Appendix Table 1: Distribution of non-pregnant women aged 12 – 49 years stratified by dietary, demographic, and lifestyle factors among categories of risk for neural tube defects (NTDs) defined by red blood cell (RBC) folate concentrations, NHANES 2007 – 2010

|  |  |  |
| --- | --- | --- |
|  | Unweighted N | RBC folate concentration (nmol/L)1,2,3 |
|  | ≤585 nmol/L[> 14 NTDs per 10,000] | 586–747 nmol/L[9–14 NTDs per 10,000]  | 748–1215 nmol/L[4–<9 NTDs per 10,000]  | ≥1216 nmol/L [Outside of estimable range] |
|  | Weighted percentage (95% CI) |
|  |  |  |  |  |  |
| Total4 | 3861 | 8.2 (7.1, 9.4) | 14.8 (13.1, 16.6) | 46.0 (43.7, 48.4) | 31.0 (28.6, 33.6) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Use of supplements containing folic acid |  |  |  |  |
| *None* | 2965 | 10.3 (8.9, 11.9) | 18.2 (15.9, 20.7) | 49.3 (46.6, 52.0) | 22.2 (19.9, 24.7) |
| *Any* | 896 | 2.9 (2.0, 4.2) | 6.4 (4.7, 8.7) | 37.9 (34.4, 41.6) | 52.8 (48.8, 56.8) |
|  |  |  |  |  |  |
| *Average daily dose <400µg* | 454 | 3.5 (2.1, 5.8) | 8.4 (5.7, 12.1) | 46.8 (42.5, 51.1) | 41.3 (36.9, 45.9) |
| *Average daily dose<200 µg* | 236 | 3.6 (1.7, 7.7) | 9.2 (6.0, 13.6) | 50.6 (43.7, 57.5) | 36.6 (29.5, 44.5) |
| *Average daily dose 200 - <400 µg* | 218 | 3.4 (1.8, 6.6) | 7.6 (4.1, 13.5) | 42.7 (35.8, 49.9) | 46.3 (40.4, 52.4) |
|  |  |  |  |  |  |
| *Average daily dose ≥400 µg* | 442 | 2.3 (1.5, 3.5) | 4.5 (2.9, 7.1) | 29.5 (24.3, 35.4) | 63.7 (57.4, 69.5) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Folic acid source(s)5 |  |  |  |  |  |
| *ECGP only* | 1621 | 13.1 (10.7, 15.9) | 20.3 (16.9, 24.4) | 48.1 (44,5, 51.7) | 18.5 (15.2, 22.4) |
| *ECGP + RTE* | 859 | 4.4 (2.8, 6.7) | 13.4 (10.1, 17.5) | 53.3 (47.6, 58.9) | 29.0 (24.3, 34.2) |
| *ECGP + SUPP* | 498 | 4.7 (2.8, 7.5) | 6.9 (4.5, 10.6) | 42.1 (35.8, 48.6) | 46.3 (40.2, 52.5) |
| *ECGP + RTE + SUPP* | 282 | 0.9 (0.2, 4.7) | 3.6 (1.7, 7.3) | 30.0 (23.7, 37.2) | 65.5 (58.1, 72.2) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Age group |  |  |  |  |  |
| *12 – 24 years* | 1488 | 8.4 (6.5, 10.8) | 17.5 (14.8, 20.6) | 52.0 (48.4, 55.5) | 22.1 (18.5, 26.2) |
| *25 – 34 years* | 868 | 9.1 (6.8, 12.1) | 14.4 (11.5, 17.9) | 46.2 (42.5, 49.9) | 30.3 (26.5, 34.4) |
| *35 – 49 years* | 1505 | 7.5 (5.9, 9.4) | 12.9 (10.4, 16.0) | 41.6 (38.3, 45.0) | 38.0 (33.9, 42.2) |
|  |  |  |  |  |  |
| Race/ethnicity |  |  |  |  |  |
| *Non-Hispanic white* | 1555 | 6.1 (4.6, 8.0) | 12.5 (10.1, 15.3) | 45.0 (41.8, 48.2) | 36.4 (32.4, 40.6) |
| *Non-Hispanic black* | 767 | 15.6 (12.5, 19.2) | 23.0 (20.1, 26.2) | 45.4 (41.6, 49.2) | 16.1 (12.9, 19.8) |
| *Hispanic* | 1325 | 8.0 (6.3, 10.1) | 14.8 (12.9, 16.8) | 52.7 (50.2, 55.2) | 24.6 (21.0, 28.5) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Education level |  |  |  |  |  |
| *< High school* | 1591 | 9.7 (7.9, 12.0) | 16.9 (14.3, 19.9) | 49.8 (45.5, 54.2) | 23.5 (20.5, 26.8) |
