## Supplementary Table 1- The mean daily intake of energy and nutrients estimated by three FFQs and nine 3-day weighed dietary record (WDR) for male participants1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nutrients** | **FFQ1** | **FFQ2** | **FFQ3** | **WDR** |
|  | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** |
| **Energy (kcal)** | 2928.14a | 1507.64 | 2328.68b | 1040.79 | 2859.61 a | 822.64 | 1978.31c | 364.95 |
| **Protein (g)** | 98.58 a | 44.97 | 100.57 a | 54.16 | 144.69 b | 63.74 | 74.71 c | 13.46 |
| **Carbohydrate (g)** | 421.04 a | 227.70 | 331.31 b | 159.42 | 416.43 a | 121.09 | 301.56 b | 64.21 |
| **Sucrose (g)** | 78.22 a | 69.12 | 54.26 b | 42.93 | 69.24 a | 36.45 | 15.54 c | 9.99 |
| **Fat (g)** | 106.50 a | 66.27 | 76.38 b | 34.64 | 82.57 b | 28.37 | 56.24 c | 11.51 |
| **Cholesterol (mg)** | 287.76 a | 123.41 | 303.74 a | 159.14 | 391.67 b | 189.31 | 262.26 a | 83.65 |
| **Fiber (g)** | 29.96 a | 15.89 | 22.53 b | 12.02 | 28.21 a | 8.85 | 19.65 b | 4.78 |
| **Thiamin (mg)** | 2.52 a | 1.17 | 2.14 b | 0.91 | 2.67 a | 0.76 | 1.96 b | 0.39 |
| **Riboflavin (mg)** | 2.13 a | 0.89 | 2.06 a | 0.85 | 2.30 a | 0.72 | 1.42 b | 0.27 |
| **Niacin (mg)** | 26.99 a | 13.53 | 24.86ac | 13.11 | 34.41 b | 12.71 | 22.67 c | 4.56 |
| **Pantothenic acid (mg)** | 7.52ab | 5.78 | 6.33 a | 3.33 | 7.62 b | 2.76 | 4.37 c | 1.09 |
| **Pyridoxine (mg)** | 2.74 ab | 1.53 | 2.23 a | 1.23 | 3.16 b | 1.31 | 1.42 c | 0.39 |
| **Folate (µg)** | 387.47 a | 235.80 | 324.10 a | 165.62 | 338.47 a | 125.63 | 238.67 b | 66.42 |
| **Vitamin B12 (µg)** | 4.66 ab | 2.30 | 4.70 a | 2.29 | 4.71 a | 1.78 | 3.67 b | 2.30 |
| **Vitamin C (mg)** | 287.25 a | 168.84 | 22.94 b | 139.27 | 269.29 ab | 120.55 | 106.76 c | 55.12 |
| **Vitamin A (RE)** | 1981.03 a | 1482.15 | 1593.09 a | 1177.48 | 1792.26 a | 995.39 | 743.69 b | 345.16 |
| **β-Carotene (µg)** | 1104.04 a | 1138.97 | 798.33 a | 911.98 | 917.33 a | 815.89 | 370.47 b | 326.28 |
| **Vitamin D (µg)** | 0.92 a | 1.03 | 1.05 a | 1.10 | 1.03 a | 0.76 | 0.38 b | 0.51 |
| **α-tocopherol (mg)** | 47.86 a | 53.70 | 29.86 b | 25.89 | 36.10 ab | 26.81 | 5.20 c | 2.56 |
| **Vitamin K (µg)** | 132.33 a | 87.08 | 114.21 ab | 79.03 | 107.53 ab | 55.46 | 92.32 b | 50.31 |
| **Calcium (mg)** | 951.23 a | 430.58 | 923.70 a | 364.24 | 1011.42 a | 314.23 | 662.35 b | 155.14 |
| **Phosphorus (mg)** | 1429.81 ab | 923.27 | 1275.38 a | 576.12 | 1481.25 b | 521.09 | 873.12 c | 182.41 |
| **Magnesium (mg)** | 349.29 a | 178.11 | 291.76 b | 129.37 | 333.32 a | 103.94 | 205.29 c | 47.92 |
| **Zinc (mg)** | 11.00 ab | 5.72 | 10.62 a | 5.25 | 12.44 b | 4.50 | 7.45 c | 1.46 |
| **Iron (mg)** | 11.61 ab | 6.26 | 9.99 a | 5.43 | 12.60 b | 4.85 | 21.38 c | 5.40 |
| **Copper (mg)** | 2.30 a | 1.55 | 1.78 b | 0.88 | 2.08 a | 0.74 | 1.25 c | 0.35 |
| **Selenium (µg)** | 0.12 ab | 0.07 | 0.11 a | 0.06 | 0.13 b | 0.05 | 0.08 c | 0.02 |
| **Potassium (mg)** | 4879.07 a | 2699.20 | 3993.72 b | 2097.47 | 4764.18 a | 1629.13 | 2467.26 c | 581.52 |
| **Manganese (mg)** | 4.48 a | 2.52 | 3.76 b | 1.69 | 3.75 b | 1.31 | 3.10 c | 0.93 |

