

Transcutaneous auricular vagal nerve stimulation against fatigue syndrome in patients with long-covid: results of the randomized, placebo controlled clinical pilot trial COVIVA

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Supplementary Table 1- statistical analysis of the questionnaire scores.

General Fatigue (MFI20) Fig. 1A				sham (fake-stimulation 28 d, then above- threshold) 15	verum 1 (below- threshold 28 d, then above-threshold) 15	verum 2 (above- threshold 28 d) 15	p-value	p(diff)
total 45								
baseline	17,4	±	2,3	17,2 ± 2,6	18,5 ± 1,3	16,6 ± 2,5	p = 0.080	0.331
week 4	16,3	±	2,7	16,8 ± 2,2	16,4 ± 3,0	15,9 ± 3,0	p = 0.840	
week 8	14,7	±	3,5	13,9 ± 3,8	15,5 ± 3,1	±	p = 0.237	
Physical Fatigue (MFI20) Fig. 1B				sham (fake-stimulation 28 d, then above- threshold) 15	verum 1 (below- threshold 28 d, then above-threshold) 15	verum 2 (above- threshold 28 d) 15	p-value	p(diff)
total 45								
baseline	17,8	±	2,7	17,5 ± 2,9	18,1 ± 3,2	17,9 ± 2,1	p = 0.578	0.472
week 4	16,9	±	2,9	16,6 ± 3,1	17,4 ± 2,5	16,6 ± 3,2	p = 0.758	
week 8	16,0	±	3,6	15,4 ± 3,8	16,5 ± 3,5	±	p = 0.421	
Mental Fatigue (MFI20) Fig. 1C				sham (fake-stimulation 28 d, then above- threshold) 15	verum 1 (below- threshold 28 d, then above-threshold) 15	verum 2 (above- threshold 28 d) 15	p-value	p(diff)
total 45								
baseline	15,3	±	3,2	16,3 ± 2,3	15,0 ± 3,7	14,5 ± 3,4	p = 0.330	0.254
week 4	14,5	±	3,4	15,1 ± 2,7	13,8 ± 3,2	14,6 ± 4,1	p = 0.616	

week 8	13,5	±	3,9	13,3	±	3,8	13,8	±	4,2	±	p = 0.781	0.616		
Reduced Activity (MFI20) Fig. 1D	total			sham (fake-stimulation 28 d, then above- threshold)	verum 1 (below- threshold 28 d, then above-threshold)			verum 2 (above- threshold 28 d)			p-value	p(diff)		
	45			15	15			15						
baseline	16,8	±	2,5	16,7	±	2,2	17,1	±	2,9	16,7	±	2,5	p = 0.701	
week 4	16,2	±	2,9	16,3	±	2,4	16,4	±	3,4	15,9	±	3,1	p = 0.848	0.561
week 8	14,8	±	3,8	14,4	±	4,4	15,2	±	3,2	±	p = 0.829	0.49		
Reduced Motivation (MFI20) Fig. 1E	total			sham (fake-stimulation 28 d, then above- threshold)	verum 1 (below- threshold 28 d, then above-threshold)			verum 2 (above- threshold 28 d)			p-value	p(diff)		
	45			15	15			15						
baseline	9,2	±	3,1	7,6	±	2,3	10,5	±	3,0	9,4	±	3,4	p = 0.040	*
week 4	8,4	±	2,8	7,8	±	2,9	8,7	±	2,4	8,8	±	3,2	p = 0.527	0.145
week 8	8,0	±	2,6	7,1	±	2,8	8,9	±	2,2	±	p = 0.128	0.086		
Score (BDI2) Fig. 1F	total			sham (fake-stimulation 28 d, then above- threshold)	verum 1 (below- threshold 28 d, then above-threshold)			verum 2 (above- threshold 28 d)			p-value	p(diff)		
	45			15	15			15						
baseline	13,0	±	5,6	11,1	±	3,2	13,2	±	5,3	14,7	±	7,2	p = 0.190	

