**Table S1.** Components of the CDGI (2018) and scoring methods according to the DGC and CFGP.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Qualitative recommendations of DGC** | **Quantitative recommendations**  **of CFGP** | **Components of CDGI (2018)** | **Recommendation for elderly b** | **Criteria for lowest score (0) d** | **Criteria for highest score d** | **Highest score value** |
|
| Eat a variety of foods, cereal based | Grains, beans and tubers: 250-400 g/d | The percentage energy from carbohydrate | 50%-65% | 0% or 100% | 50%-65% | 5 |
| Whole grains and beans: 50-150 g/d | Other grains and beans | 50-150 g/d | 0 g/d | ≥100 g/d | 5 |
| Tubers: 50-100 g/d |  |  |  |  |  |
| Eat plenty of vegetables, fruits, dairy products and soybeans | Vegetables: 300-500 g/d | Vegetables | Male: 450-600 g/d | 0 g/d | Male: ≥525 g/da | 5 |
| Female: 400-500 g/d | 0 g/d | Female: ≥450 g/da |
| Dark-colored vegetables c | >1/2 | 0 | ≥ 1/2 | 5 |
| Fruits: 200-350 g/d | Fruits | Male: 300-400 g/d | 0g/d | Male: ≥ 350g/da | 10 |
| Female: 200-350 g/d | Female: ≥ 275g/da |
| Dairy products: 300g/d | Dairy products | 300g/d | 0g/d | ≥300 g/d | 10 |
| Soybeans and nuts: 25-35 g/d | Soybeans and nuts | Male: 35 g/d | 0 g/d | Male: ≥35 g/da | 10 |
| Female: 25-35 g/d | 0 g/d | Female: ≥30 g/da |
| Eat moderate amount of fish, poultry, eggs, and lean meats | Seafood: 40-75 g/d | Seafood | Male: 75-125 g/d | Male: 0 g/d or ≥200 g/d | Male: 100 g/da | 10 |
| Female: 50-75 g/d | Female: 0 g/d or ≥125 g/d | Female: 62.5 g/da |
| Red meat and poultry: 40-75 g/d | Red meat and poultry | Male: 75-100 g/d | Male: 0 g/d or ≥175 g/d | Male: 87.5 g/da | 10 |
| Female: 50-75 g/d | Female: 0 g/d or ≥125 g/d | Female: 62.5 g/da |
| Eggs: 40-50 g/d | Eggs | Male: 50 g/d | 0 g/d | Male: 50 g/d | 10 |
| Female: 40-50 g/d | 0 g/d | Female: 45 g/d |
| Limit salt, cooking oil, added sugar and alcohol | Edible oil: 25-30 g/d | Edible oil | Male: 25-35 g/d | 60 g/d | 30 g/d | 10 |
|  | Female: 25-30 g/d | 55 g/d | 27.5 g/d |  |
| Salt: <6 g/d | Salt | <6 g/d | ≥12 g/d | <6 g/d | 10 |
|  | Alcohol | Male: <25 g/d | Male: ≥ 50 g/d | Male: <25 g/d | 10 |
| Female: <15 g/d | Female: ≥30 g/d | Female: <15 g/d |
| Abbreviation: CDGI (2018), China Dietary Guideline Index (2018); DGC, Dietary guidelines for Chinese; CFGP, Chinese Food Guide Pagoda.  a Maximum is the median of recommended range. b Recommendations of components intake in different energy requirements. (see Table S1). c Dark-colored vegetables are defined as 500 mg carotene/100 g of vegetables. d For adequate components, score = highest score /{[(Rmax-Rmin) / 2] +Rmin} × X. However, the scoring rule of percentage energy from carbohydrate is an exception, it followed the scoring rule of moderate components. When the proportion is lower than 50%, component score = highest score /Rmin × X; When the proportion is higher than 65%, score = highest score - highest score /35% × (X-65%). For limited components, When the consumption is lower than limit, component score = highest score - highest score / Rmax × (X-Rmax). Rmax is the maximum recommendation of the corresponding component, Rmin is the minimum recommendation, and X is actual personal intake of each component. | | | | | | |

**Table S2.** Trends in Intake of Energy from Total and Subtypes of Carbohydrate, Protein and Fat

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | **1991(n=9251)** | **2000(n=10491)** | **2009(9912)** | **2015(n=14549)** | ***P*-trend** |
| **Estimated Intake, g/d** | |  |  |  |  |  |
| **Total carbohydrate** | | 383.2(319.9,446.5) | 329.2(265.9,392.4) | 286.6(223.3,349.9) | 249.9(186.7,313.2) | <.0001 |
|  | High-quality carbohydrate | 51.1(43.5,58.7) | 41.5(33.9,49.1) | 40.8(33.2,48.4) | 42.1(34.5,49.7) | <.0001 |
|  | Low-quality carbohydrate | 331.5(272.9,390.2) | 286.9(228.3,345.6) | 244.8(186.2,303.5) | 206.4(147.8,265.1) | <.0001 |
| **Total protein** | | 77.7(64.5,90.9) | 71.4(58.2,84.5) | 71.8(58.6,85) | 64.6(51.5,77.8) | <.0001 |
|  | High-quality protein | 20.5(10.5,30.6) | 25.4(15.3,35.4) | 29.6(19.6,39.7) | 27.0(17.0,37.1) | <.0001 |
|  | Incomplete protein | 57.2(48.6,65.8) | 46.0(37.4,54.6) | 42.1(33.5,50.7) | 37.3(28.7,45.9) | <.0001 |
| **Total fat** | | 65.8(49.1,82.4) | 77.8(61.2,94.5) | 79.2(62.5,95.8) | 80.8(64.2,97.5) | <.0001 |
|  | High-quality fat | 24.5(17.5,31.5) | 35.9(28.9,42.9) | 36.2(29.2,43.2) | 38.5(31.5,45.5) | <.0001 |
|  | Low-quality fat | 41.2(30.4,52.1) | 41.9(31.0,52.7) | 43.0(32.1,53.9) | 42.3(31.5,53.2) | 0.0056 |

