	[4.53, 26.42]	15.8(2.92)	[13.71, 17.88]	18.0	0.15	0.777
Duration (s)	0.78(0.07)	[0.67, 0.9]	0.75(0.04)	[0.72, 0.79]	14.0	0.47	0.396
Core frequency (Hz)	13.46(0.25)	[13.07, 13.85]	13.36(0.33)	[13.13, 13.6]	15.0	0.39	0.480
Slow Oscillations							
Density (1/epoch)	0.68(0.17)	[0.41, 0.96]	0.92(0.41)	[0.63, 1.21]	13.0	0.55	0.322
Duration (s)	1.37(0.09)	[1.23, 1.52]	1.36(0.08)	[1.31, 1.42]	18.0	0.15	0.777
Amplitude (μV)	76.2(11.03)	[58.64, 93.75]	88.14(16.78)	[76.13, 100.14]	11.0	0.72	0.203
Slope (μV/s)	-313(53.6)	[-398.29, -227.7]	-376.51(78.41)	[-432.6, -320.42]	8.0	1.02	0.090
Coupling Fast spindles-SO	28.08(29.51)	[-18.88, 75.05]	44.23(32.55)	[20.95, 67.52]	10.0	0.82	0.157

	P4						
	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Slow Spindles							
Density (1/epoch)	1.27(0.34)	[0.72, 1.81]	1.4(0.3)	[1.18, 1.61]	16.0	0.31	0.572
Amplitude (μV)	16.03(5.38)	[7.47, 24.59]	16.8(2.11)	[15.29, 18.31]	17.0	0.23	0.671
Duration (s)	0.73(0.02)	[0.7, 0.76]	0.73(0.02)	[0.72, 0.74]	18.0	0.15	0.777
Core frequency (Hz)	9.58(0.38)	[8.97, 10.19]	9.83(0.42)	[9.53, 10.13]	13.0	0.55	0.322
Fast Spindles							
Density (1/epoch)	2.39(0.4)	[1.75, 3.03]	2.28(0.37)	[2.01, 2.54]	15.0	0.39	0.480
Amplitude (μV)	14.93(6.33)	[4.86, 25]	15.27(2.43)	[13.54, 17.01]	19.0	0.08	0.888
Duration (s)	0.78(0.07)	[0.67, 0.88]	0.75(0.05)	[0.72, 0.79]	13.0	0.55	0.322

Core frequency (Hz)	13.43(0.25)	[13.02, 13.83]	13.34(0.33)	[13.11, 13.57]	15.0	0.39	0.480
Slow Oscillations							
Density (1/epoch)	0.67(0.14)	[0.44, 0.9]	0.9(0.4)	[0.61, 1.18]	15.0	0.39	0.480
Duration (s)	1.42(0.04)	[1.35, 1.48]	1.39(0.09)	[1.33, 1.46]	16.0	0.31	0.572
Amplitude ( $\mu$ V)	77.86(11.26)	[59.95, 95.77]	88.3(16.7)	[76.35, 100.24]	13.0	0.55	0.322
Slope ( $\mu$ V/s)	-316.42(46.31)	[-390.11, -242.74]	-362.07(80.2)	[-419.45, -304.71]	9.0	0.91	0.120
Coupling Fast spindles-SO	23.42(26.43)	[-18.64, 65.48]	42.23(30.15)	[20.66, 63.8]	8.0	1.02	0.090

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	F3				U	ES	P-Value
	HPC		CTL				
	M (SD)	95% CI	M (SD)	95% CI			
Count	46.17(46.46)	[-27.77, 120.1]	81.67(47.81)	[47.46, 115.87]	9.0	0.91	0.120
Delay (s)	0.72(0.07)	[0.61, 0.83]	0.62(0.09)	[0.56, 0.68]	6.0	1.25	<b>0.048</b>
Delay dispersion (SD)	0.40(0.08)	[0.27, 0.53]	0.36(0.08)	[0.30, 0.42]	15.0	0.39	0.480
SO duration (s)	1.39(0.05)	[1.32, 1.47]	1.31(0.06)	[1.27, 1.36]	6.0	1.25	<b>0.048</b>
Spindle duration (s)	0.74(0.02)	[0.70, 0.77]	0.74(0.05)	[0.71, 0.78]	18.0	0.15	0.777
SO amplitude (μV)	112.85(28.11)	[68.12, 157.58]	129.16(25.22)	[111.12, 147.20]	13.0	0.55	0.322
Spindle amplitude (μV)	15.18(8.09)	[2.30, 28.06]	15.35(4.19)	[12.35, 18.34]	20.0	1.55	1.000