1 Mean values with dissimilar superscripts were statistically different (P<0.05).

**Supplementary Table 2-** The mean daily intake of energy and nutrients estimated by three FFQs and nine 3-day weighed dietary record (WDR) for female participants1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nutrients** | **FFQ1** | **FFQ2** | **FFQ3** | **WDR** |
|  | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** |
| **Energy (kcal)** | 2258.05 ab | 812.50 | 2397.03 b | 766.25 | 2098.65 a | 579.13 | 1681.92 c | 257.89 |
| **Protein (g)** | 90.65 a | 40.51 | 95.25 a | 37.02 | 0.98.64 a | 41.31 | 63.36 b | 10.95 |
| **Carbohydrate (g)** | 324.99 a | 126.89 | 326.88 a | 110.03 | 303.65 a | 92.73 | 249.58 b | 452.68 |
| **Sucrose (g)** | 60.26 a | 51.38 | 61.53 a | 53.87 | 53.38 a | 34.48 | 14.32 b | 7.13 |
| **Fat (g)** | 75.82 a | 34.82 | 89.89 a | 43.55 | 63.40 b | 21.37 | 51.08 c | 10.17 |
| **Cholesterol (mg)** | 260.77 ab | 123.98 | 264.78 a | 107.10 | 278.89 a | 103.45 | 224.87 b | 69.44 |
| **Fiber (g)** | 22.71 ab | 10.55 | 24.01 a | 9.04 | 20.70 b | 6.76 | 16.70 c | 3.17 |
| **Thiamin (mg)** | 1.99 a | 0.78 | 2.09 a | 0.91 | 1.87 a | 0.55 | 1.61 b | 0.25 |
| **Riboflavin (mg)** | 1.89 a | 0.81 | 1.90 a | 0.62 | 1.80 a | 0.54 | 1.29 b | 0.29 |
| **Niacin (mg)** | 22.43 a | 8.97 | 22.74 a | 7.78 | 23.72 a | 7.89 | 18.84 b | 3.47 |
| **Pantothenic acid (mg)** | 5.96 a | 2.69 | 5.96 a | 2.31 | 5.67 a | 2.22 | 3.87 b | 1.06 |
| **Pyridoxine (mg)** | 2.07 a | 0.99 | 2.64 a | 3.33 | 1.96 a | 0.70 | 1.23 b | 0.29 |
