

Supplementary Files

Table S1. Daily Nutrition Intake by 72-hour Dietary Recall

Outcomes	Baseline			Week 4			Week 8			Week 4 vs. Baseline p-value		Week 8 vs. Baseline p-value	
	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	Iron-fortified Gummy	Control
Energy, Kcal	1377.7 (1240.3, 1605.7)	1477.0 (1220.7, 1661.0)	0.711	1374.7 (1204.7, 1519.3)	1371.0 (1229.3, 1658.0)	0.634	1406.5 (1250.5, 1541.8)	1472.7 (1221.0, 1711.3)	0.357	0.445	0.896	0.891	0.403
Protein, g	60.9 (47.1, 71.7)	62.1 (49.4, 70.9)	0.622	58.9 (46.6, 73.3)	60.2 (44.0, 76.0)	0.821	59.5 (47.8, 73.8)	61.3 (48.5, 71.5)	0.912	0.435	0.756	0.463	0.970
Vitamin A, µg	326.7 (253.3, 420.7)	349.3 (245.7, 409.3)	0.860	311.8 (257.0, 394.7)	337.3 (281.0, 436.0)	0.430	359.8 (225.5, 450.0)	374.7 (310.7, 438.0)	0.731	0.789	0.747	0.891	0.246
Vitamin B1, mg	0.7 (0.6, 0.9)	0.8 (0.6, 1.0)	0.240	0.7 (0.6, 0.9)	0.8 (0.6, 1.1)	0.380	0.7 (0.6, 1.0)	0.9 (0.6, 1.1)	0.185	0.364	0.944	0.373	0.358
Vitamin B2, mg	0.8 (0.7, 1.1)	0.9 (0.7, 1.1)	0.312	0.8 (0.7, 0.9)	0.8 (0.7, 1.1)	0.178	0.8 (0.7, 1.0)	0.9 (0.7, 1.1)	0.762	0.159	0.462	0.253	0.326
Vitamin B6, mg	0.2 (0.1, 0.2)	0.1 (0.1, 0.2)	0.622	0.2 (0.1, 0.2)	0.2 (0.1, 0.2)	0.387	0.1 (0.1, 0.2)	0.2 (0.1, 0.2)	0.858	0.953	0.124	0.667	0.681
Vitamin B12, µg	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.376	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.205	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.923	0.697	0.180	0.758	0.983
Vitamin B9, µg	82.3 (63.4, 119.5)	84.7 (63.7, 111.8)	0.995	93.9 (70.6, 104.5)	88.4 (55.2, 116.3)	0.547	87.5 (55.3, 133.7)	76.7 (55.4, 112.2)	0.711	0.821	0.965	0.855	0.819
Vitamin C, mg	65.6 (42.3, 104.8)	76.3 (49.3, 98.2)	0.902	68.8 (44.3, 92.1)	66.7 (49.1, 89.9)	0.792	72.2 (50.6, 89.3)	69.0 (47.7, 92.8)	0.783	0.359	0.456	0.634	0.490
Vitamin D, µg	2.0 (1.4, 4.1)	1.9 (1.2, 3.1)	0.496	2.1 (1.2, 2.8)	2.3 (1.1, 2.7)	0.880	2.2 (1.0, 4.2)	2.1 (1.6, 3.9)	0.475	0.142	0.752	0.230	0.312
Ca, mg	414.0 (320.3, 512.7)	441.0 (337.3, 550.3)	0.357	380.7 (281.3, 494.3)	441.3 (298.7, 517.0)	0.581	408.3 (304.5, 495.8)	414.0 (314.3, 505.3)	0.815	0.350	0.694	0.558	0.774
P, mg	827.8 (681.0, 962.4)	830.5 (728.7, 1040.3)	0.470	770.8 (611.0, 923.5)	809.1 (665.9, 1084.6)	0.259	784.1 (622.2, 941.9)	849.5 (706.1, 1022.6)	0.243	0.240	0.882	0.170	0.924
Ka, mg	1294.3 (1033.2, 1552.8)	1341.6 (1042.8, 1629.4)	0.569	1188.5 (1005.6, 1502.4)	1417.4 (952.4, 1750.5)	0.259	1348.3 (978.0, 1537.0)	1264.8 (981.7, 1644.8)	0.956	0.377	0.924	0.770	0.848
Na, mg	586.7 (444.7, 711.0)	610.7 (484.7, 710.3)	0.470	563.7 (444.3, 743.7)	554.0 (436.7, 717.3)	0.905	560.2 (472.3, 680.5)	595.7 (400.0, 689.3)	0.853	0.657	0.827	0.447	0.716
Mg, mg	200.3 (155.0, 234.3)	196.3 (176.7, 266.7)	0.573	187.7 (170.3, 227.3)	189.7 (164.0, 249.3)	0.900	192.3 (149.8, 231.5)	197.0 (159.3, 243.0)	0.492	0.333	0.707	0.325	0.539
Fe, mg	11.9 (9.5, 14.2)	13.4 (10.2, 16.1)	0.288	12.3 (10.3, 14.5)	12.3 (9.4, 14.8)	0.975	11.3 (8.8, 15.0)	12.7 (9.6, 15.9)	0.462	0.880	0.767	0.774	0.559
Zn, mg	8.1 (6.2, 10.3)	8.3 (7.0, 11.2)	0.435	7.3 (5.9, 9.1)	8.5 (6.3, 10.8)	0.264	7.1 (6.1, 9.2)	6.9 (5.5, 11.7)	0.550	0.184	0.910	0.153	0.674
Se, µg	42.9 (33.5, 54.2)	43.0 (35.1, 60.0)	0.939	44.4 (34.8, 51.9)	48.3 (37.2, 64.5)	0.238	39.7 (33.4, 50.4)	44.0 (36.3, 51.8)	0.364	0.455	0.546	0.189	0.924
Cu, mg	0.9 (0.6, 1.2)	0.8 (0.7, 1.1)	0.986	0.8 (0.7, 1.1)	0.8 (0.7, 1.1)	0.935	0.7 (0.6, 1.0)	0.8 (0.6, 1.3)	0.685	0.476	0.834	0.596	0.723
I, µg	22.9 (16.6, 35.7)	26.1 (18.5, 39.9)	0.408	28.5 (19.4, 35.8)	28.5 (19.9, 34.7)	0.905	23.1 (19.2, 38.7)	28.5 (20.9, 34.0)	0.630	0.123	0.972	0.927	0.894

