

Table 3. The effects of Spirulina administration on anthropometric measurements, blood pressure, sleep quality, mood, fatigue status and quality of life

Variables	Spirulina group (n = 36)				Placebo group (n = 37)				
	Baseline	End of trial	Change	<i>p</i> ^a	Baseline	End of trial	Change	<i>p</i> ^a	<i>p</i> ^b
Weight(kg)	72.33 ± 13.59	72.89 ± 13.98	0.56 ± 1.48	0.02	69.72 ± 14.54	70.0 ± 14.42	0.32 ± 1.34	0.15	0.29
BMI(kg/m ²)	26.01 ± 4.41	26.22 ± 4.59	0.20 ± 0.51	0.02	25.61 ± 5.50	25.73 ± 5.52	0.26 ± 0.51	0.14	0.33
WC (cm)	89.83 ± 11.46	90.43 ± 11.10	0.59 ± 3.03	0.24	87.56 ± 11.69	87.70 ± 11.68	0.13 ± 2.50	0.74	0.34
HC (cm)	94.18 ± 18.83	97.14 ± 11.76	2.96 ± 15.47	0.25	96.81 ± 11.80	96.37 ± 11.44	- 0.43 ± 2.12	0.25	0.51
NC (cm)	36.27 ± 3.99	36.10 ± 3.98	0.16 ± 1.02	0.34	35.30 ± 3.93	35.32 ± 3.86	0.02 ± 0.37	0.66	0.32
WHR	0.91 ± 0.07	0.91 ± 0.07	0.003 ± 0.02	0.42	0.91 ± 0.09	0.91 ± 0.09	0.003 ± 0.01	0.41	0.92
SBP (mmHg)	11.87 ± 0.90	11.83 ± 0.66	- 0.49 ± 0.04	0.73	11.78 ± 1.66	11.86 ± 0.48	0.08 ± 1.29	0.37	0.39
DBP (mmHg)	8.04 ± 0.56	8.06 ± 0.53	0.02 ± 0.31	0.54	7.97 ± 1.16	8.00 ± 0.47	0.02 ± 1.04	0.59	0.44
Sleep quality score	11.11 ± 6.55	9.00 ± 6.00	- 2.11 ± 3.61	0.01	11.45 ± 6.02	10.18 ± 6.31	-1.27 ± 3.15	0.01	0.69
Sleep duration (hours)	7.13 ± 1.61	7.09 ± 1.89	-0.03 ± 1.69	0.90	6.78 ± 1.68	6.91 ± 1.59	0.13 ± 0.72	0.24	0.45
Subjective sleep quality score	1.30 ± 1.70	1.02 ± 0.73	-0.27 ± 1.25	0.06	1.35 ± 0.75	1.40 ± 0.64	0.05 ± 0.57	0.57	0.16
Sleep latency (minutes)	17.22 ± 17.54	15.33 ± 14.57	-1.89 ± 7.93	0.16	17.51 ± 16.40	16.16 ± 14.11	-1.35 ± 0.74	0.33	0.91
Sleep efficiency (%)	85.7 ± 0.10	86.2 ± 0.09	0.5 ± 0.04	0.47	85.6 ± 0.10	85.4 ± 0.09	-0.2 ± 0.46	0.78	0.49
Sleep disturbances score	5.19 ± 4.10	4.16 ± 3.78	-1.02 ± 2.31	0.004	7.45 ± 4.23	7.97 ± 5.09	0.51 ± 2.76	0.26	0.03
Use of sleep medication score	0.40 ± 0.83	0.37 ± 0.75	-0.02 ± 0.55	0.35	0.19 ± 0.62	0.27 ± 0.65	0.08 ± 0.28	0.08	0.67
Day-time dysfunction score	0.61 ± 0.90	0.75 ± 0.87	0.13 ± 0.89	0.74	0.91 ± 1.18	1.05 ± 1.15	0.13 ± 0.91	0.09	0.57
Anxiety score	15.83 ± 12.57	14.02 ± 10.54	-1.80 ± 5.90	0.07	16.45 ± 10.50	14.81 ± 8.75	-1.64 ± 5.20	0.06	0.60
Stress score	22.00 ± 10.84	16.88 ± 10.05	- 5.11 ± 7.50	<0.001	20.43 ± 9.54	18.40 ± 8.79	-2.03 ± 5.83	0.04	0.04
Depression score	16.72 ± 12.74	13.61 ± 10.71	-3.11 ± 7.34	0.01	16.91 ± 11.28	14.70 ± 10.62	-2.21 ± 5.76	0.02	0.50
Fatigue score	33.55 ± 13.53	31.86 ± 11.39	-1.69 ± 11.71	0.39	35.02 ± 11.57	33.16 ± 10.98	-1.86 ± 5.58	0.05	0.63
Quality of life score	41.61 ± 10.95	48.30 ± 8.95	6.69 ± 7.69	<0.001	42.08 ± 9.72	44.97 ± 9.02	2.89 ± 6.66	0.01	0.03

Note: Variables are expressed as mean ± SD. Abbreviations: BMI, Body mass index; WC, Waist circumference; HC, Hip circumference; NC, Neck circumference; WHR, Waist to hip ratio; SBP, Systolic Blood Pressure; DBP, diastolic blood pressure

^a Obtained from paired t test.

^b Obtained from multiple linear regression test, adjusted for baseline value of age, disease length and baseline BMI