| **Folate (µg)** | 298.47 a | 130.04 | 298.36 a | 104.70 | 266.65 a | 99.60 | 212.73 b | 48.86 |
| **Vitamin B12 (µg)** | 4.11 a | 2.21 | 3.87 a | 1.52 | 4.05 a | 1.75 | 3.41 a | 2.75 |
| **Vitamin C (mg)** | 221.63 a | 128.31 | 236.15 a | 102.76 | 201.55 a | 94.56 | 93.31 b | 28.59 |
| **Vitamin A (RE)** | 1429.11 a | 781.82 | 1549.07 a | 907.07 | 1183.58 b | 498.90 | 730.87 c | 419.66 |
| **β-Carotene (µg)** | 745.62 a | 500.22 | 828.65 a | 773.64 | 582.72 b | 343.20 | 371.44 c | 282.27 |
| **Vitamin D (µg)** | 1.11 a | 1.70 | 0.92 a | 0.85 | 0.84 a | 0.71 | 0.48 b | 0.63 |
| **α-tocopherol (mg)** | 30.03 a | 32.62 | 34.82 a | 26.71 | 31.88 a | 33.66 | 5.23 b | 4.19 |
| **Vitamin K (µg)** | 103.27 a | 67.37 | 110.50 a | 65.77 | 73.82 b | 31.42 | 80.88 b | 30.75 |
| **Calcium (mg)** | 865.29 a | 410.36 | 910.38 a | 397.11 | 802.34 a | 293.55 | 593.42 b | 138.12 |
| **Phosphorus (mg)** | 1177.50 a | 503.59 | 1233.84 a | 574.60 | 1129.75 a | 453.24 | 789.39 b | 187.70 |
| **Magnesium (mg)** | 285.15 ab | 113.98 | 289.50 a | 99.03 | 257.96 b | 76.36 | 184.40 c | 38.16 |
| **Zinc (mg)** | 9.81 a | 4.24 | 9.73 a | 3.22 | 9.92 a | 3.42 | 6.58 b | 1.32 |
| **Iron (mg)** | 9.35 a | 4.19 | 10.33 a | 5.99 | 9.11 a | 4.27 | 17.47 b | 3.62 |
| **Copper (mg)** | 1.80 a | 0.80 | 1.77 a | 0.59 | 1.67 a | 0.70 | 1.18 b | 0.43 |
| **Selenium (µg)** | 0.10 a | 0.05 | 0.10 a | 0.03 | 0.09 a | 0.03 | 0.07 b | 0.01 |
| **Potassium (mg)** | 3974.60 a | 1865.52 | 4014.93 a | 1483.38 | 3636.27 a | 1138.96 | 2222.74 b | 479.01 |
| **Manganese (mg)** | 3.53 a | 1.40 | 3.45 a | 1.18 | 3.11 b | 0.96 | 2.78 c | 0.71 |