Data are presented as median (the 1st and the 3rd quantile); inter-group differences are tested by Kruskal Wallis test; intra-group differences are tested by Wilcoxon signed-rank test.

Table S2. Weekly Physical Exercise

Criteria	Baseline			Week 4			Week 8			Week 4 vs. Baseline p-value		Week 8 vs. Baseline p-value	
	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	Iron-fortified Gummy	Control
Vigorous MET-minutes/week ^a	0 (0, 480)	0 (0, 480)	0.755	0 (0, 960)	0 (0, 480)	0.506	0 (0, 720)	0 (0, 480)	0.773	0.532	0.586	0.718	1.000
Moderate MET-minutes/week ^a	240 (0, 1200)	360 (0, 720)	0.820	480 (0, 720)	480 (0, 840)	0.962	240 (0, 1200)	240 (0, 480)	0.694	0.714	0.675	0.791	0.956
Walk MET-minutes/week ^a	693 (396, 1188)	594 (247.5, 1386)	0.426	693 (396, 990)	693 (297, 1386)	0.972	693 (297, 1386)	594 (165, 1386)	0.547	0.416	0.990	0.941	0.983
Total MET-minutes/week ^a	1386 (810, 2664)	1215 (693, 2154)	0.424	1413 (680, 3066)	1188 (802.5, 2826)	0.897	1295 (540, 4239)	1137 (492, 2460)	0.407	0.861	0.438	0.889	0.733
Average daily duration of sitting, hour	5.3±2.3	5.4±2.2	0.873	5.6±2.0	5.4±2.4	0.656	5.5±2.3	5.4±2.4	0.765	0.402	0.757	0.444	0.644

MET: metabolic equivalent of task.

Unless otherwise noted, continuous variables are summarized by mean±standard deviation; inter-group differences are tested by one-way analysis of variance; intra-group differences are tested by paired t-test.

^aDescriptive statistics are presented as median (the 1st and the 3rd quantile); inter-group differences are tested by Kruskal Wallis test; intra-group differences are tested by Wilcoxon signed-rank test.