	F4				U	ES	P-Value
	HPC		CTL				
	M (SD)	95% CI	M (SD)	95% CI			
Count	42.33(38.15)	[-18.38, 103.05]	81.07(43.03)	[50.29, 111.85]	7.0	1.13	0.066
Delay (s)	0.67(0.04)	[0.60, 0.74]	0.62(0.07)	[0.57, 0.67]	11.0	0.72	0.203
Delay dispersion (SD)	0.40(0.10)	[0.25, 0.56]	0.36(0.07)	[0.31, 0.41]	9.0	0.91	0.120
SO duration (s)	1.34(0.04)	[1.28, 1.41]	1.31(0.07)	[1.26, 1.36]	12.0	0.63	0.258
Spindle duration (s)	0.73(0.05)	[0.65, 0.81]	0.73(0.04)	[0.70, 0.76]	20.0	0.00	1.000
SO amplitude (μV)	112.17(29.38)	[65.42, 158.93]	128.19(25.77)	[109.75, 146.63]	14.0	0.47	0.396
Spindle amplitude (μV)	15.39(8.12)	[2.46, 28.31]	15.97(4.36)	[12.85, 19.08]	18.0	1.47	0.777

	C3				U	ES	P-Value
	HPC		CTL				
	M (SD)	95% CI	M (SD)	95% CI			
Count	36.21(43.05)	[-32.29, 104.7]	58.03(29.3)	[37.08, 78.99]	9.0	0.91	0.120
Delay (s)	0.69(0.14)	[0.46, 0.92]	0.61(0.11)	[0.54, 0.69]	14.0	0.47	0.396
Delay dispersion (SD)	0.38(0.13)	[0.17, 0.59]	0.35(0.09)	[0.29, 0.42]	18.0	0.15	0.777
SO duration (s)	1.40(0.05)	[1.33, 1.48]	1.32(0.11)	[1.24, 1.40]	10.0	0.82	0.157
Spindle duration (s)	0.72(0.06)	[0.62, 0.81]	0.71(0.05)	[0.67, 0.74]	20.0	0.00	1.000
SO amplitude (μV)	95.63(21.85)	[60.86, 130.40]	101.69(17.49)	[89.18, 114.20]	20.0	0.00	1.000
Spindle amplitude (μV)	17.64(10.28)	[1.28, 34.00]	17.00(3.06)	[14.81, 19.18]	18.0	1.00	0.777

	C4				U	ES	P-Value
	HPC		CTL				
	M (SD)	95% CI	M (SD)	95% CI			
Count	37.17(36.36)	[-20.69, 95.03]	53.23(28.1)	[33.13, 73.34]	9.0	0.91	0.119
Delay (s)	0.70(0.07)	[0.58, 0.81]	0.60(0.10)	[0.53, 0.67]	7.0	1.13	0.066
Delay dispersion (SD)	0.40(0.11)	[0.23, 0.57]	0.35(0.09)	[0.28, 0.42]	15.0	0.39	0.480
SO duration (s)	1.41(0.03)	[1.36, 1.45]	1.33(0.10)	[1.26, 1.40]	13.0	0.55	0.322
Spindle duration (s)	0.70(0.03)	[0.65, 0.76]	0.68(0.03)	[0.66, 0.70]	15.0	0.39	0.480
SO amplitude (μV)	100.28(25.45)	[59.79, 140.78]	104.02(16.83)	[91.98, 116.06]	19.0	0.08	0.888
Spindle amplitude (μV)	16.29(7.39)	[4.53, 28.05]	16.10(2.88)	[14.04, 18.17]	20.0	1.08	1.000

	P3		CTL		U	ES	P-Value
	HPC						
	M (SD)	95% CI	M (SD)	95% CI			

B

	F3			F4		
	Mean Difference	P-Value	95% CI	Mean Difference	P-Value	95% CI
Count	-35.500	0.196	[-79.27, 30.82]	-38.733	0.112	[-76.06, 15.68]
Delay (s)	0.099	0.053	[0.00, 0.18]	0.049	0.148	[-0.01, 0.11]
Delay dispersion (SD)	0.036	0.449	[-0.07, 0.12]	0.045	0.427	[-0.09, 0.13]
SO duration (s)	0.081	<b>0.016</b>	[0.03, 0.14]	0.033	0.298	[-0.03, 0.08]
Spindle duration (s)	-0.008	0.684	[-0.04, 0.03]	-0.001	0.974	[-0.05, 0.06]
SO amplitude (μV)	-16.313	0.294	[-46.66, 13.05]	-16.020	0.343	[-48.17, 14.88]
Spindle amplitude (μV)	-0.166	0.968	[-8.12, 8.83]	-0.578	0.909	[-7.96, 8.45]