1 Mean values with dissimilar superscripts were statistically different (P<0.05).

**Supplementary Table 3-** Pearson correlation coefficient between energy and nutrient intake in three food frequency questionnaires (FFQs) for male participants1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nutrients** | **FFQ1 vs FFQ2** | **FFQ1 vs FFQ3** | **FFQ2 vs FFQ3** | **ICC2** |
|  | **Crude** | **Adjusted3** | **Crude** | **Adjusted3** | **Crude** | **Adjusted3** | **Crude** | **Adjusted3** |
| **Energy** | 0.27 |  | 0.31 |  | 0.38 |  | 0.56 |  |
| **Protein** | 0.25 | 0.17 | 0.35 | 0.38 | 0.34 | 0.10 | 0.57 | 0.44 |
| **Carbohydrate** | 0.36 | 0.35 | 0.28 | 0.19 | 0.39 | 0.26 | 0.59 | 0.50 |
| **Sucrose** | 0.36 | 0.40 | 0.34 | 0.24 | 0.48 | 0.35 | 0.67 | 0.59 |
| **Fat** | 0.14 | 0.49 | 0.37 | 0.22 | 0.30 | 0.35 | 0.48 | 0.59 |
| **Cholesterol** | 0.27 | 0.24 | 0.51 | 0.36 | 0.36 | 0.20 | 0.65 | 0.50 |
| **Fiber** | 0.35 | 0.48 | 0.40 | 0.33 | 0.40 | 0.47 | 0.64 | 0.70 |
| **Thiamin** | 0.25 | 0.18 | 0.30 | 0.21 | 0.30 | 0.12 | 0.53 | 0.36 |
| **Riboflavin** | 0.29 | 0.39 | 0.43 | 0.37 | 0.38 | 0.32 | 0.63 | 0.61 |
| **Niacin** | 0.30 | 0.18 | 0.29 | 0.32 | 0.36 | 0.20 | 0.56 | 0.49 |
| **Pantothenic acid** | 0.42 | 0.40 | 0.40 | 0.28 | 0.52 | 0.52 | 0.70 | 0.62 |
| **Pyridoxine** | 0.18 | 0.10 | 0.41 | 0.32 | 0.26 | 0.39 | 0.54 | 0.52 |
| **Folate** | 0.47 | 0.39 | 0.38 | 0.15 | 0.50 | 0.42 | 0.69 | 0.55 |
| **Vitamin B12** | 0.13 | 0.21 | 0.33 | 0.40 | 0.36 | 0.38 | 0.51 | 0.57 |
| **Vitamin C** | 0.35 | 0.37 | 0.42 | 0.38 | 0.40 | 0.44 | 0.66 | 0.66 |
| **Vitamin A** | 0.34 | 0.41 | 0.41 | 0.33 | 0.44 | 0.42 | 0.66 | 0.63 |
| **β-Carotene** | 0.40 | 0.27 | 0.46 | 0.41 | 0.39 | 0.36 | 0.67 | 0.65 |
| **Vitamin D** | 0.54 | 0.44 | 0.62 | 0.52 | 0.57 | 0.58 | 0.81 | 0.76 |
| **α-tocopherol** | 0.43 | 0.34 | 0.53 | 0.26 | 0.52 | 0.45 | 0.74 | 0.58 |
| **Vitamin K** | 0.43 | 0.47 | 0.36 | 0.20 | 0.37 | 0.37 | 0.66 | 0.62 |
| **Calcium** | 0.20 | 0.29 | 0.40 | 0.44 | 0.29 | 0.56 | 0.57 | 0.73 |
| **Phosphorus** | 0.34 | 0.26 | 0.38 | 0.22 | 0.43 | 0.44 | 0.64 | 0.50 |
| **Magnesium** | 0.43 | 0.32 | 0.42 | 0.33 | 0.52 | 0.42 | 0.70 | 0.66 |
| **Zinc** | 0.29 | 0.25 | 0.38 | 0.25 | 0.41 | 0.29 | 0.61 | 0.45 |
| **Iron** | 0.33 | 0.20 | 0.46 | 0.37 | 0.42 | 0.52 | 0.66 | 0.66 |
| **Copper** | 0.41 | 0.30 | 0.35 | 0.26 | 0.53 | 0.41 | 0.67 | 0.55 |
| **Selenium** | 0.43 | 0.01 | 0.35 | 0.35 | 0.57 | 0.38 | 0.71 | 0.55 |
| **Potassium** | 0.38 | 0.51 | 0.44 | 0.34 | 0.50 | 0.51 | 0.68 | 0.72 |
| **Manganese** | 0.46 | 0.28 | 0.44 | 0.39 | 0.57 | 0.40 | 0.72 | 0.62 |
| **Median** | 0.35 | 0.31 | 0.40 | 0.33 | 0.40 | 0.40 | 0.66 | 0.59 |