Table S3. Laboratory Safety Test Results

Criteria	Baseline			Week 4			Week 8			Week 4 vs. Baseline p-value		Week 8 vs. Baseline p-value	
	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	Iron-fortified Gummy	Control
Blood Routine Test													
White blood cell, 10e9/L	6.3±1.4	6.1±1.3	0.665	6.2±1.6	6.2±1.5	0.916	6.3±1.4	6.1±1.3	0.714	0.569	0.604	0.984	0.505
Monocyte percent, %	5.6±1.3	5.7±1.5	0.782	5.7±1.5	5.6±1.7	0.886	5.7±1.6	5.7±1.5	0.944	0.590	0.639	0.854	0.810
Monocyte count, 10e9/L	0.4±0.1	0.3±0.1	0.451	0.4±0.1	0.3±0.1	0.249	0.4±0.1	0.3±0.1	0.388	0.948	0.553	0.926	0.927
Red blood cell, 10e12/L	4.4±0.3	4.4±0.3	0.486	4.4±0.4	4.4±0.3	0.931	4.4±0.4	4.4±0.3	0.931	0.448	0.378	0.642	0.849
Red blood cell volume distribution width, %	13.3±0.9	13.4±1.0	0.690	13.2±1.0	13.4±1.1	0.468	13.4±0.8	13.4±0.9	0.772	0.508	0.940	0.434	0.743
Hematocrit, %	40.4±2.3	40.0±2.5	0.251	40.5±2.6	40.1±3.3	0.586	40.5±2.9	39.9±2.9	0.459	0.516	0.807	0.535	0.994
Lymphocytes percent, %	34.8±6.6	33.9±7.4	0.588	35.0±6.2	33.1±6.6	0.245	35.5±7.4	32.7±6.9	0.138	1.000	0.349	0.685	0.197
Lymphocytes count, 10e9/L	2.2±0.5	2.2±0.5	0.574	2.2±0.5	2.1±0.4	0.296	2.2±0.6	2.1±0.4	0.440	0.941	0.861	0.910	0.963
Mean Platelet Volume, fl	9.9±1.2	9.8±1.5	0.765	10.1±1.2	9.9±1.2	0.571	10.1±1.1	9.7±1.2	0.129	0.197	0.411	0.162	0.899
Basophils percent, %	0.4±0.2	0.4±0.2	0.634	0.4±0.2	0.4±0.2	0.855	0.4±0.2	0.4±0.2	0.773	0.173	0.498	0.503	0.887
Basophils count, 10e9/L	0.02±0.01	0.02±0.01	0.855	0.03±0.01	0.02±0.01	0.273	0.03±0.01	0.02±0.01	0.562	0.271	1.000	0.640	0.778
Eosinophils percent, % ^a	1.6 (1.2, 2.4)	1.4 (0.8, 1.8)	0.268	1.6 (1.2, 2.3)	1.5 (1.1, 2.3)	0.639	1.9 (1.1, 2.5)	1.2 (1.0, 2.2)	0.403	0.823	0.336	0.875	0.396
Eosinophils count, 10e9/L ^a	0.10 (0.07, 0.13)	0.08 (0.05, 0.11)	0.176	0.10 (0.07, 0.14)	0.09 (0.06, 0.14)	0.307	0.10 (0.08, 0.15)	0.09 (0.05, 0.14)	0.205	0.819	0.480	0.807	0.375
Platelet distribution width, %	15.9±0.3	16.0±0.4	0.323	15.9±0.4	15.9±0.5	0.468	15.9±0.3	16.0±0.4	0.159	0.888	0.937	0.205	0.661
Platelet count, 10e9/L	272.0±48.8	260.4±51.0	0.333	273.8±53.6	259.4±54.9	0.283	273.3±56.5	264.5±38.5	0.475	0.534	0.814	0.478	0.762
Plateletcrit, %	0.3±0.04	0.2±0.1	0.189	0.3±0.04	0.3±0.04	0.110	0.3±0.04	0.3±0.04	0.167	0.111	0.665	0.377	0.755
Neutrophils percent, %	57.9±6.3	58.8±6.7	0.529	57.1±7	59.1±7.1	0.240	57.0±7.7	59.2±6.7	0.229	0.497	0.903	0.564	0.688
Neutrophils count, 10e9/L	3.7±1.1	3.6±1.1	0.734	3.6±1.3	3.5±1.1	0.782	3.7±1.2	3.6±1.2	0.708	0.304	0.598	0.861	0.978
Serum Liver and Kidney Function Biomarkers													
ALT, U/L ^a	13 (10, 18)	13 (11, 19)	0.892	13 (10, 18)	12 (9, 18)	0.941	12.5 (10, 18)	13 (10, 17)	0.820	0.418	0.950	0.535	0.762
AST, U/L ^a	16 (13, 18)	15 (14, 18)	0.742	16 (14, 19)	16 (14, 18)	0.578	16 (14, 18)	15 (13, 18)	0.493	0.853	0.610	0.892	0.892
Uric acid, µmol/L	265.2±46.1	256.5±45.0	0.426	262.7±51.0	268.5±43.7	0.621	268.2±49.3	266.3±46.9	0.874	0.429	0.437	0.905	0.475
Urine Routine Test													
Microscopic white blood cells (+)	7 (20.0)	6 (17.1)	1.000	7 (20.6)	6 (18.2)	1.000	6 (18.8)	7 (22.6)	0.763	1.000	1.000	1.000	0.625
Urine Specific Gravity ^b	1.025 (1.02, 1.03)	1.025 (1.02, 1.03)	0.585	1.025 (1.02, 1.03)	1.025 (1.02, 1.03)	0.320	1.025 (1.02, 1.03)	1.025 (1.02, 1.03)	0.806	0.423	0.735	0.476	0.763
pH	5.6±0.6	5.8±0.7	0.310	5.6±0.7	5.7±0.6	0.619	5.7±0.7	5.7±0.6	0.741	0.876	0.791	0.506	0.801
Occult blood (+)	4 (11.4)	5 (14.3)	1.000	4 (11.8)	4 (12.1)	1.000	5 (15.6)	3 (9.7)	0.708	1.000	1.000	0.727	0.727

