**Supplemental Table 1. Description of food group components**

|  |  |
| --- | --- |
| **Food group** | **Food group components** |
| **Bread** | Breads |
| **Cereals** | Cereals, cereals-based product, rice, rice-based dishes, pasta, pasta-based dishes and noodles, bulgur, bulgur-based dishes, pizzas, and pies |
| **Legumes** | Legumes and legume-based dishes |
| **Starchy Vegetables** | Starchy vegetables |
| **Vegetables** | Salad and raw vegetables, cooked vegetables, vegetable-based dishes, canned vegetables, and mahashi (stuffed vegetables) |
| **Chips and Salty Crackers** | Salty snacks |
| **Nuts and seeds** | Nuts/seeds |
| **Dairy Products** | Milk, cheese, yoghurt, labneh, and yoghurt-based dishes |
| **Sweetened Dairy Products** | Sweetened dairy products |
| **Meat / Poultry / Fish** | Meat, meat-based traditional dishes, poultry, poultry-based traditional dishes, seafood, and seafood-based dishes |
| **Eggs** | Eggs and eggs-based dishes |
| **Fruits** | Whole fruits and dried fruits |
| **Fresh Fruit Juices** | Fresh fruit juices |
| **Sweets** | Pastries, candies, biscuits, wafers, chocolate bars, chocolate-based biscuits and wafer, cocoa powder, cakes and desserts, traditional sweets, and ice-cream |
| **Added Sugars** | Sugar and jams |
| **Sugar Sweetened Beverages** | Sweetened juices and regular soft drinks |
| **Hot Beverages** | Tea and coffee |
| **Alcoholic Beverages** | Alcoholic beverages |
| **Added Fats / Oils** | Olive oil, olives, avocado, oil, salad dressings, and animal-based fat |
| **Fast Food** | Fast foods |
| **Miscellaneous** | Pickles, salt, condiments, soups, and broth |

Supplemental Table 2. Daily food consumption (g/day) of sample contributed by various food groups according to survey year in the study population (n=1,645), Lebanon, 1997 (n=451), 2008/9 (n=528), and 2015 (n=666) among adolescents aged 10-18.9 years

