



Title	Physiological and nutritional intake characteristics of pregnant women according to their recommended gestational weight gain in relation to the birth weight of their full-term infants(Table_図表)
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Table 4 Energy and nutritional intake for the recommended gestational weight gain according to fetal birth weight percentile

		2nd trimester					3rd trimester					Mean ± SD	
Variable	Recommended gestational weight gain	Fetal birth weight percentile				P	Multiple comparison	Fetal birth weight percentile				P	Multiple comparison
		≤10th ^a n=15	10-50th ^b n=86	50-90th ^c n=71	90th < ^d n=20			≤10th ^a n=15	10-50th ^b n=99	50-90th ^c n=89	90th < ^d n=25		
n-3 polyunsaturated fat (mg/1,000kcal)	Below	-	1.1 ± 0.2	1.0 ± 0.2	-	0.415	1.5 ± 0.7	1.2 ± 0.3	0.9 ± 0.2	-	0.088		
	Within	1.1 ± 0.3	1.2 ± 0.3	1.2 ± 0.3	1.4 ± 0.3	0.255	1.2 ± 0.1	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.2	0.656		
	Above	1.1 ± 0.2	1.1 ± 0.3	1.2 ± 0.4	1.0 ± 0.3	0.232	1.0 ± 0.1	1.2 ± 0.3	1.2 ± 0.3	1.0 ± 0.1	0.100		
n-6 polyunsaturated fat (mg/1,000kcal)	Below	-	5.9 ± 0.7	5.0 ± 1.0	-	0.170	6.2 ± 0.8	5.6 ± 0.9	5.4 ± 1.1	-	0.451		
	Within	5.4 ± 1.3	5.8 ± 1.2	5.6 ± 1.0	6.3 ± 1.1	0.271	5.7 ± 0.8	5.6 ± 1.1	5.7 ± 0.9	6.0 ± 0.6	0.890		
	Above	5.4 ± 1.4	5.6 ± 1.1	5.9 ± 2.0	5.0 ± 1.2	0.630	5.6 ± 0.9	5.7 ± 1.1	5.8 ± 1.3	5.2 ± 0.7	0.317		
Vitamin D (µg/1,000kcal)	Below	-	4.2 ± 1.4	4.6 ± 2.8	-	0.902	7.0 ± 7.4	4.9 ± 2.6	3.4 ± 1.7	-	0.216		
	Within	3.6 ± 1.3	5.7 ± 3.6	5.2 ± 2.5	5.4 ± 1.6	0.235	5.9 ± 1.4	6.1 ± 3.6	4.2 ± 1.8	5.0 ± 2.1	0.010 c<b		
	Above	4.1 ± 1.1	3.7 ± 1.6	4.9 ± 2.9	3.9 ± 1.7	0.354	2.0 ± 0.6	4.2 ± 1.9	5.0 ± 2.5	4.1 ± 1.3	0.062		
Vitamin B ₆ (mg/1,000kcal)	Below	-	0.6 ± 0.1	0.5 ± 0.1	-	0.047 c<b	0.7 ± 0.4	0.6 ± 0.1	0.6 ± 0.1	-	0.259		
	Within	0.6 ± 0.1	0.6 ± 0.2	0.6 ± 0.2	0.7 ± 0.1	0.399	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.7 ± 0.1	0.311		
	Above	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.3	0.540	0.5 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.175		
Vitamin B ₁₂ (mg/1,000kcal)	Below	-	3.2 ± 1.1	3.1 ± 1.4	-	0.420	4.8 ± 4.2	3.4 ± 1.6	2.4 ± 0.8	-	0.153		
	Within	3.0 ± 0.9	3.8 ± 2	3.3 ± 1.3	4.3 ± 1.0	0.186	3.9 ± 1.1	4.0 ± 2.0	3.4 ± 1.4	3.9 ± 1.5	0.325		
	Above	2.9 ± 1.0	2.8 ± 1.0	3.7 ± 2.0	2.8 ± 0.9	0.255	1.4 ± 0.4	3.2 ± 1.3	3.8 ± 1.8	2.8 ± 0.8	0.014		
Folate (mg/1,000kcal)	Below	-	174.7 ± 44.7	172.0 ± 46.6	-	0.969	170.8 ± 69.6	196.6 ± 63.9	171.1 ± 25.3	-	0.286		