	C3			C4		
	Mean Difference	P-Value	95% CI	Mean Difference	P-Value	95% CI
Count	-21.825	0.377	[-54.69, 37.94]	-16.067	0.456	[-45.90, 32.89]
Delay (s)	0.078	0.339	[-0.06, 0.25]	0.097	0.062	[0.02, 0.20]
Delay dispersion (SD)	0.027	0.682	[-0.13, 0.17]	0.050	0.419	[-0.09, 0.16]
SO duration (s)	0.081	0.103	[-0.01, 0.16]	0.074	0.068	[0.01, 0.14]
Spindle duration (s)	0.011	0.743	[-0.05, 0.09]	0.018	0.338	[-0.01, 0.06]
SO amplitude (μV)	-6.061	0.603	[-30.58, 15.78]	-3.736	0.784	[-31.74, 23.21]
Spindle amplitude (μV)	0.642	0.877	[-9.05, 12.60]	0.189	0.958	[-7.31, 8.07]

	P3			P4		
	Mean Difference	P-Value	95% CI	Mean Difference	P-Value	95% CI
Count	-16.150	0.384	[-46.33, 25.27]	-18.817	0.261	[-45.05, 19.12]
Delay (s)	0.111	0.079	[0.01, 0.21]	0.116	<b>0.030</b>	[0.04, 0.19]
Delay dispersion (SD)	0.067	0.308	[-0.05, 0.19]	0.093	0.221	[-0.05, 0.24]
SO duration (s)	0.049	0.250	[-0.04, 0.13]	0.021	0.689	[-0.07, 0.13]
Spindle duration (s)	0.066	0.121	[0.00, 0.13]	0.027	0.227	[-0.01, 0.07]
SO amplitude (μV)	-7.093	0.425	[-25.04, 8.66]	-10.072	0.248	[-27.00, 4.09]
Spindle amplitude (μV)	1.441	0.766	[-7.81, 12.67]	0.418	0.903	[-6.57, 8.68]

Count	28.08(29.51)	[-18.88, 75.05]	44.23(32.55)	[20.95, 67.52]	10.0	0.82	0.157
Delay (s)	0.68(0.07)	[0.57, 0.79]	0.57(0.12)	[0.48, 0.65]	6.0	1.25	<b>0.048</b>
Delay dispersion (SD)	0.37(0.11)	[0.20, 0.55]	0.31(0.09)	[0.24, 0.37]	12.0	0.63	0.258
SO duration (s)	1.40(0.06)	[1.30, 1.50]	1.35(0.09)	[1.29, 1.42]	14.0	0.47	0.396
Spindle duration (s)	0.73(0.06)	[0.63, 0.83]	0.66(0.02)	[0.65, 0.68]	7.0	1.13	0.066
SO amplitude (μV)	82.48(13.81)	[60.50, 104.45]	89.57(17.79)	[76.84, 102.30]	17.0	0.23	0.671
Spindle amplitude (μV)	17.13(9.78)	[1.57, 32.68]	15.69(2.82)	[13.67, 17.70]	20.0	1.23	1.000

P4							
	HPC		CTL		U	ES	P-Value
	M (SD)	95% CI	M (SD)	95% CI			
Count	23.42(26.43)	[-18.64, 65.48]	42.23(30.15)	[20.66, 63.8]	8.0	1.02	0.090
Delay (s)	0.69(0.05)	[0.60, 0.77]	0.57(0.10)	[0.50, 0.64]	5.0	1.38	<b>0.034</b>
Delay dispersion (SD)	0.41(0.13)	[0.21, 0.62]	0.32(0.09)	[0.26, 0.38]	10.0	0.82	0.157
SO duration (s)	1.41(0.08)	[1.29, 1.54]	1.39(0.11)	[1.31, 1.47]	17.0	0.23	0.671
Spindle duration (s)	0.70(0.03)	[0.65, 0.75]	0.67(0.05)	[0.64, 0.70]	12.0	0.63	0.258
SO amplitude (μV)	80.68(11.50)	[62.38, 98.97]	90.75(17.91)	[77.94, 103.56]	14.0	0.47	0.396
Spindle amplitude (μV)	15.62(7.38)	[3.88, 27.37]	15.21(2.48)	[13.44, 16.98]	20.0	1.47	1.000