Supplementary table 1. Energy adjusted fatty acid intakes (g/d) in medians with interquartile ranges (IQR) for the three measurements of the food frequency questionnaire (FFQ) and the weighted average 24 hour dietary recalls (24HDRs) in 63 men

|  |  |  | FFQ1 | |  | FFQ2 | |  | FFQ3 | |  | 24HDR | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Median | IQR |  | Median | IQR |  | Median | IQR |  | Median | IQR |
| SFA | Total |  | 42.6 | (32.7 - 54.5) | | 40.8\* | (31.3 - 49.8) | | 39.2\*\* | (29.4 - 47.5) | | 42.3\* | (31.2 - 49.2) |
|  | Butyric acid | 4:0 | 0.54 | (0.33 - 0.89) | | 0.43\*\*\* | (0.27 - 0.70) | | 0.46\*\* | (0.31 - 0.68) | | 0.56 | (0.37 - 0.76) |
|  | Caproic acid | 6:0 | 0.40 | (0.24 - 0.62) | | 0.31\*\*\* | (0.19 - 0.50) | | 0.33\*\* | (0.22 - 0.49) | | 0.39 | (0.27 - 0.56) |
|  | Caprylic acid | 8:0 | 0.30 | (0.20 - 0.40) | | 0.23\*\*\* | (0.15 - 0.38) | | 0.23\*\* | (0.16 - 0.35) | | 0.28 | (0.20 - 0.37) |
|  | Capric acid | 10:0 | 0.58 | (0.35 - 0.75) | | 0.47\*\*\* | (0.31 - 0.66) | | 0.46\*\* | (0.32 - 0.72) | | 0.50\*\* | (0.35 - 0.65) |
|  | Lauric acid | 12:0 | 2.05 | (1.32 - 2.71) | | 1.68\*\* | (1.12 - 2.44) | | 1.57\*\* | (1.03 - 2.14) | | 1.69 | (1.26 - 2.36) |
|  | Myristic acid | 14:0 | 4.4 | (3.1 - 5.5) | | 3.9\*\* | (2.5 - 5.1) | | 3.9\* | (2.5 - 4.7) | | 4.0 | (2.8 - 5.1) |
|  | Pentadecylic acid | 15:0 | 0.56 | (0.41 - 0.73) | | 0.48\*\*\* | (0.33 - 0.65) | | 0.50\*\* | (0.34 - 0.64) | | 0.54 | (0.38 - 0.71) |
|  | Palmitic acid | 16:0 | 20.1 | (15.7 - 26.1) | | 19.0\*\* | (14.5 - 22.9) | | 18.9\*\*\* | (14.4 - 21.5) | | 19.5\*\* | (14.1 - 22.8) |
|  | Margaric acid | 17:0 | 0.44 | (0.31 - 0.53) | | 0.40\*\*\* | (0.28 - 0.46) | | 0.39\*\* | (0.28 - 0.48) | | 0.39 | (0.31 - 0.50) |
|  | Stearic acid | 18:0 | 9.4 | (7.5 - 12.3) | | 9.1\* | (7.1 - 11.2) | | 8.6\*\* | (6.8 - 10.6) | | 9.4 | (7.2 - 11.4) |
| MUFA | Total |  | 40.5 | (31.9 - 51.7) | | 38.6 | (30.6 - 49.7) | | 36.8\* | (29.4 - 45.2) | | 37.2\*\* | (29.0 - 45.4) |
|  | Oleic acid | 18:1n-9 | 19.9 | (14.6 - 26.7) | | 19.5 | (13.7 - 25.2) | | 18.8\*\* | (14.2 - 24.2) | | 20.0 | (15.4 - 26.7) |
| TFA | Total |  | 4.2 | (3.1 - 6.1) | | 4.0\* | (3.0 - 5.1) | | 3.8\*\* | (2.7 - 5.2) | | 3.8\* | (2.7 - 5.2) |
| PUFA | Total |  | 23.1 | (17.6 - 31.0) | | 23.2 | (18.8 - 29.9) | | 22.2 | (16.7 - 28.2) | | 18.3\*\*\* | (14.4 - 23.7) |
| *n*-6 | Total |  | 16.9 | (12.4 - 22.3) | | 17.7 | (12.9 - 21.3) | | 15.9 | (12.7 - 20.5) | | 12.7\*\*\* | (9.1 - 15.3) |
|  | Linoleic acid | 18:2n-6 | 16.7 | (12.4 - 22.2) | | 17.6 | (12.8 - 20.9) | | 15.8 | (12.6 - 20.3) | | 12.5\*\*\* | (8.9 - 15.1) |
|  |  |  |  |  |  |  |  |  |  | *Table continues on next page* | | | |
|  | Arachidonic Acid | C20:4n-6 | 0.02 | (0.02 - 0.04) | | 0.02 | (0.02 - 0.04) | | 0.02\* | (0.02 - 0.03) | | 0.03\*\* | (0.02 - 0.05) |
| *n*-3 | Total |  | 1.58 | (1.24 - 2.11) | | 1.56 | (1.17 - 2.01) | | 1.52\* | (1.08 - 1.93) | | 1.47\* | (1.00 - 1.94) |
|  | Alpha-linolenic acid | 18:3n-3 | 1.44 | (1.09 - 1.87) | | 1.44 | (1.02 - 1.86) | | 1.36\* | (0.94 - 1.72) | | 1.24\*\* | (0.88 - 1.67) |
|  | Eicosapentanoic acid | C20:5n-3 | 0.03 | (0.01 - 0.05) | | 0.02 | (0.01 - 0.05) | | 0.03 | (0.01 - 0.05) | | 0.02 | (0.00 - 0.12) |
|  | Docosahexanoic acid | C22:6n-3 | 0.07 | (0.04 - 0.13) | | 0.06\* | (0.04 - 0.12) | | 0.06 | (0.04 - 0.12) | | 0.05 | (0.02 - 0.17) |

