**Supplementary material**. Estimated dietary intake of energy and selected nutrients from FFQ1 and FFQ2

**Supplemental Table 1: Participants who submitted a questionnaire at the center**

| **Nutrient** | **Complete-case of FFQ2****(n = 3,299)** |  | **All of FFQ2****(n = 3,580)** |  | **Difference(B)** − **(A)****(n = 3,565, nalc = 1,844)** |  | **Difference(C)** − **(A)****(n = 3,565, nalc = 1,839)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **FFQ1****(n = 3,282, nalc = 1,694)** |  | **FFQ2****(n = 3,285, nalc = 1,663)** |  | **FFQ1****(n = 3,562, nalc = 1,872)** |  | **(A) FFQ2 of imputing baseline value****(n = 3,565, nalc = 1,840)** |  | **(B) FFQ2 of zero imputation****(n = 3,566, nalc = 1,844)** |  | **(C) FFQ2 of multiple imputation****(n = 3,566, nalc = 1,842)** |  |  |
|  |  |  |  |  |  |  |
| **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean** |  | **Mean** |
| Total Energy | kcal | 1,695 | (6.0) |  | 1,636 | (5.7) |  | 1,695 | (5.7) |  | 1,634 | (5.4) |  | 1,633 | (5.5) |  | 1,634 | (5.4) |  | −1.06\* |  | 0.37  |
| Protein | g | 53.4 | (0.18) |  | 52.7 | (0.19) |  | 53.4 | (0.18) |  | 52.7 | (0.18) |  | 52.6 | (0.18) |  | 52.7 | (0.18) |  | −0.03\*\* |  | 0.01  |
|  | % energy | 12.7 | (0.03) |  | 13.0 | (0.03) |  | 12.7 | (0.03) |  | 13.0 | (0.03) |  | 13.0 | (0.03) |  | 13.0 | (0.03) |  | 0.00  |  | 0.00  |
| Fat | g | 43.6 | (0.19) |  | 45.3 | (0.20) |  | 43.5 | (0.18) |  | 45.1 | (0.19) |  | 45.1 | (0.19) |  | 45.1 | (0.19) |  | −0.01\*\* |  | 0.01  |
|  | % energy | 23.7 | (0.11) |  | 25.5 | (0.12) |  | 23.7 | (0.10) |  | 25.5 | (0.11) |  | 25.5 | (0.11) |  | 25.5 | (0.11) |  | 0.02  |  | 0.00  |
| Carbohydrate | g | 251 | (1.2) |  | 238 | (1.1) |  | 251 | (1.1) |  | 237 | (1.0) |  | 237 | (1.0) |  | 237 | (1.0) |  | −0.19\* |  | 0.07  |
|  | % energy | 58.7 | (0.09) |  | 57.5 | (0.10) |  | 58.7 | (0.09) |  | 57.5 | (0.09) |  | 57.5 | (0.09) |  | 57.5 | (0.09) |  | −0.01 |  | 0.00  |
| Dietary Fiber | g | 10.8 | (0.05) |  | 10.9 | (0.06) |  | 10.8 | (0.05) |  | 10.9 | (0.05) |  | 10.9 | (0.05) |  | 10.9 | (0.05) |  | 0.00\*\* |  | 0.00  |
|  | g/1,000 kcal | 6.5 | (0.03) |  | 6.9 | (0.04) |  | 6.5 | (0.03) |  | 6.9 | (0.04) |  | 6.9 | (0.04) |  | 6.9 | (0.04) |  | 0.00 |  | 0.00  |
| Alcohol | g | 15 | (0.4) |  | 15 | (0.4) |  | 15 | (0.4) |  | 15 | (0.4) |  | 15 | (0.4) |  | 15 | (0.4) |  | −0.11\* |  | −0.02  |
| 　 | g/1,000 kcal | 9 | (0.3) | 　 | 9 | (0.3) | 　 | 9 | (0.3) | 　 | 10 | (0.3) | 　 | 10 | (0.3) | 　 | 10 | (0.3) | 　 | −0.07\* | 　 | −0.02 |

**n** indicates the number of participants who had <40 missing values and total energy intake between 600 and 3,500 kcal.

**nalc** indicates the number of participants who consumed >0 g/day of alcohol in **n** participants.

Energy from alcohol was not included in the total energy.

