

1 Supplementary Table 1. Clinical characteristics of participants according to iodine status

	Deficient (n = 12)	Adequate (n = 48)	Mild excess (n = 35)	Moderate excess (n = 49)	Severe excess (n = 84)
UIC range, µg/L	< 100	100–299	300–499	500–999	≥1000
Boys, n (%)	3 (25.0)	22 (45.8)	21 (60.0)	31 (63.3)	46 (54.8)
Height z-score	0.17 ± 0.66	0.44 ± 0.66	0.57 ± 1.16	0.13 ± 0.86	0.46 ± 0.94
Weight z-score	-0.09 ± 0.56	0.07 ± 0.88	0.30 ± 1.05	-0.24 ± 0.85	0.29 ± 0.99
Body mass index z-score	-0.30 ± 0.70	-0.25 ± 0.86	0.02 ± 1.08	-0.43 ± 0.88	0.09 ± 0.99
Body surface area, m ²	0.80 ± 0.04	0.82 ± 0.06	0.84 ± 0.08	0.80 ± 0.05	0.83 ± 0.08
Palpable goiter at physical examination, n (%)	1 (8.3)	7 (14.6)	2 (5.7)	11 (22.5)	22 (26.2)
Parental history of thyroid disease, n (%)	0 (0.0)	1 (2.1)	2 (5.7)	2 (4.1)	5 (6.0)
Maternal education level ≥ college, n (%)	12 (100.0)	41 (85.4)	27 (77.1)	46 (93.9)	70 (83.3)
Free thyroxine, ng/dL	1.2 ± 0.1	1.2 ± 0.1	1.1 ± 0.1	1.2 ± 0.1	1.1 ± 0.1
Thyroid	2.5	2.3	2.4 (1.8–3.0)	2.5 (1.6–3.3)	2.7

stimulating hormone, $\mu\text{IU/mL}$	(1.5–3.0)	(1.8–3.1)			(2.1–3.5)
Subclinical hypothyroidism, n (%)	1 (8.3)	2 (4.2)	2 (5.7)	2 (4.1)	8 (9.5)
Thyroid volume, mL	2.5 ± 0.8	2.4 ± 0.5	2.4 ± 0.7	2.5 ± 0.8	2.7 ± 0.8
Goiter on US (age-specific criteria), n (%)	4 (33.3)	6 (12.5)	8 (22.9)	14 (28.6)	27 (32.1)
Goiter on US (BSA-specific criteria), n (%)	5 (41.7)	11 (22.9)	10 (28.6)	19 (38.8)	34 (40.5)

2 Data are expressed as the mean \pm standard deviation, median (interquartile range), or number
3 (%).

4 Supplementary Table 2. Distribution of thyroid volume (mL) according to sex and body surface area

Body surface area (m ²)	Total				Boys				Girls			
	N	P3	P50	P97	n	P3	P50	P97	n	P3	P50	P97
0.6	4	1.46	1.69	2.26	2	1.81	2.05	2.29	2	1.45	1.52	1.59
0.7	88	1.29	2.32	4.02	46	1.23	2.22	3.55	42	1.44	2.45	4.13
0.8	109	1.53	2.52	4.12	59	1.77	2.39	4.10	50	1.47	2.61	4.31
0.9	26	1.53	2.64	3.94	15	1.56	2.71	3.95	11	1.72	2.52	3.67
1.0	1	-	1.95	-	1	-	1.95	-	-	-	-	-
Total	228	1.44	2.43	4.10	123	1.41	2.33	4.03	105	1.44	2.52	4.16

5 P3, 3rd percentile; P50, 50th percentile; P97, 97th percentile

Supplementary Table 3. Comparison of clinical characteristics according to the presence of goiter on the US based on BSA-specific criteria

	Goiter-US (-) (n = 149)	Goiter-US (+) (n = 79)	<i>p</i>
Boys, n (%)	87 (58.4)	36 (45.6)	0.088
Body mass index z-score	-0.13 ± 0.93	-0.12 ± 1.02	0.936
Body surface area, m ²	0.82 ± 0.07	0.82 ± 0.0	0.611
Palpable goiter at physical examination, n (%)	21 (14.1)	22 (27.9)	0.019
Parental history of thyroid disease, n (%)	7 (4.7)	3 (3.8)	0.999
Maternal education level ≥ college, n (%)	129 (86.6)	67 (84.8)	0.869
Thyroid stimulating hormone, μIU/mL	2.4 (1.8-3.4)	2.6 (1.9-3.3)	0.977
Subclinical hypothyroidism, n (%)	10 (6.7)	5 (6.3)	0.999
Thyroid volume, mL	2.1 ± 0.4	3.3 ± 0.6	<0.001
Goiter-US based on age-specific criteria, n (%)	2 (1.34)	57 (72.2)	<0.001
Focal lesion ^a , n (%)	34 (22.8)	41 (51.2)	<0.001

Data are expressed as the mean ± standard deviation, median (interquartile range), or number (%).

^aFocal lesion was defined as thyroid cysts, nodules, or intrathyroidal thymus.

US, ultrasound; BSA, body surface area

Supplementary Table 4. Association between covariates and thyroid volume (mL) (unadjusted)

Covariates	Thyroid volume (β , 95% CI)	<i>p</i>
Age, years	0.00 (−0.06, 0.06)	0.935
Boys (vs. girls)	−0.11 (−0.30, 0.08)	0.260
Body mass index z-scores	0.15 (0.06, 0.25)	0.002
Body surface area, m ²	2.23 (0.89, 3.57)	0.001
Parental history of thyroid disease	−0.13 (−0.59, 0.33)	0.587
Maternal education level \geq college (vs. \leq high school)	−0.02 (−0.29, 0.25)	0.880
Free thyroxine, ng/dL	0.64 (−0.18, 1.46)	0.129
Log-transformed thyroid stimulating hormone, μ IU/mL	−0.05 (−0.26, 0.15)	0.601
Subclinical hypothyroidism (vs. normal)	−0.21 (−0.59, 0.65)	0.275

CI, confidence interval