1energy and nutrients values were log-transformed (Log10) to optimize normality

2ICC: intraclass correlation

3Energy adjusted

**Supplementary Table 4-** Pearson correlation coefficient between energy and nutrient intake in three food frequency questionnaires (FFQs) for female participants1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nutrients** | **FFQ1 vs FFQ2** | **FFQ1 vs FFQ3** | **FFQ2 vs FFQ3** | **ICC2** |
|  | **Crude** | **Adjusted3** | **Crude** | **Adjusted3** | **Crude** | **Adjusted3** | **Crude** | **Adjusted3** |
| **Energy** | 0.11 |  | 0.26 |  | 0.22 |  | 0.43 |  |
| **Protein** | 0.27 | 0.27 | 0.43 | 0.44 | 0.42 | 0.25 | 0.64 | 0.61 |
| **Carbohydrate** | 0.11 | 0.43 | 0.13 | 0.27 | 0.24 | 0.30 | 0.38 | 0.62 |
| **Sucrose** | 0.35 | 0.57 | 0.33 | 0.35 | 0.32 | 0.42 | 0.59 | 0.72 |
| **Fat** | 0.22 | 0.27 | 0.39 | 0.07 | 0.27 | 0.22 | 0.55 | 0.45 |
| **Cholesterol** | 0.34 | 0.34 | 0.51 | 0.22 | 0.45 | 0.14 | 0.69 | 0.48 |
| **Fiber** | 0.22 | 0.21 | 0.34 | 0.30 | 0.34 | 0.31 | 0.56 | 0.51 |
| **Thiamin** | 0.09 | 0.24 | 0.22 | 0.26 | 0.22 | 0.18 | 0.39 | 0.45 |
| **Riboflavin** | 0.38 | 0.37 | 0.48 | 0.40 | 0.51 | 0.55 | 0.70 | 0.69 |
| **Niacin** | 0.18 | 0.18 | 0.32 | 0.38 | 0.39 | 0.23 | 0.56 | 0.53 |
| **Pantothenic acid** | 0.30 | 0.41 | 0.47 | 0.29 | 0.51 | 0.47 | 0.69 | 0.65 |
| **Pyridoxine** | 0.13 | 0.08 | 0.37 | 0.35 | 0.28 | 0.21 | 0.47 | 0.34 |
| **Folate** | 0.48 | 0.31 | 0.47 | 0.28 | 0.52 | 0.33 | 0.74 | 0.57 |
| **Vitamin B12** | 0.44 | 0.42 | 0.35 | 0.23 | 0.51 | 0.28 | 0.67 | 0.58 |
| **Vitamin C** | 0.28 | 0.42 | 0.42 | 0.24 | 0.46 | 0.29 | 0.65 | 0.57 |
| **Vitamin A** | 0.21 | 0.15 | 0.40 | 0.24 | 0.39 | 0.22 | 0.57 | 0.38 |
| **β-Carotene** | 0.21 | 0.26 | 0.33 | 0.27 | 0.29 | 0.23 | 0.50 | 0.50 |
| **Vitamin D** | 0.60 | 0.56 | 0.49 | 0.39 | 0.57 | 0.53 | 0.78 | 0.72 |
| **α-tocopherol** | 0.39 | 0.36 | 0.43 | 0.23 | 0.41 | 0.40 | 0.68 | 0.56 |
| **Vitamin K** | 0.48 | 0.51 | 0.50 | 0.43 | 0.40 | 0.35 | 0.72 | 0.71 |
| **Calcium** | 0.29 | 0.42 | 0.36 | 0.43 | 0.42 | 0.56 | 0.61 | 0.71 |
| **Phosphorus** | 0.30 | 0.28 | 0.42 | 0.35 | 0.48 | 0.48 | 0.66 | 0.64 |
| **Magnesium** | 0.34 | 0.40 | 0.44 | 0.37 | 0.51 | 0.49 | 0.69 | 0.67 |
| **Zinc** | 0.30 | 0.32 | 0.40 | 0.30 | 0.55 | 0.54 | 0.66 | 0.66 |
| **Iron** | 0.30 | 0.15 | 0.46 | 0.33 | 0.38 | 0.26 | 0.63 | 0.48 |
| **Copper** | 0.33 | 0.33 | 0.43 | 0.26 | 0.49 | 0.39 | 0.69 | 0.60 |
| **Selenium** | 0.17 | 0.21 | 0.39 | 0.35 | 0.51 | 0.20 | 0.62 | 0.38 |
| **Potassium** | 0.28 | 0.31 | 0.42 | 0.37 | 0.46 | 0.39 | 0.64 | 0.58 |
| **Manganese** | 0.45 | 0.32 | 0.49 | 0.44 | 0.56 | 0.37 | 0.76 | 0.65 |
| **Median** | 0.30 | 0.32 | 0.42 | 0.32 | 0.42 | 0.32 | 0.64 | 0.58 |