\**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001 for paired t-test between imputation methods

SE, standard error

**Supplemental Table 2: Participants who submitted a questionnaire by mail**

| **Nutrient** | **Complete−case of FFQ2****(n = 374)** |  | **All of FFQ2****(n = 1,540)** |  | **Difference(B) − (A)****(n=1,516, nalc=708)** |  | **Difference(C) − (A)****(n=1,519, nalc=711)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **FFQ1****(n=374, nalc=186)** |  | **FFQ2****(n=373, nalc=160)** |  | **FFQ1****(n=1,536, nalc=792)** |  | **(A) FFQ2 of imputing baseline value****(n=1,522, nalc=724)** |  | **(B) FFQ2 of zero imputation****(n=1,518, nalc=728)** |  | **(C) FFQ2 of multiple imputation****(n=1,520, nalc=732)** |  |  |
|  |  |  |  |  |  |  |
| **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean (SE)** |  | **Mean** |  | **Mean** |
| Total Energy | kcal | 1,672 | (16.6) |  | 1,608 | (17.6) |  | 1,695 | (8.6) |  | 1,676 | (9.1) |  | 1,609 | (8.6) |  | 1,696 | (10.3) |  | **−**70.63\*\*\* |  | 20.33\*\* |
| Protein | g | 52.6 | (0.49) |  | 52.3 | (0.57) |  | 53.5 | (0.26) |  | 54.5 | (0.30) |  | 52.8 | (0.29) |  | 55.2 | (0.34) |  | **−**1.74\*\*\* |  | 0.75\*\*\* |
|  | % energy | 12.7 | (0.10) |  | 13.2 | (0.11) |  | 12.8 | (0.05) |  | 13.2 | (0.05) |  | 13.3 | (0.06) |  | 13.2 | (0.06) |  | 0.15\*\*\* |  | 0.00 |
| Fat | g | 44.0 | (0.54) |  | 45.5 | (0.58) |  | 43.3 | (0.27) |  | 46.1 | (0.31) |  | 45.4 | (0.31) |  | 46.5 | (0.33) |  | **−**0.71\*\*\* |  | 0.44\*\*\* |
|  | % energy | 24.3 | (0.32) |  | 26.1 | (0.35) |  | 23.6 | (0.16) |  | 25.4 | (0.18) |  | 26.2 | (0.20) |  | 25.3 | (0.19) |  | 0.77\*\*\* |  | **−**0.08  |
| Carbohydrate | g | 246 | (3.2) |  | 231 | (3.3) |  | 252 | (1.7) |  | 245 | (1.7) |  | 232 | (1.6) |  | 248 | (1.9) |  | **−**13.38\*\*\* |  | 3.43\*\* |
|  | % energy | 58.4 | (0.27) |  | 56.9 | (0.29) |  | 58.9 | (0.13) |  | 57.9 | (0.14) |  | 57.1 | (0.16) |  | 58.0 | (0.15) |  | **−**0.82\*\*\* |  | 0.11 |
| Dietary Fiber | g | 10.9 | (0.17) |  | 11.1 | (0.16) |  | 11.2 | (0.09) |  | 11.7 | (0.10) |  | 11.5 | (0.10) |  | 11.8 | (0.10) |  | **−**0.22\*\*\* |  | 0.16\*\*\* |
|  | g/1,000 kcal | 6.7 | (0.11) |  | 7.2 | (0.12) |  | 6.8 | (0.06) |  | 7.2 | (0.07) |  | 7.4 | (0.07) |  | 7.2 | (0.07) |  | 0.21\*\*\* |  | **−**0.01 |
| Alcohol | g | 14 | (1.3) |  | 16 | (1.6) |  | 16 | (0.6) |  | 18 | (0.7) |  | 16 | (0.6) |  | 21 | (1.0) |  | **−**1.31\*\*\* |  | 3.34\*\*\* |
| 　 | g/1,000 kcal | 9 | (1.0) | 　 | 11 | (1.3) | 　 | 10 | (0.4) | 　 | 11 | (0.5) | 　 | 11 | (0.5) | 　 | 13 | (0.7) | 　 | **−**0.36\* | 　 | 1.92\*\*\* |

**n** indicates the number of participants who had <40 missing values and total energy intake between 600 and 3,500 kcal.

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\**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001 for paired t-test between imputation methods

SE, standard error