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **1997** | | | | | | **2009** | | | | | | | | | | | | | | **2015** | | | | | | | | | | | |  |
| **(n=451)** | | | | | | **(n=528)** | | | | | | | | | | | | | | **(n=666)** | | | | | | | | | | | |  |
|  | **Mean** | | | | | **SE** | **Mean** | | | | | | | | | | | | **SE** | | **Mean** | | | | | | | | | | | **SE** | **p-value** |
| **Both sexes** |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Bread | 134.27 a | | | | | 4.95 | 136.34 a | | | | | | | | | 5.06 | | | |  | 80.37 b | | | | | | | | | | 3.01 | | <0.001 |
| Cereals | 101.28 a | | | | | 6.89 | 155.53 b | | | | | | | | | 9.39 | | | |  | 160.17 b | | | | | | | | | | 7.56 | | <0.001 |
| Legumes | 37.42 | | | | | 7.61 | 50.70 | | | | | | | | | 6.80 | | | |  | 20.80 | | | | | | | | | 2.86 | | | <0.001 |
| Starchy Vegetables | 48.34 | | | | | 3.65 | 59.61 | | | | | | | | | 4.53 | | | |  | 59.21 | | | | | | | | | 3.35 | | | 0.087 |
| Vegetables | 176.15 a | | | | | 8.32 | 192.32 a | | | | | | | | | 12.70 | | | |  | 137.94 b | | | | | | | | | 7.83 | | | <0.001 |
| Chips and Salty Crackers | 9.44 c | | | | | 1.03 | 17.94 b | | | | | | | | | 1.44 | | | | | 31.54 a | | | | | | | | 1.97 | | | | <0.001 |
| Nuts and Seeds | 9.11 | | | | | 1.55 | 6.89 | | | | | | | | | 1.27 | | | | | 7.28 | | | | | | | | 0.95 | | | | 0.436 |
| Dairy Products | 144.5 a | | | | | 8.30 | 104.30 b | | | | | | | | | | | 6.67 | | | 99.45 b | | | | | | | | 5.82 | | | | <0.001 |
| Meat, Poultry, Fish | 64.61 b | | | | | 4.59 | 101.94 a | | | | | | | | | | | 6.20 | | | 64.49 b | | | | | | | 3.50 | | | | | <0.001 |
| Eggs | 18.02 | | | | 1.95 | | 15.37 | | | | | | | | | | | 3.47 | | | 11.10 | | | | | | 1.39 | | | | | | 0.105 |
| Fruits, Total |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Whole Fruits | 184.17 a | | | | 10.39 | | 114.32 b | | | | | | 7.78 | | | | | | | | 117.84 b | | | | | | 7.64 | | | | | | <0.001 |
| Fresh Juices (100% Fruit Juices) | 1.78 | | | | 1.30 | | | 3.53 |  | | | | 1.45 | | | | | | | | 0.54 | | | | | | 0.42 | | | | | | 0.115 |
| Sweets and Added Sugars |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Sweets | 65.77 | | | | 4.13 | | 63.53 | | | | | | | | | | 4.22 | | | | 65.77 | | | | | | 3.14 | | | | | | 0.891 |
| Added Sugars, Jams, Honey, Molasses | 6.38 a, b | | | | 0.57 | | 7.37 a | | | | | | | | | | 0.66 | | | | 5.30 b | | | | | | 0.52 | | | | | | 0.033 |
| Sugar Sweetened Beverages | 241.42 a | | | | 13.97 | | 321.73 b | | | | | | | | | | 13.89 | | | | 301.59 b | | | | | | 12.01 | | | | | | <0.001 |
| Hot Beverages (Coffee, Tea) | 116.96 a | | | | 8.72 | | 84.05 b | | | | | | | | | | 6.21 | | | | 80.64 b | | | | | | 6.40 | | | | | | 0.001 |
| Alcoholic Beverages | 2.92 | | | | 1.37 | | 5.82 | | | | | | | 2.21 | | | | | | | 3.04 | | | | | | 1.34 | | | | | | 0.396 |
| Added Fats and Oils | 9.06 a | | | | 0.80 | | 18.78 b | | | | | | | 1.47 | | | | | | | 16.16 b | | | | | | 0.90 | | | | | | <0.001 |
