

**Supplementary table 1.** Linear mixed model regression investigating the effects of selenium and placebo supplementation in patients with hypothyroidism. The intervention ended at 12 months.

Outcomes	Placebo Coefficient (95% CI), p*	Selenium Coefficient (95% CI), p*	Difference placebo vs selenium Coefficient, (95% CI), p**
<b>Composite score</b>			
Baseline	37.8 (35.8-39.8)	37.8 (35.8-39.8)	-
6 weeks	-5.9 (-8.0 to -3.9); p<0.0001	-8.1 (-9.8 to -6.4); p<0.0001	-2.1 (-4.5 to 0.3); p=0.093
3 months	-7.5 (-9.6 to -5.5); p<0.0001	-9.2 (-11.1 to -7.2); p<0.0001	-1.7 (-4.2 to 0.9); p=0.212
6 months	-8.7 (-10.8 to -6.5); p<0.0001	-8.8 (-11.3 to -6.2); p<0.0001	-0.1 (-3.2 to 3.0); p=0.952
12 months	-9.8 (-12.1 to -7.6); p<0.0001	-9.0 (-11.3 to -6.7); p<0.0001	0.8 (-2.2 to 3.8); p=0.602
18 months	-8.6 (-10.9 to -6.2); p<0.0001	-9.4 (-11.9 to -6.8); p<0.0001	-0.8 (-4.0 to 2.5); p=0.636
<b>Goitre symptoms</b>			
Baseline	14.7 (13.1 – 16.2)	14.7 (13.1 – 16.2)	-
6 weeks	-1.1 (-2.8 to 0.62); p=0.212	-0.5 (-2.0 to 1.1); p=0.546	0.6 (-1.6 to 2.9); p=0.587
3 months	-1.4 (-3.2 to 0.4); p=0.128	0.3 (-1.7 to 2.2); p=0.793	1.7 (-0.8 to 4.1); p=0.179
6 months	-1.0 (-2.9 to 0.96); p=0.313	-0.4 (-2.4 to 1.7); p=0.736	0.7 (-2.0 to 3.4); p=0.630
12 months	-3.0 (-5.1 to -0.9); p=0.004	-0.9 (-2.7 to 1.0); p=0.364	2.2 (-0.4 to 4.8); p=0.102
18 months	-2.5 (-4.5 to -0.5); p=0.013	-0.8 (-2.9 to 1.3); p=0.546	1.7 (-0.9 to 4.4); p=0.208
<b>Hypothyroid symptoms</b>			
Baseline	36.8 (34.2-39.2)	36.8 (34.2-39.2)	-
6 weeks	-6.0 (-8.5 to -3.5); p<0.0001	-5.7 (-8.2 to -3.4); p<0.0001	0.3 (-2.9 to 3.5); p=0.876
3 months	-5.4 (-7.9 to -2.9); p<0.0001	-5.0 (-7.8 to -2.3); p<0.0001	0.4 (-3.0 to 3.9); p=0.805
6 months	-4.6 (-7.6 to -1.6); p=0.002	-5.2 (-7.9 to -2.4); p<0.0001	-0.6 (-4.4 to 3.2); p=0.753
12 months	-8.4 (-11.3 to -5.5); p<0.0001	-3.6 (-6.6 to -0.7); p=0.016	<b>4.8 (0.9 to 8.7); p=0.016</b>
18 months	-6.9 (-9.2 to -4.0); p<0.0001	-3.9 (-6.9 to -0.8); p=0.012	3.0 (-0.9 to 6.9); p=0.135
<b>LT4 dosage</b>			
Baseline	104.2 (99.8-108.5)	104.2 (99.8-108.5)	-
3 months	9.5 (-0.1 to 19.1); p=0.052	11.6 (4.0 to 19.2); p=0.003	2.1 (-10.4 to 14.4); p=0.742
12 months	14.7 (9.5 to 19.8); p<0.0001	12.3 (6.9 to 17.8); p<0.0001	-2.3 (-9.3 to 4.7); p=0.524
18 months	21.5 (8.4 to 34.6); p=0.001	15.1 (9.6 to 20.6); p<0.0001	-6.4 (-20.3 to 7.5); p=0.367
<b>Log s-TPOAb</b>			
Baseline	3.45 (3.39 to 3.51)	3.45 (3.39 to 3.51)	--
3 months	-0.04 (-0.07 to -0.02); p=0.001	-0.09 (-0.13 to -0.05); p<0.0001	-0.05 (-0.09 to -0.01); p=0.056
12 months	-0.08 (-0.12 to -0.04); p<0.0001	-0.15 (-0.20 to -0.11); p<0.0001	<b>-0.08 (-0.14 to -0.01); p=0.016</b>
18 months	-0.14 (-0.19 to -0.09); p<0.0001	-0.220 (-0.27 to -0.17); p<0.0001	-0.08 (-0.15 to -0.01); p=0.061
<b>s-FT3I/FT4 ratio</b>			
Baseline	0.109 (0.106-0.113)	0.109 (0.106-0.113)	-
3 months	-0.003 (-0.006 to -0.002); p=0.04	-0.004 (-0.007 to -0.001); p=0.01	-0.001 (-0.005 to -0.004); p=0.754
12 months	-0.007 (-0.010 to -0.002); p=0.005	-0.006 (-0.009 to -0.001); p=0.01	0.001 (-0.005 to 0.007); p=0.679
18 months	-0.009 (-0.010 to -0.004); p<0.0001	-0.007 (-0.007 to 0.003); p=0.480	0.007 (0.001 to 0.014); p=0.243
<b>s-selenium</b>			
Baseline	85.4 (83.6-87.1)	85.4 (83.6-87.1)	-
3 months	-5.2 (-7.6 to -2.7); p<0.0001	39.7 (36.1 to 43.2); p<0.0001	<b>44.8 (40.8 to 48.8); p&lt;0.0001</b>
12 months	-1.1 (-3.7 to 1.5); p=0.402	54.5 (49.6 to 59.3); p<0.0001	<b>55.6 (50.3 to 60.9); p&lt;0.0001</b>
18 months	0.5 (-2.7 to 3.6); p=0.768	13.6 (9.8 to 17.4); p<0.0001	<b>13.2 (8.5 to 17.8); p&lt;0.0001</b>

Data presented as coefficients with 95% confidence intervals. \* P-value <0.05 is significant difference from baseline; \*\* P-value<0.05 is significant difference between groups. Statistically significant differences between groups are highlighted in bold. Abbreviations: LT4, levothyroxine; TPOAb, thyroid peroxidase antibodies; T3, triiodothyronine; FT4, free thyroxine; FT3I, free T3 index