| *High school graduate/GED* | 666 | 10.8 (8.3, 14.0) | 16.0 (12.8, 19.9) | 47.6 (43.1, 52.3) | 25.5 (20.9, 30.7) |
| *At least some college* | 1600 | 6.3 (4.9, 8.1) | 13.0 (11.4, 14.8) | 43.2 (39.9, 46.7) | 37.4 (33.5, 41.5) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Poverty income ratio6 |  |  |  |  |  |
| *<1.0* | 1029 | 12.4 (9.9, 15.3) | 16.6 (13.5, 20.3) | 47.2 (41.7, 52.9) | 23.8 (19.3, 29.0) |
| *1.0 – 1.9* | 998 | 8.5 (6.3, 11.5) | 16.3 (13.7, 19.3) | 47.5 (42.0, 53.1) | 27.7 (23.6, 32.1) |
| *2.0 – 3.9* | 817 | 8.9 (6.7, 11.6) | 13.6 (10.6, 17.2) | 42.8 (38.5, 47.1)  | 34.8 (30.5, 39.3) |
| *≥4.0* | 712 | 4.3 (2.9, 6.5) | 13.3 (10.6, 16.5) | 47.2 (43.2, 51.3) | 35.2 (30.2, 40.5) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Body Mass Index (BMI) [kg/m2] |  |  |  |  |  |
| *Underweight (BMI<18.5)* | 196 | 11.3 (7.0, 17.6) | 14.0 (9.3, 20.5) | 53.4 (42.9, 63.7) | 21.3 (14.0, 31.1) |
| *Normal weight (18.5≤BMI<25)* | 1449 | 8.2 (6.8, 9.9) | 15.9 (13.4, 18.9) | 47.2 (44.1, 50.4) | 28.6 (25.1, 32.4) |
| *Overweight (25≤BMI<30)* | 967 | 8.2 (6.4, 10.6) | 15.6 (12.9, 18.7) | 47.0 (42.0, 51.9) | 29.2 (24.4, 34.6) |
| *Obese (BMI≥30)* | 1202 | 7.5 (5.7, 9.7) | 12.7 (10.6, 15.0) | 42.5 (38.5, 46.5) | 37.4 (33.7, 41.2) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Smoking status7 |  |  |  |  |  |
| *Non-smoker* | 3014 | 5.9 (4.8, 7.3) | 13.6 (12.1, 15.2) | 47.0 (44.3, 49.8) | 33.4 (30.7, 36.2) |
| *Smoker* | 817 | 15.9 (13.3, 18.8) | 18.7 (15.0, 23.0) | 43.2 (39.4, 47.1) | 22.2 (18.4, 26.6) |
|  |  |  |  |  |  |

NHANES: National Health and Nutrition Examination Survey; CI: Confidence Interval; ECGP: Enriched cereal grain products; RTE: ready-to-eat cereal; SUPP: dietary supplement containing folic acid

1 RBC folate ranges from Pfeiffer/NHANES method presented

2 Risk categories derived from Crider et al., 2014 ([1](#_ENREF_1))

3 NTD prevalence estimates are based on the median estimated NTD prevalence for an entire population with a given RBC folate concentration, corresponding to the risk category cut points; rounded to the nearest whole number

4 Excludes those who did not attend the Mobile Examination Center (N=93), those who reported that they did not know how many supplements they had taken (N=1), and those with missing RBC folate concentrations (N=293)

54Additionally excludes those for whom the day 1 dietary recall was not reliable (N=2) or missing (N=147) and additionally those for whom the day 2 dietary recall was not reliable (N=14) or missing (N=438)

6Poverty income ratio is defined as the ratio of self-reported family income to federal poverty threshold, accounting for family size, year, and state; higher values correspond to higher socioeconomic status

7Smoking status is defined as smoker (cotinine >10 ng/mL) and non-smoker (≤ 10 ng/mL)