ALT: alanine aminotransaminase; AST: aspartate aminotransferase.

Unless otherwise noted, continuous variables are summarized by mean±standard deviation; inter-group differences are tested by one-way analysis of variance; intra-group differences in continuous variables are tested by paired t-test. Discret variables are summarized by n(%); inter-group differences are tested by Fisher exact test; intra-group differences are tested by McNemar test.

^aDescriptive statistics are presented as median (the 1st and the 3rd quantile); inter-grouop differences are tested by one-way analysis of variance on log10 transformed data; intra-grouop differences are tested by paired t-test on log10 transformed data.

^bDescriptive statistics are presented as median (the 1st and the 3rd quantile); inter-group differences are tested by Kruskal Wallis test; intra-group differences are tested by Wilcoxon signed-rank test.

Table S4. Quality of Life Questionnaire Individual Item Scores for Physical Health and Psychological Health

Criteria	Baseline			Week 4			Week 8			Week 4 vs. Baseline p-value		Week 8 vs. Baseline p-value	
	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	Iron-fortified Gummy	Control
Physical health (PHYS)													
Physical pain that affect daily life ^a	3.4±1.0	3.5±0.9	0.719	3.7±0.9	3.4±1.0	0.196	4.1±0.9	3.5±1.0	0.028	0.062	0.861	0.001	0.751
Need of medical supports ^a	4.3±1.0	4.3±0.9	0.803	4.4±0.9	4.3±0.9	0.862	4.7±0.6	4.3±0.9	0.040	0.422	1.000	0.009	0.773
Energy for daily life	3.3±0.9	3.3±0.8	0.673	3.6±0.7	3.3±0.8	0.105	4.0±0.7	3.7±0.5	0.032	0.088	0.839	0.038	1.000
Mobility	3.7±0.9	3.7±0.7	0.886	3.8±0.7	3.6±0.8	0.332	3.3±0.8	2.9±0.8	0.045	0.737	1.000	0.044	0.690
Satisfaction with sleep quality	2.8±1.0	2.9±0.9	0.801	3.1±0.9	3.0±0.8	0.576	3.7±0.6	3.4±0.7	0.039	0.071	0.423	0.002	0.677
Satisfaction with ability for daily activities	3.3±0.7	3.3±0.8	0.740	3.4±0.6	3.3±0.7	0.793	3.8±0.6	3.5±0.7	0.035	0.475	0.745	0.003	0.572
Satisfaction with capacity for work	3.5±0.6	3.5±0.7	0.304	3.7±0.7	3.3±0.6	0.987	3.3±0.7	3.5±0.7	0.013	0.379	0.801	0.001	0.625
Psychological health (PSYCH)													
Enjoyment of life	3.4±0.7	3.3±0.8	0.737	3.6±0.7	3.6±0.8	0.757	3.5±0.7	3.5±0.6	0.684	0.165	0.187	0.325	0.344
Feeling of life to be meaningful	3.5±0.7	3.5±0.8	0.873	3.6±0.7	3.5±0.7	0.751	3.7±0.5	3.5±0.7	0.164	0.521	0.609	0.109	0.598
Ability to concentrate	3.2±0.7	3.3±0.9	0.640	3.4±0.6	3.3±0.8	0.564	3.6±0.6	3.2±0.7	0.015	0.088	0.647	0.010	1.000
Acceptance of own bodily appearance	3.3±0.7	3.4±0.7	0.502	3.4±0.6	3.5±0.5	0.513	3.6±0.7	3.5±0.5	0.530	0.413	0.572	0.136	0.823
Self satisfaction	3.2±0.6	3.3±0.6	0.313	3.4±0.7	3.4±0.6	0.878	3.6±0.6	3.3±0.6	0.041	0.110	1.000	0.003	0.500
Negative feelings (despair, anxiety, depression) ^a	3.5±0.6	3.5±0.6	0.559	3.6±0.7	3.6±0.6	0.829	3.6±0.7	3.6±0.6	0.728	0.402	0.211	0.206	0.380