| Fast Food | 25.45 | | | | 3.38 | | 28.65 a | | | | | | | 4.70 | | | | | | | 16.58 b | | | | | | 2.80 | | | | | | 0.040 |
| Miscellaneous | 11.41 b | | | | 2.18 | | 16.14 a, b | | | | | | | 3.00 | | | | | | | 26.04 a | | | | | | 3.49 | | | | | | 0.003 |
| **Males** |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Bread | 164.74 a | | | | 8.42 | | 172.53 a | | | | | | | 8.17 | | | | | | | 93.77 b | | | | | | 4.98 | | | | | | <0.001 |
| Cereals | 112.22 a | | | | 12.06 | | 187.10 b | | | | 15.66 | | | | | | | | | | 182.99 b | | | | | 12.10 | | | | | | | <0.001 |
| Legumes | 36.13 a, b | | | | 10.70 | | 50.92 a | | | | 10.60 | | | | | | | | | | 22.65 b | | | | | 4.45 | | | | | | | 0.042 |
| Starchy Vegetables | 58.32 | | | | 6.10 | | 66.05 | | | | 7.40 | | | | | | | | | | 63.83 | | | | | 5.25 | | | | | | | 0.713 |
| Vegetables | 157.84 a, b | | | | 12.81 | | 215.50 a | | | | 22.73 | | | | | | | | | | 133.84 b | | | | | 10.54 | | | | | | | 0.001 |
| Chips and Salty Crackers | 8.83 b | | | | 1.56 | | 17.34 b | | | | 2.03 | | | | | | | | | | 35.24 a | | | | | 3.10 | | | | | | | <0.001 |
| Nuts and Seeds | 10.80 | | | | 3.07 | | 5.56 | | | | 1.59 | | | | | | | | | | 8.62 | | | | | 1.43 | | | | | | | 0.190 |
| Dairy Products | 152.40 a | | | | 12.88 | | 117.59 a, b | | | | | 10.58 | | | | | | | | | 106.67 b | | | | | 8.64 | | | | | | | 0.009 |
| Meat, Poultry, Fish | 79.17 b | | | 7.50 | | | 132.27 a | | | | | | | | 11.19 | | | | | | 69.23 b | | | | 5.45 | | | | | | | | <0.001 |
| Eggs | 24.19 | | | 3.31 | | | 23.11 | | | | | | | | 6.94 | | | | | | 13.66 | | | 2.47 | | | | | | | | | 0.185 |
| Fruits, Total |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Whole Fruits | 154.34 a | | 16.27 | | | | 106.84 b | | | 11.93 | | | | | | | | | | | 118.19 a, b | | | 11.48 | | | | | | | | | 0.044 |
| Fresh Juices (100% Fruit Juices) | 2.82 | | 2.74 | | | | 4.99 | | | 2.66 | | | | | | | | | | | 0.30 | | | 0.30 | | | | | | | | | 0.203 |
| Sweets and Added Sugars |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Sweets | 70.96 | | 6.97 | | | | 62.52 | | | 6.27 | | | | | | | | | | | 69.31 | | | 4.90 | | | | | | | | | 0.579 |
| Added Sugars, Jams, Honey, Molasses | 7.98 | | 1.09 | | | | 7.30 | | | 0.92 | | | | | | | | | | | 5.66 | | | 0.90 | | | | | | | | | 0.210 |
| Sugar Sweetened Beverages | 305.61 b | | 22.22 | | | | 392.38 a | | | 23.25 | | | | | | | | | | | 361.91 a, b | | | 18.75 | | | | | | | | | 0.027 |
| Hot Beverages (Coffee, Tea) | 123.98 a | | 15.76 | | | | 86.87 a, b | | | 9.14 | | | | | | | | | | | 79.14 a | | | 8.77 | | | | | | | | | 0.013 |
| Alcoholic Beverages | 3.07 | | 2.21 | | | | 8.10 | | | 3.57 | | | | | | | | | | | 5.09 | | | 2.62 | | | | | | | | | 0.519 |
| Added Fats and Oils | 9.22 a | | 1.15 | | | | 20.43 b | | | 1.99 | | | | | | | | | | | 17.75 b | | | 1.50 | | | | | | | | | <0.001 |
| Fast Food | 34.20 | | 5.76 | | | | 33.98 | | | 6.88 | | | | | | | | | | | 22.98 | | | 5.08 | | | | | | | | | 0.283 |