1energy and nutrients values were log-transformed (Log10) to optimize normality

2ICC: intraclass correlation

3Energy adjusted

**Supplementary Table 5-** Correlation coefficients for the association between energy and nutrient intake measured by the nine 3-d weighed dietary food records (WDRs) and the food frequency questionnaires (FFQs) for male participants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nutrient** | **Pearson correlation** | **Partial correlation1** | **Partial + de-attenuated** | **ICC2** |
|  | **FFQ1-WDR** | **FFQ3-WDR** | **FFQ1-WDR** | **FFQ3-WDR** | **FFQ1-WDR** | **FFQ3-WDR** | **FFQ1-WDR** | **FFQ3-WDR** |
| **Protein** | 0.18 | 0.32 | 0.13 | 0.31 | 0.14 | 0.32 | 0.22 | 0.31 |
| **Carbohydrate** | 0.12 | 0.42 | 0.15 | 0.45 | 0.15 | 0.46 | 0.16 | 0.50 |
| **Sucrose** | 0.05 | -0.06 | -0.01 | -0.02 | -0.01 | -0.02 | 0.09 | -0.12 |
| **Fat** | 0.14 | 0.33 | 0.16 | 0.37 | 0.17 | 0.39 | 0.20 | 0.48 |
| **Cholesterol** | 0.20 | 0.22 | 0.13 | 0.22 | 0.15 | 0.25 | 0.33 | 0.31 |
| **Fiber** | 0.28 | 0.17 | 0.29 | 0.18 | 0.31 | 0.19 | 0.41 | 0.29 |
| **Thiamin** | 0.25 | 0.03 | 0.22 | 0.02 | 0.23 | 0.02 | 0.35 | 0.06 |
| **Riboflavin** | 0.20 | 0.13 | 0.07 | 0.16 | 0.07 | 0.17 | 0.32 | 0.22 |
| **Niacin** | 0.04 | 0.10 | 0.02 | 0.08 | 0.02 | 0.08 | 0.06 | 0.18 |
| **Pantothenic acid** | 0.16 | 0.22 | 0.23 | 0.20 | 0.24 | 0.21 | 0.26 | 0.36 |
| **Pyridoxine** | 0.35 | 0.14 | 0.33 | 0.11 | 0.38 | 0.13 | 0.51 | 0.23 |
| **Folate** | 0.24 | 0.07 | 0.23 | 0.05 | 0.25 | 0.05 | 0.38 | 0.13 |
| **Vitamin B12** | 0.16 | 0.16 | 0.10 | 0.15 | 0.13 | 0.19 | 0.26 | 0.25 |
| **Vitamin C** | 0.29 | 0.17 | 0.23 | 0.17 | 0.25 | 0.18 | 0.45 | 0.29 |
| **Vitamin A** | 0.14 | -0.14 | 0.13 | -0.19 | 0.15 | -0.22 | 0.24 | -0.31 |
| **β-Carotene** | 0.34 | 0.14 | 0.32 | 0.16 | 0.37 | 0.19 | 0.51 | 0.25 |
| **Vitamin D** | 0.35 | 0.45 | 0.42 | 0.51 | 0.44 | 0.54 | 0.51 | 0.58 |
| **α-tocopherol** | 0.03 | 0.08 | 0.03 | 0.10 | 0.03 | 0.11 | 0.06 | 0.13 |
| **Vitamin K** | 0.25 | 0.27 | 0.27 | 0.24 | 0.33 | 0.29 | 0.40 | 0.42 |
| **Calcium** | 0.27 | 0.37 | 0.30 | 0.40 | 0.31 | 0.42 | 0.40 | 0.54 |
| **Phosphorus** | 0.10 | 0.33 | 0.11 | 0.30 | 0.11 | 0.31 | 0.17 | 0.48 |
| **Magnesium** | 0.30 | 0.14 | 0.29 | 0.15 | 0.30 | 0.16 | 0.46 | 0.25 |
| **Zinc** | 0.09 | 0.29 | 0.03 | 0.25 | 0.32 | 0.26 | 0.17 | 0.44 |
| **Iron** | 0.23 | 0.00 | 0.28 | -0.01 | 0.29 | -0.01 | 0.14 | 0.00 |
| **Copper** | 0.03 | 0.03 | 0.04 | 0.01 | 0.04 | 0.01 | 0.05 | 0.05 |
| **Selenium** | 0.20 | 0.30 | 0.15 | 0.26 | 0.16 | 0.28 | 0.33 | 0.44 |
| **Potassium** | 0.27 | 0.03 | 0.27 | 0.07 | 0.28 | 0.07 | 0.41 | 0.06 |
| **Manganese** | 0.25 | 0.36 | 0.28 | 0.34 | 0.29 | 0.35 | 0.40 | 0.53 |
| **Median** | 0.20 | 0.17 | 0.19 | 0.17 | 0.24 | 0.19 | 0.33 | 0.27 |