Data are summarized by mean±standard deviation. Inter-group differences are tested by one-way analysis of variance. Intra-group differences are tested by paired t-test; No significant change or inter-group difference was observed in all individual item scores of the social relationships and environment domain and the results are not shown.

^aHigher score indicates less or lower level of the described items.

Table S5. Gastrointestinal Symptoms Rating Scale (GSRS)

Criteria	Baseline			Week 4			Week 8			Week 4 vs. Baseline p-value		Week 8 vs. Baseline p-value	
	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	Iron-fortified Gummy	Control
Abdominal pain	1 (1, 1.3)	1 (1, 1.7)	0.501	1.3 (1, 1.7)	1 (1, 1.7)	0.322	1.3 (1, 1.7)	1 (1, 1.7)	0.541	0.182	1.000	0.322	0.828
1. Pain or discomfort in upper abdomen or the pit of stomach	1 (1, 1)	1 (1, 1)	0.993	1 (1, 1)	1 (1, 1)	0.690	1 (1, 1)	1 (1, 1)	0.899	0.957	1.000	1.000	1.000
4. Gastric hunger pain	1 (1, 2)	1 (1, 2)	0.838	1 (1, 2)	1 (1, 2)	0.881	1 (1, 2)	1 (1, 2)	0.936	0.599	1.000	0.563	1.000
5. Nausea	1 (1, 1)	1 (1, 1)	0.741	1 (1, 2)	1 (1, 1)	0.083	1 (1, 1)	1 (1, 1)	0.665	0.060	1.000	0.453	1.000
Reflux	1 (1, 1)	1 (1, 1.5)	0.437	1 (1, 1.5)	1 (1, 1.5)	0.115	1 (1, 1.5)	1 (1, 1.5)	0.926	0.100	0.688	0.281	1.000
2. Heartburn	1 (1, 1)	1 (1, 1)	0.664	1 (1, 1)	1 (1, 1)	0.124	1 (1, 1)	1 (1, 1)	0.639	0.070	1.000	0.750	1.000
3. Acid reflux	1 (1, 1)	1 (1, 1)	0.589	1 (1, 2)	1 (1, 1)	0.148	1 (1, 2)	1 (1, 2)	0.767	0.130	0.672	0.359	1.000
Indigestion	1 (1, 1.5)	1 (1, 2)	0.523	1.3 (1.3, 1.8)	1 (1, 2)	0.154	1.3 (1, 1.8)	1 (1, 1.8)	0.715	0.280	0.813	0.106	0.848
6. Borborygmi	1 (1, 1)	1 (1, 1)	0.825	1 (1, 2)	1 (1, 2)	0.943	1 (1, 2)	1 (1, 2)	0.959	0.836	1.000	0.533	1.000
7. Abdominal distension	1 (1, 1)	1 (1, 2)	0.476	1 (1, 2)	1 (1, 2)	0.988	1 (1, 2)	1 (1, 2)	0.897	0.838	1.000	0.274	1.000
8. Burping	1 (1, 1)	1 (1, 2)	0.646	1 (1, 2)	1 (1, 2)	0.377	1 (1, 2)	1 (1, 2)	0.993	0.120	1.000	0.520	0.750
9. Passing gas or flatus	1 (1, 2)	1 (1, 2)	0.462	1 (1, 2)	1 (1, 2)	0.413	1 (1, 2)	1 (1, 2)	0.724	0.084	1.000	0.307	0.938
Diarrhoea	1 (1, 1)	1 (1, 1.3)	0.657	1 (1, 1.7)	1 (1, 1.3)	0.418	1 (1, 1.7)	1 (1, 1.3)	0.658	0.633	0.813	0.459	0.750
11. Diarrhea	1 (1, 1)	1 (1, 1)	0.825	1 (1, 2)	1 (1, 1)	0.556	1 (1, 1.5)	1 (1, 1)	0.698	0.608	0.344	0.778	0.750
12. Loose stools	1 (1, 1)	1 (1, 1)	0.802	1 (1, 2)	1 (1, 1)	0.535	1 (1, 2)	1 (1, 1)	0.534	0.560	0.469	0.520	1.000
14. Urgent need to defecate	1 (1, 1)	1 (1, 1)	1.000	1 (1, 1)	1 (1, 1)	0.748	1 (1, 1)	1 (1, 1)	0.802	0.594	1.000	1.000	1.000
Constipation	1 (1, 1.3)	1 (1, 1.7)	0.604	1.3 (1, 1.3)	1.3 (1, 1.7)	0.942	1 (1, 1.7)	1 (1, 1.7)	0.703	0.504	0.594	0.326	0.896
10. Constipation	1 (1, 1)	1 (1, 1)	0.974	1 (1, 2)	1 (1, 2)	0.280	1 (1, 2)	1 (1, 2)	0.973	0.071	1.000	0.952	1.000
13. Hard stools	1 (1, 1)	1 (1, 1)	0.572	1 (1, 1)	1 (1, 1)	0.212	1 (1, 1.5)	1 (1, 1)	0.875	0.961	1.000	0.636	0.594
15. Sensation of not completely emptying the bowels	1 (1, 2)	1 (1, 2)	0.782	1 (1, 2)	1 (1, 2)	0.824	1 (1, 2)	1 (1, 2)	0.651	1.000	0.875	0.828	0.789