| Miscellaneous | 9.41 b | | 2.49 | | | | 16.34 a, b | | | 4.25 | | | | | | | | | | | 23.61 a | | | 3.92 | | | | | | | | | 0.040 |
| **Females** |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Bread | 111.27 a | | 5.51 | | | | 102.80 a | | | 5.44 | | | | | | | | | | | 68.34 b | | | 3.42 | | | | | | | | | <0.001 |
| Cereals | 93.02 b | | 7.94 | | | | 126.27 a, b | | | 10.53 | | | | | | | | | | | 139.70 a | | | 9.25 | | | | | | | | | 0.002 |
| Legumes | 38.40 a, b | | 10.65 | | | | 50.49 a | | | 8.70 | | | | | | | | | | | 19.14 b | | | 3.69 | | | | | | | | | 0.010 |
| Starchy Vegetables | 40.81 | | 4.40 | | | | 53.65 | | | 5.40 | | | | | | | | | | | 55.06 | | | 4.27 | | | | | | | | | 0.073 |
| Vegetables | 189.97 a | | 10.89 | | | | 170.83 a, b | | | 12.33 | | | | | | | | | | | 141.62 b | | | 11.46 | | | | | | | | | 0.011 |
| Chips and Salty Crackers | 9.90 c | 1.38 | | | | | 18.50 b | | | 2.03 | | | | | | | | | | | 28.21 a | | | 2.50 | | | | | | | | | <0.001 |
| Nuts and Seeds | 7.82 | 1.42 | | | | | 8.12 | | | 1.96 | | | | | | | | | | | 6.08 | | | 1.27 | | | | | | | | | 0.576 |
| Dairy Products | 138.49 a | | 10.84 | | | | 91.98 a, b | | | 8.27 | | | | | | | | | | | 93.00 b | | | 7.86 | | | | | | | | | <0.001 |
| Meat, Poultry, Fish | 53.62 b | 5.64 | | | | | 73.82 a | | | 5.42 | | | | | | | | | | | 60.24 a,b | | 4.51 | | | | | | | | | | 0.025 |
| Eggs | 13.37 | 2.30 | | | | | 8.20 | | | 1.75 | | | | | | | | | | | 8.79 | 1.42 | | | | | | | | | | | 0.101 |
| Fruits, Total |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Whole Fruits | 206.68 a | 13.34 | | | | | 121.25 b | | | 10.12 | | | | | | | | | | | 117.53 b | 10.21 | | | | | | | | | | | <0.001 |
| Fresh Juices (100% Fruit Juices) | 1.00 | 0.97 | | | | | 2.18 | | | 1.30 | | | | | | | | | | | 0.76 | 0.76 | | | | | | | | | | | 0.562 |
| Sweets and Added Sugars |  | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | |  |
| Sweets | 61.85 | 4.98 | | | | | 64.47 | | | 5.70 | | | | | | | | | | | 62.59 | 4.02 | | | | | | | | | | | 0.931 |
| Added Sugars, Jams, Honey, Molasses | 5.18 a, b | 0.57 | | | | | 7.43 a | | | 0.93 | | | | | | | | | | | 4.98 b | 0.55 | | | | | | | | | | | 0.023 |
| Sugar Sweetened Beverages | 192.97 a | 17.32 | | | | | 256.25 b | | | 14.84 | | | | | | | | | | | 247.45 b | 14.82 | | | | | | | | | | | 0.013 |
| Hot Beverages (Coffee, Tea) | 111.67 | 9.63 | | | | | 81.43 | | | 8.45 | | | | | | | | | | | 81.99 | 9.27 | | | | | | | | | | | 0.039 |
| Alcoholic Beverages | 2.80 | 1.74 | | | | | 3.70 | | | 2.69 | | | | | | | | | | | 1.20 | 0.98 | | | | | | | | | | | 0.595 |
| Added Fats and Oils | 8.94 a | 1.10 | | | | | 17.25 b | | | 2.16 | | | | | | | | | | | 14.74 b | 1.06 | | | | | | | | | | | 0.001 |
| Fast Food | 18.84 | 3.99 | | | | | 23.71 | | | 6.44 | | | | | | | | | | | 10.84 | 2.70 | | | | | | | | | | | 0.100 |
| Miscellaneous | 12.92 | 3.34 | | | | | 15.97 | | | 4.23 | | | | | | | | | | | 28.22 | 5.62 | | | | | | | | | | | 0.049 |