1 adjusted for age, sex, and education level

2ICC: intraclass correlation

**Supplementary Table 6-** Correlation coefficients for the association between energy and nutrient intake measured by the nine 3-d weighed dietary food records (WDRs) and the food frequency questionnaires (FFQs) for female participants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nutrient** | **Pearson correlation** | **Partial correlation1** | **Partial + de-attenuated** | **ICC2** |
|  | **FFQ1-WDR** | **FFQ3-WDR** | **FFQ1-WDR** | **FFQ3-WDR** | **FFQ1-WDR** | **FFQ3-WDR** | **FFQ1-WDR** | **FFQ3-WDR** |
| **Protein** | 0.33 | 0.20 | 0.37 | 0.18 | 0.38 | 0.19 | 0.33 | 0.24 |
| **Carbohydrate** | 0.39 | 0.25 | 0.43 | 0.28 | 0.44 | 0.29 | 0.45 | 0.32 |
| **Sucrose** | 0.32 | 0.33 | 0.34 | 0.36 | 0.35 | 0.38 | 0.45 | 0.50 |
| **Fat** | 0.23 | 0.29 | 0.25 | 0.33 | 0.26 | 0.35 | 0.30 | 0.42 |
| **Cholesterol** | 0.26 | 0.18 | 0.30 | 0.21 | 0.34 | 0.24 | 0.41 | 0.30 |
| **Fiber** | 0.22 | 0.29 | 0.26 | 0.20 | 0.28 | 0.21 | 0.30 | 0.43 |
| **Thiamin** | 0.22 | -0.05 | 0.25 | -0.12 | 0.26 | -0.12 | 0.26 | -0.10 |
| **Riboflavin** | 0.39 | 0.31 | 0.39 | 0.33 | 0.41 | 0.35 | 0.52 | 0.47 |
| **Niacin** | 0.16 | 0.06 | 0.22 | 0.07 | 0.23 | 0.07 | 0.23 | 0.11 |
| **Pantothenic acid** | 0.24 | 0.22 | 0.19 | 0.22 | 0.20 | 0.23 | 0.37 | 0.35 |
| **Pyridoxine** | 0.08 | 0.04 | 0.06 | 0.02 | 0.07 | 0.02 | 0.13 | 0.08 |
| **Folate** | 0.21 | -0.13 | 0.24 | -0.11 | 0.26 | -0.12 | 0.32 | -0.25 |
| **Vitamin B12** | 0.43 | 0.15 | 0.49 | 0.19 | 0.62 | 0.24 | 0.59 | 0.23 |
| **Vitamin C** | 0.14 | 0.14 | 0.14 | 0.11 | 0.15 | 0.12 | 0.23 | 0.24 |
| **Vitamin A** | 0.02 | 0.03 | 0.01 | 0.06 | 0.01 | 0.07 | 0.04 | 0.06 |
| **β-Carotene** | 0.12 | 0.04 | 0.12 | 0.11 | 0.14 | 0.13 | 0.21 | 0.06 |
| **Vitamin D** | 0.35 | 0.27 | 0.31 | 0.29 | 0.33 | 0.31 | 0.50 | 0.37 |
| **α-tocopherol** | 0.21 | 0.14 | 0.19 | 0.16 | 0.20 | 0.17 | 0.28 | 0.22 |
| **Vitamin K** | 0.18 | 0.22 | 0.21 | 0.21 | 0.26 | 0.26 | 0.30 | 0.35 |
| **Calcium** | 0.38 | 0.48 | 0.39 | 0.52 | 0.41 | 0.54 | 0.50 | 0.64 |
| **Phosphorus** | 0.32 | 0.10 | 0.26 | 0.10 | 0.27 | 0.10 | 0.42 | 0.17 |
| **Magnesium** | 0.18 | 0.15 | 0.18 | 0.17 | 0.19 | 0.18 | 0.29 | 0.26 |
| **Zinc** | 0.25 | -0.01 | 0.28 | 0.00 | 0.29 | 0.00 | 0.35 | -0.03 |
| **Iron** | -0.01 | 0.09 | -0.05 | 0.02 | -0.05 | 0.02 | 0.00 | 0.08 |
| **Copper** | 0.31 | 0.06 | 0.29 | 0.07 | 0.32 | 0.08 | 0.47 | 0.12 |
| **Selenium** | 0.23 | 0.13 | 0.22 | 0.10 | 0.24 | 0.11 | 0.35 | 0.23 |
| **Potassium** | 0.08 | -0.04 | 0.07 | -0.05 | 0.07 | -0.05 | 0.13 | -0.09 |
| **Manganese** | 0.20 | 0.27 | 0.22 | 0.28 | 0.23 | 0.29 | 0.33 | 0.42 |
| **Median** | 0.23 | 0.15 | 0.25 | 0.17 | 0.26 | 0.18 | 0.33 | 0.24 |

1 adjusted for age, sex, and education level

2ICC: intraclass correlation