	Within	161.6 ± 31.8	184.6 ± 57.6	183.9 ± 61.5	172.7 ± 35.0	0.652	151.3 ± 39.7	170.1 ± 48.4	181.3 ± 61.5	187.4 ± 41.3	0.374		
	Above	222.4 ± 72.6	156.0 ± 54.6	168.3 ± 60.1	195.4 ± 87.5	0.361	147.7 ± 36.5	180.0 ± 66.4	197.4 ± 53.1	183.2 ± 59.1	0.403		
Vitamin C (mg/1,000kcal)	Below	-	57.1 ± 18.4	57.5 ± 21.4	-	0.630	54.3 ± 25.3	66.4 ± 26.5	60.9 ± 20.7	-	0.651		
	Within	58.4 ± 18.1	63.5 ± 22.6	62.9 ± 25.9	50.3 ± 15.5	0.429	52.4 ± 22.0	59.6 ± 20.7	60.1 ± 24.2	67.3 ± 23.0	0.581		
	Above	72.6 ± 20.4	51.8 ± 20.3	59.6 ± 25.8	67.0 ± 40.7	0.607	50.0 ± 12.5	62.7 ± 29.2	69.3 ± 27.5	63.3 ± 27.5	0.298		
Calcium (mg/1,000kcal)	Below	-	270.0 ± 80.3	255.5 ± 67.7	-	0.594	255.8 ± 65.7	286.8 ± 74.4	276.9 ± 63.5	-	0.657		
	Within	249.6 ± 82.2	288.0 ± 95.8	270.7 ± 76.0	275.9 ± 63.2	0.584	246.4 ± 53.2	285.4 ± 91.2	285.1 ± 67.9	321.8 ± 67.5	0.235		
	Above	301.0 ± 58.2	257.3 ± 68.4	272.9 ± 82.6	323.4 ± 110.0	0.322	224.7 ± 48.2	281.9 ± 84.6	289.2 ± 92.3	281.8 ± 87.2	0.515		
Iron (mg/1,000kcal)	Below	-	4.1 ± 0.6	4.0 ± 0.6	-	0.897	4.1 ± 1.3	4.3 ± 0.8	4.1 ± 0.7	-	0.483		
	Within	3.8 ± 0.6	4.2 ± 0.9	4.2 ± 0.9	4.3 ± 0.8	0.506	3.9 ± 0.5	4.1 ± 0.8	4.2 ± 0.9	4.3 ± 0.8	0.819		
	Above	4.5 ± 0.9	3.8 ± 0.9	4.0 ± 0.8	4.3 ± 1.2	0.566	3.5 ± 0.5	4.1 ± 0.9	4.4 ± 0.9	4.1 ± 0.9	0.093		
Zinc (mg/1,000kcal)	Below	-	4.6 ± 0.4	4.0 ± 0.4	-	0.010 c<b	4.4 ± 0.7	4.5 ± 0.5	4.2 ± 0.5	-	0.371		
	Within	4.2 ± 0.3	4.4 ± 0.5	4.4 ± 0.6	4.6 ± 0.6	0.367	4.2 ± 0.3	4.4 ± 0.5	4.5 ± 0.5	4.7 ± 0.6	0.241		
	Above	4.6 ± 0.2	4.1 ± 0.5	4.4 ± 0.6	4.5 ± 0.8	0.137	3.9 ± 0.5	4.3 ± 0.6	4.3 ± 0.6	4.3 ± 0.5	0.613		
Copper (µg/1,000kcal)	Below	-	0.6 ± 0.1	0.6 ± 0.1	-	0.934	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	-	0.852		
	Within	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.09	0.925	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.7 ± 0.1	0.358		
	Above	0.6 ± 0.0	0.6 ± 0.1	0.6 ± 0.1	0.61 ± 0.15	0.817	0.6 ± 0.2	0.6 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.358		

The "below" group with a the birth weight percentile of ≤10 comprised 1 individual, and was therefore excluded from the analysis.

Analysis of covariance: Multiple comparison with Bonferroni test

Covariance: age, pre-pregnancy BMI

Fetal birth weight percentile: Classification based on the "Introduction of the new gestational age-specific standards for birth size (2010)" by the Japan Pediatric Society

Recommended gestational weight gain: below (<9kg), within (9-12kg), and above (>12kg) for underweight (BMI<18.5kg/m²) women, and below (<7kg), within (7-12kg), above (>12kg) for normal weight (18.5≤BMI<25.0kg/m²) women.