**Abbreviations:** SE, Standard Error.

Data are expressed as mean and ~~±~~ SE.

Differences among group means were tested by ANOVA. Bonferroni was used for post-hoc analyses.

Means that have different alphabetical letter superscripts are significantly different from each other (post-hoc, p-value ≤ 0.05).

**Supplemental Table 3. Mean MD scores among adolescents (aged 10-18.9 years), according to sex and survey year, Lebanon, 1997, 2008/09, and 2015 (Figure 1).**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **MD scores** | | | | | | | | | | | | |  | |
|  | **1997** | | | | **2009** | | | **2015** | | | | **2030** | |  | |
|  | **(n=451)** | | | | **(n=528)** | | | **(n=666)** | | | | **-** | |  | |
|  | **Mean** | | | **SE** | **Mean** | | **SE** | **Mean** | **SE** | | **Mean** | | **p-value** | |
| **Both sexes** |  | | | |  | | |  | | | |  | |  | |
| C-MED > 2 | 2.22 a | | 0.05 | | 1.99 b | | 0.05 | 1.96 b | 0.04 | | | 1.71 | | <0.001 | |
| LMD > 12 | 11.96 a | | 0.08 | | 11.67 b | | 0.09 | 11.42 b | 0.07 | | | 11.01 | | <0.001 | |
| **Males** |  | | | |  | | |  | | | |  | |  | |
| C-MED > 2 | 1.91 | 0.07 | | | 1.78 | 0.07 | | 1.84 | | 0.06 | | 1.73 | | 0.419 | |
| LMD > 12 | 12.05 a | 0.14 | | | 11.76 a, b | 0.13 | | 11.53 b | | 0.11 | | 11.13 | | 0.017 | |
| **Females** |  | | | |  | | |  | | | |  | |  | |
| C-MED > 2 | 2.46 a | 0.07 | | | 2.19 b | 0.07 | | 2.07 b | | 0.06 | | 1.74 | | <0.001 | |
| LMD > 12 | 11.90 a | 0.11 | | | 11.58 a, b | 0.12 | | 11.32 b | | 0.09 | | 10.88 | | <0.001 | |

**Abbreviations:** MD, Mediterranean Diet; SE, Standard Error; c-MED, Composite Mediterranean Diet; LMD, Lebanese Mediterranean Diet.

Data are expressed as mean and~~±~~ SE.

Differences among group means (1997, 2009, and 2015) were tested by ANOVA.

Bonferroni was used for post-hoc analyses; means that have different alphabetical letter superscripts are significantly different from each other (post-hoc, p-value ≤ 0.05).

**Supplemental Table 4. Proportion of the study population’s level of adherence\* to the MD scores across survey years and projection to 2030**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **MD scores** | | | |  |
|  | **1997** | **2009** | **2015** | **2030** |  |
|  | **(n=451)** | **(n=528)** | **(n=666)** | **-** |  |
|  | **n (%)** | **n (%)** | **n (%)** | **%** | **p-value** |
| **Both sexes** |  |  |  |  |  |
| C-MED > 2 | 158 (35.03) a | 160 (30.30) a, b | 184 (27.63) b | 21.59 | 0.031 |
| LMD > 12 | 174 (38.58) a | 170 (32.20) a | 164 (24.62) b | 14.76 | <0.001 |
| **Males** |  |  |  |  |  |
| C-MED > 2 | 47 (24.23) | 61 (24.02) | 77 (24.44) | 24.40 | 0.993 |
| LMD > 12 | 80 (41.24) a | 82 (32.28) a, b | 87 (27.62) b | 16.34 | 0.006 |
| **Females** |  |  |  |  |  |
| C-MED > 2 | 111 (43.19) a | 99 (36.13) a, b | 107 (30.48) b | 20.75 | 0.005 |
| LMD > 12 | 94 (36.58) a | 88 (32.12) a | 77 (21.94) b | 12.96 | <0.001 |

**Abbreviations:** MD, Mediterranean Diet; c-MED, Composite Mediterranean Diet; LMD, Lebanese Mediterranean Diet.

Data are expressed as absolute numbers and percentages.

Differences among group proportions (1997 vs 2009 vs 2015) were tested using Chi-square test.

Chi-square post-hoc analysis with Bonferroni correction was used; means that have different alphabetical letter superscripts are significantly different from each other (post-hoc, p-value ≤ 0.05).

\* Adherence was measured as having a score greater than the 1997th median reported score (that is a score greater than 2 for composed scale and greater than 12 for LMD scale).