Descriptive statistics are presented as median (the 1st and the 3rd quantile); inter-group differences are tested by Kruskal Wallis test; intra-group differences are tested by Wilcoxon signed-rank test.

Table S6. Menstration and Leucorrhea Status

Outcomes	Baseline			Week 4			Week 8			Week 4 vs. Baseline p-value		Week 8 vs. Baseline p-value	
	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	p-value	Iron-fortified Gummy	Control	Iron-fortified Gummy	Control
Menstrual cycle			0.746			1.000			0.416	0.666	0.620	0.069	0.766
>35 days	3 (8.6)	1 (2.9)		3 (8.8)	3 (9.1)		2 (6.3)	1 (3.2)					
<=21 days	2 (5.7)	1 (2.9)		1 (2.9)	1 (3.0)		0 (0.0)	1 (3.2)					
21-35 days	28 (80.0)	30 (85.7)		28 (82.4)	27 (81.8)		30 (93.8)	27 (87.1)					
Irregular (other)	2 (5.7)	3 (8.6)		2 (5.9)	2 (6.1)		0 (0.0)	2 (6.5)					
Menstrual duration			1.000			1.000			0.742	0.342	1.000	0.621	1.000
0 day	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)					
1-2 day	0 (0.0)	1 (2.9)		0 (0.0)	0 (0.0)		0 (0.0)	1 (3.3)					
3-7 day	33 (94.3)	33 (94.3)		33 (97.1)	32 (100.0)		31 (96.9)	29 (93.6)					
7-15 day	2 (5.7)	1 (2.9)		1 (2.9)	0 (0.0)		1 (3.1)	1 (3.2)					
Menstrual abnormalities:													
Blood clot	19 (54.3)	17 (48.6)	0.811	15 (44.1)	19 (57.6)	0.332	14 (43.8)	15 (48.4)	0.803	0.157	0.366	0.096	0.739
Dysmenorrhea	14 (40.0)	15 (42.9)	1.000	11 (32.4)	14 (42.4)	0.455	8 (25.0)	14 (45.2)	0.117	0.180	1.000	0.059	0.157
Pus in menstrual blood	0 (0.0)	1 (2.9)	1.000	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	NA	NA	NA	NA	NA
Headache	10 (28.6)	8 (22.9)	0.785	7 (20.6)	11 (33.3)	0.280	2 (6.3)	9 (29.0)	0.022	0.083	0.103	0.020	0.480
Insomnia	8 (22.9)	11 (31.4)	0.592	5 (14.7)	11 (33.3)	0.091	2 (6.3)	10 (32.3)	0.011	0.083	0.655	0.034	0.655
Menstrual fever	0 (0.0)	1 (2.9)	1.000	0 (0.0)	1 (3.0)	0.493	0 (0.0)	2 (6.5)	0.238	NA	1.000	NA	0.317
Body pain	8 (22.9)	8 (22.9)	1.000	4 (11.8)	7 (21.2)	0.341	2 (6.3)	7 (22.6)	0.082	0.157	0.706	0.059	0.655
Light bleeding between periods	1 (2.9)	2 (5.7)	1.000	1 (2.9)	2 (6.1)	0.614	0 (0.0)	0 (0.0)	NA	NA	1.000	NA	NA
Irritability	9 (25.7)	14 (40.0)	0.309	8 (23.5)	13 (39.4)	0.194	7 (21.9)	13 (41.9)	0.109	1.000	0.739	0.706	1.000