week 4	10,8	±	4,9	10,6	±	2,8	10,1	±	5,1	11,6	±	6,3	p = 0.677	0.075
week 8	10,0	±	5,3	9,2	±	3,5	10,8	±	6,6		±		p = 0.492	0.211
Score (PCS) Fig. 1G	total			sham (fake-stimulation 28 d, then above- threshold)				verum 1 (below- threshold 28 d, then above-threshold)				verum 2 (above- threshold 28 d)	p-value	p(diff)
	45			15				15				15		
baseline	36,5	±	9,1	34,5	±	8,8	36,9	±	10,0	38,2	±	8,7	p = 0.536	
week 4	34,2	±	11,1	32,4	±	8,9	35,9	±	10,7	34,3	±	13,5	p = 0.694	0.654
week 8	32,1	±	10,6	32,1	±	11,2	32,0	±	10,5		±		p = 0.829	0.165
Physical functioning (SF36) Fig. 1H	total			sham (fake-stimulation 28 d, then above- threshold)				verum 1 (below- threshold 28 d, then above-threshold)				verum 2 (above- threshold 28 d)	p-value	p(diff)
	45			15				15				15		
baseline	45,4	±	21,8	48,3	±	25,1	42,0	±	17,6	46,0	±	23,2	p = 0.734	
week 4	52,2	±	24,4	58,8	±	22,8	46,1	±	22,6	52,1	±	27,4	p = 0.318	0.993
week 8	60,0	±	20,4	62,7	±	23,7	57,5	±	17,5		±		p = 0.457	0.755
Role physical (SF36) Fig. 1I	total			sham (fake-stimulation 28 d, then above- threshold)				verum 1 (below- threshold 28 d, then above-threshold)				verum 2 (above- threshold 28 d)	p-value	p(diff)
	45			15				15				15		

baseline	9,4	±	20,1	5,0	±	10,4	5,0	±	14,0	18,3	±	29,1	p = 0.299	0.94
week 4	13,4	±	25,1	9,6	±	16,3	10,7	±	27,2	19,6	±	29,7	p = 0.445	
week 8	19,6	±	27,1	27,3	±	34,4	12,5	±	16,9		±		p = 0.344	
Bodily pain (SF36) Fig. 1J				total	sham (fake-stimulation 28 d, then above- threshold)		verum 1 (below- threshold 28 d, then above-threshold)		verum 2 (above- threshold 28 d)		p-value		p(diff)	0.578
				45	15		15		15					
baseline	45,6	±	36,5	55,4	±	46,1	42,1	±	30,7	39,2	±	30,8	p = 0.556	
week 4	50,2	±	29,2	58,5	±	32,2	43,6	±	23,0	49,1	±	32,1	p = 0.464	
week 8	57,5	±	26,0	65,0	±	29,3	50,6	±	21,5		±		p = 0.127	
General Health (SF36) Fig. 1K				total	sham (fake-stimulation 28 d, then above- threshold)		verum 1 (below- threshold 28 d, then above-threshold)		verum 2 (above- threshold 28 d)		p-value		p(diff)	0.616
				45	15		15		15					
baseline	30,3	±	10,2	32,5	±	9,4	27,7	±	8,2	30,8	±	12,5	p = 0.429	
week 4	31,6	±	11,1	34,7	±	8,9	30,5	±	11,4	29,9	±	12,7	p = 0.402	
week 8	35,8	±	13,2	38,5	±	13,1	33,3	±	13,4		±		p = 0.435	
Vitality (SF36) Fig. 1L				total	sham (fake-stimulation 28 d, then above- threshold)		verum 1 (below- threshold 28 d, then above-threshold)		verum 2 (above- threshold 28 d)		p-value		p(diff)	0.777