Abbreviations: SFA, saturated fatty acid; MUFA, monounsaturated fatty acid; TFA, trans fatty acid; PUFA, polyunsaturated fatty acid

\*p-value<0.05; \*\*p-value <0.005; \*\*\*p-value <0.0001 for significance of difference in median intake compared to FFQ1 as tested with the Wilcoxon Signed ranks test

Supplementary table 2.Energy adjusted fatty acid intakes (g/d) in medians with interquartile ranges (IQR) for the three measurements of the food frequency questionnaire (FFQ) and the weighted average 24 hour dietary recalls (24HDRs) in 58 women.

|  |  |  | FFQ1 | |  | FFQ2 | |  | FFQ3 | |  | 24HDR | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Median | IQR |  | Median | IQR |  | Median | IQR |  | Median | IQR |
| SFA | Total |  | 36.8 | (33.8 - 41.6) |  | 35.6 | (32.5 - 39.4) |  | 33.8 | (29.9 - 36.8) |  | 34.8 | (30.8 - 38.2) |
|  | Butyric acid | 4:0 | 0.53 | (0.42 - 0.65) |  | 0.46 | (0.39 - 0.62) |  | 0.47 | (0.33 - 0.54) |  | 0.63 | (0.45 - 0.76) |
|  | Caproic acid | 6:0 | 0.39 | (0.30 - 0.46) |  | 0.33 | (0.28 - 0.44) |  | 0.34 | (0.23 - 0.39) |  | 0.45 | (0.32 - 0.53) |
|  | Caprylic acid | 8:0 | 0.27 | (0.21 - 0.32) |  | 0.26 | (0.19 - 0.30) |  | 0.24 | (0.18 - 0.28) |  | 0.25 | (0.21 - 0.32) |
|  | Capric acid | 10:0 | 0.50 | (0.44 - 0.60) |  | 0.50 | (0.39 - 0.58) |  | 0.47 | (0.38 - 0.53) |  | 0.48 | (0.40 - 0.56) |
|  | Lauric acid | 12:0 | 1.72 | (1.36 - 2.01) |  | 1.60 | (1.34 - 1.92) |  | 1.51 | (1.12 - 1.81) |  | 1.60 | (1.32 - 1.96) |
|  | Myristic acid | 14:0 | 3.8 | (3.2 - 4.6) |  | 3.7 | (3.0 - 4.2) |  | 3.4 | (2.8 - 3.9) |  | 3.7 | (3.0 - 4.3) |
|  | Pentadecylic acid | 15:0 | 0.51 | (0.44 - 0.61) |  | 0.48 | (0.37 - 0.61) |  | 0.45 | (0.37 - 0.52) |  | 0.51 | (0.40 - 0.61) |
|  | Palmitic acid | 16:0 | 16.7 | (15.4 - 19.3) |  | 16.7 | (14.2 - 17.7) |  | 15.7 | (13.4 - 17.0) |  | 15.5 | (13.8 - 17.4) |
|  | Margaric acid | 17:0 | 0.37 | (0.31 - 0.41) |  | 0.35 | (0.31 - 0.40) |  | 0.32 | (0.29 - 0.36) |  | 0.35 | (0.31 - 0.40) |
|  | Stearic acid | 18:0 | 8.1 | (7.1 - 9.0) |  | 7.9 | (7.1 - 8.7) |  | 7.5 | (6.4 - 8.1) |  | 7.4 | (6.7 - 8.4) |
| MUFA | Total |  | 33.2 | (29.9 - 38.3) |  | 32.7 | (29.7 - 36.5) |  | 30.3 | (27.3 - 35.5) |  | 29.1 | (26.8 - 33.2) |
|  | Oleic acid | 18:1n-9 | 16.8 | (14.9 - 19.2) |  | 16.3 | (14.3 - 18.8) |  | 15.9 | (13.2 - 17.6) |  | 15.3 | (13.0 - 17.5) |
| TFA | Total |  | 3.3 | (2.7 - 4.2) |  | 3.3 | (2.5 - 4.2) |  | 3.0 | (2.53 - 3.81) |  | 3.1 | (2.6 - 3.8) |
| PUFA | Total |  | 20.1 | (16.9 - 23.5) |  | 19.3 | (16.3 - 24.4) |  | 19.1 | (16.2 - 22.5) |  | 14.4 | (11.9 - 16.9) |
| *n*-6 | Total |  | 15.0 | (11.5 - 17.2) |  | 13.7 | (11.4 - 17.1) |  | 13.7 | (10.7 - 15.8) |  | 8.6 | (7.4 - 11.2) |
|  | Linoleic acid | 18:2n-6 | 14.8 | (11.4 - 17.1) |  | 13.5 | (11.2 - 16.7) |  | 13.5 | (10.6 - 15.6) |  | 8.4 | (7.3 - 11.1) |
|  |  |  |  |  |  |  |  |  |  | *Table continues on next page* | | | |
|  | Arachidonic Acid | 20:4n-6 | 0.03 | (0.02 - 0.04) |  | 0.02 | (0.02 - 0.03) |  | 0.03 | (0.02 - 0.03) |  | 0.04 | (0.02 - 0.07) |
| *n*-3 | Total |  | 1.43 | (1.15 - 1.71) |  | 1.34 | (1.09 - 1.72) |  | 1.3 | (1.07 - 1.47) |  | 1.13 | (0.88 - 1.39) |
|  | Alpha-linolenic acid | 18:3n-3 | 1.26 | (1.04 - 1.53) |  | 1.15 | (0.98 - 1.52) |  | 1.11 | (0.97 - 1.36) |  | 0.99 | (0.78 - 1.21) |
|  | Eicosapentanoic acid | 20:5n-3 | 0.04 | (0.01 - 0.06) |  | 0.03 | (0.01 - 0.05) |  | 0.03 | (0.01 - 0.04) |  | 0.02 | (0.00 - 0.04) |
|  | Docosahexanoic acid | 22:6n-3 | 0.08 | (0.03 - 0.13) |  | 0.07 | (0.03 - 0.11) |  | 0.07 | (0.04 - 0.10) |  | 0.06 | (0.03 - 0.14) |