Anxiety	13 (37.1)	12 (34.3)	1.000	9 (26.5)	11 (33.3)	0.600	7 (21.9)	10 (32.3)	0.405	0.180	0.782	0.157	1.000
Depression	14 (40.0)	13 (37.1)	1.000	10 (29.4)	17 (51.5)	0.084	7 (21.9)	12 (38.7)	0.177	0.180	0.166	0.096	0.706
Premenstrual breast tenderness	16 (45.7)	20 (57.1)	0.473	13 (38.2)	19 (57.6)	0.145	14 (43.8)	19 (61.3)	0.210	0.257	0.706	0.317	1.000
Leucorrhea odor			0.614			0.673			0.113	0.301	0.157	NA	0.799
None	34 (97.1)	32 (91.4)		32 (94.1)	30 (90.9)		32 (100.0)	28 (90.3)					
Slight odor	1 (2.9)	3 (8.6)		2 (5.9)	3 (9.1)		0 (0.0)	3 (9.7)					
Strong fishy smell	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)					
Leucorrhea color			0.777			0.262			0.237	0.209	0.165	0.165	0.281
Yellowish	9 (25.7)	7 (20.0)		6 (17.7)	10 (30.3)		5 (15.6)	9 (29.0)					
White	26 (74.3)	28 (80.0)		28 (82.4)	23 (69.7)		27 (84.4)	22 (71.0)					
Red/brown	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)					
Leucorrhea volume			0.536			0.076			0.525	0.118	0.826	0.829	0.771
Large	2 (5.7)	4 (11.4)		1 (2.9)	4 (12.1)		2 (6.3)	2 (6.5)					
Normal	29 (82.9)	25 (71.4)		32 (94.1)	24 (72.7)		27 (84.4)	23 (74.2)					
Small	4 (11.4)	6 (17.1)		1 (2.9)	5 (15.2)		3 (9.4)	6 (19.4)					

Data are summarized by frequency (%); inter-group differences are tested by Fisher exact test; intra-group differences are tested by McNemar test for dichotomous variable, and by multivariable logistic regression for multi-level discrete variables.

Table S7. List of Adverse Events

Adverse events	Iron-fortified Gummy (n=35)	Control (n=35)	Overall (n=70)
EENT 001 Otitis media	2 (5.7)	1 (2.9)	3 (4.3)
EENT 045 Dental ulcer	0 (0.0)	1 (2.9)	1 (1.4)
MS 003 Traumatism	2 (5.7)	0 (0.0)	2 (2.9)
MS 005 Stiff neck	1 (2.9)	0 (0.0)	1 (1.4)
RESP 001 Cold	0 (0.0)	3 (8.6)	3 (4.3)
RESP 002 Cough with no other related symptoms	1 (2.9)	0 (0.0)	1 (1.4)
SK 004 Eczema	0 (0.0)	2 (5.7)	2 (2.9)
SK 010 Other rash	0 (0.0)	1 (2.9)	1 (1.4)
Total	6 (17.1)	8 (22.9)	14 (20.0)
			p-value: 0.766

Descriptive statistics are presented as frequency (%), and Fisher's exact test was used to compare the differences between groups.