45				15			15			15				
baseline	19,4	±	15,3	17,0	±	11,5	18,0	±	9,2	23,3	±	22,3	p = 0.830	
week 4	26,8	±	20,7	28,5	±	18,5	23,6	±	17,3	28,6	±	26,2	p = 0.782	0.539
week 8	31,1	±	20,1	33,6	±	22,3	28,8	±	18,6		±		p = 0.558	0.729
Social functioning (SF36) Fig. 1M	total			sham (fake-stimulation 28 d, then above-threshold)			verum 1 (below-threshold 28 d, then above-threshold)			verum 2 (above-threshold 28 d)			p-value	p(diff)
	45			15			15			15				
baseline	27,2	±	24,8	41,7	±	29,0	17,5	±	19,4	22,5	±	19,0	p = 0.019	*
week 4	37,6	±	26,0	49,2	±	26,0	29,5	±	26,2	34,8	±	23,6	p = 0.070	0.532
week 8	44,6	±	28,2	52,3	±	28,9	37,5	±	26,7		±		p = 0.161	0.403
Role emotional (SF36) Fig. 1N	total			sham (fake-stimulation 28 d, then above-threshold)			verum 1 (below-threshold 28 d, then above-threshold)			verum 2 (above-threshold 28 d)			p-value	p(diff)
	45			15			15			15				
baseline	74,1	±	40,1	64,4	±	44,5	91,1	±	26,6	66,7	±	43,6	p = 0.095	
week 4	72,4	±	36,4	64,1	±	34,6	83,3	±	31,4	69,1	±	42,3	p = 0.285	0.354
week 8	76,8	±	40,7	75,8	±	42,4	77,8	±	41,0		±		p = 0.904	0.675
Mental health (SF36) Fig. 1O	total									verum 2 (above-threshold 28 d)			p-value	p(diff)

				sham (fake-stimulation 28 d, then above- threshold) 15			verum 1 (below- threshold 28 d, then above-threshold) 15			15				
baseline	64,3	±	15,5	67,5	±	15,6	62,7	±	11,6	62,7	±	19,0	p = 0.602	0.721
week 4	68,9	±	13,8	71,1	±	13,3	67,4	±	10,7	68,3	±	17,2	p = 0.763	
week 8	69,4	±	16,7	73,5	±	15,5	65,7	±	17,5	±		p = 0.322	0.237	
Health transition (SF36) Fig. 1P				sham (fake-stimulation 28 d, then above- threshold) 15			verum 1 (below- threshold 28 d, then above-threshold) 15			verum 2 (above- threshold 28 d) 15			p-value	p(diff)
total 45														
baseline	3,1	±	1,1	3,7	±	1,2	2,5	±	0,8	3,1	±	1,1	p = 0.016	*
week 4	2,8	±	1,2	3,2	±	1,4	2,4	±	0,8	2,9	±	1,2	p = 0.167	0.546
week 8	2,5	±	1,2	3,0	±	1,5	2,1	±	0,5	±		p = 0.137	0.733	
PCS (SF36) Fig. 1Q				sham (fake-stimulation 28 d, then above- threshold) 15			verum 1 (below- threshold 28 d, then above-threshold) 15			verum 2 (above- threshold 28 d) 15			p-value	p(diff)
total 45														
baseline	26,9	±	8,7	28,3	±	8,2	24,1	±	8,5	28,4	±	9,2	p = 0.171	0.794
week 4	29,7	±	9,9	32,0	±	9,8	26,6	±	9,5	30,8	±	10,4	p = 0.274	

week 8	32,8	±	9,9	35,0	±	11,3	30,7	±	8,3	±			p = 0.268	1
MCS (SF36) Fig. 1R	total			sham (fake-stimulation 28 d, then above- threshold)			verum 1 (below- threshold 28 d, then above-threshold)			verum 2 (above- threshold 28 d)			p-value	p(diff)
	45			15			15			15				
baseline	42,9	±	9,1	43,6	±	9,1	44,0	±	6,8	41,2	±	11,2	p = 0.704	
week 4	44,9	±	8,3	45,2	±	7,7	45,6	±	7,4	44,0	±	9,9	p = 0.826	0.501
week 8	45,6	±	8,7	46,9	±	10,2	44,5	±	7,3	±			p = 0.242	0.712