Abbreviations: SFA, saturated fatty acid; MUFA, monounsaturated fatty acid; TFA, trans fatty acid; PUFA, polyunsaturated fatty acid

\*p-value<0.05; \*\*p-value <0.005; \*\*\*p-value <0.0001 for significance of difference in median intake compared to FFQ1 as tested with the Wilcoxon Signed ranks test

Supplementary figures 1 to 44. Bland-Altman plots of energy adjusted intakes of fatty acids for men (in blue) and women (in red) separately.

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaSFA_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaSFA_v1.png |
| Figure 1. | Figure 2. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC4_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC4_vrouw.jpg |
| Figure 3. | Figure 4. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC6_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC6_v1.png |
| Figure 5. | Figure 6. |

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC8_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC8_v1.png |
| Figure 7. | Figure 8. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC10_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eac10_vrouw.jpg |
| Figure 9. | Figure 10. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC12_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC12_v1.png |
| Figure 11. | Figure 12. |

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC14_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC14_v1.png |
| Figure 13. | Figure 14. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC15_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC15_v1.png |
| Figure 15. | Figure 16. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC16_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC16_v1.png |
| Figure 17. | Figure 18. |

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC17_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC17_v1.png |
| Figure 19. | Figure 20. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC18_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaC18_v1.png |
| Figure 21. | Figure 22. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaMUFA_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaMUFA_vrouw.jpg |
| Figure 23. | Figure 24. |

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaOA_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaOA_v1.png |
| Figure 25. | Figure 26. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaTFA_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaTFA_v1.png |
| Figure 27. | Figure 28. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eapufa_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaPUFA_v1.png |
| Figure 29. | Figure 30. |

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\ean6_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\ean6_vrouw.jpg |
| Figure 31. | Figure 32. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaLA_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaLA_vrouw.jpg |
| Figure 33. | Figure 34. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaAA_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaAA_vrouw.jpg |
| Figure 35. | Figure 36. |

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\ean3_m1.png | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\ean3_v1.png |
| Figure 37. | Figure 38. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaALA_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaALA_v1.png |
| Figure 39. | Figure 40. |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaEPA_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaEPA_vrouw.jpg |
| Figure 41. | Figure 42. |

|  |  |
| --- | --- |
| U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaDHA_man.jpg | U:\Artikel Validatie study FA in EPICnl\manuscript\plots\bland altmans\eaDHA_vrouw.jpg |
| Figure 43. | Figure 44. |