**Table S3.** Trends in Percentage of Energy from Total and Subtypes of Carbohydrate, Protein and Fat, After Adjusted Age, Gender, Regions, Educational level, Household income level and Urbanicity index

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | **1991(n=9251)** | **2000(n=10491)** | **2009(9912)** | **2015(n=14549)** | ***P*-trend** |
| **Estimated Percent Energy, %** | |  |  |  |  |  |
| **Total carbohydrate** | | 62.1(57.1,67.2) | 57.5(52.5,62.5) | 52.6(47.5,57.6) | 50.5(45.5,55.6) | <.0001 |
|  | High-quality carbohydrate | 9.1(7.6,10.7) | 7.2(5.6,8.8) | 7.5(5.9,9.1) | 8.6(7,10.2) | <.0001 |
|  | Low-quality carbohydrate | 52.9(48.7,57.1) | 50.2(46,54.4) | 44.9(40.8,49.1) | 41.7(37.5,45.8) | <.0001 |
| **Total protein** | | 12.7(11.7,13.8) | 12.4(11.4,13.5) | 13.1(12.1,14.2) | 13.2(12.1,14.2) | <.0001 |
|  | High-quality protein | 3.4(1.8,5) | 4.4(2.8,6) | 5.4(3.8,7) | 5.5(3.9,7.2) | <.0001 |
|  | Incomplete protein | 9.3(8.7,9.9) | 8(7.4,8.6) | 7.7(7.1,8.3) | 7.6(7,8.2) | <.0001 |
| **Total fat** | | 24.4(20.7,28) | 29.4(25.7,33) | 31.9(28.2,35.5) | 35.7(32.1,39.3) | <.0001 |
|  | High-quality fat | 9.5(7.8,11.2) | 13.4(11.7,15.1) | 14.5(12.8,16.2) | 16.8(15.1,18.4) | <.0001 |
|  | Low-quality fat | 14.8(12.1,17.6) | 16(13.2,18.7) | 17.4(14.6,20.1) | 18.9(16.2,21.7) | <.0001 |

**Table S4.** Trends in Estimated Intake of Carbohydrate, Protein and Fat from Different Sources

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **1991(n=9251)** | **2000(n=10491)** | **2009(n=9912)** | **2015(n=14549)** | ***P*-trend** |
| **Carbohydrates** | | |  |  |  |  |  |
| **High-quality carbohydrate** | | |  |  |  |  |  |
|  |  | Coarse grain | 89.5(84.3,94.7) | 47.1(44.5,49.6) | 35.7(33.5,37.8) | 40.0(38.1,41.9) | <.0001 |
|  |  | Fruit | 4.7(4.3,5.1) | 7.0(6.5,7.5) | 25.2(24.2,26.2) | 22.2(21.6,22.9) | <.0001 |
|  |  | Vegetable | 49.7(48.9,50.6) | 59.3(57.7,60.8) | 53.3(52.1,54.4) | 43.3(42.6,44.1) | <.0001 |
|  |  | Legume | 21.1(20.1,22.2) | 19.4(18.3,20.5) | 20.1(18.9,21.2) | 25.9(24.9,26.8) | <.0001 |
|  |  | Tuber | 40.5(38.2,42.9) | 35.6(34.1,37.1) | 31.7(30.5,32.8) | 39.3(38.3,40.4) | <.0001 |
| **Low-quality carbohydrate** | | |  |  |  |  |  |
|  |  | Refined grain | 1357.2(1345.8,1368.5) | 1152.9(1144.5,1161.3) | 945.2(936.8,953.6) | 735.6(728.4,742.7) | <.0001 |
|  |  | Added sugars | 12.4(11.4,13.4) | 15.8(14.6,17.1) | 24.9(23.2,26.6) | 34.8(33.4,36.3) | <.0001 |
|  |  | Other | 22.1(21.6,22.6) | 32.8(31.9,33.7) | 41.5(40.3,42.8) | 74.7(73.2,76.2) | <.0001 |
| **Protein** | |  |  |  |  |  |  |
| **High-quality protein** | | |  |  |  |  |  |
|  |  | White meat | 35.2(34.3,36.1) | 42.7(41.8,43.6) | 45.0(44.1,45.9) | 46.3(45.5,47.1) | <.0001 |
|  |  | Fresh red meat | 21(20.2,21.8) | 27.8(26.9,28.7) | 37.4(36.2,38.5) | 33(32.2,33.7) | <.0001 |
|  |  | Egg | 8.0(7.7,8.3) | 13.4(13,13.8) | 16.4(16,16.8) | 14.2(13.9,14.4) | <.0001 |
|  |  | Dairy | 0.5(0.4,0.6) | 0.9(0.8,1) | 1.7(1.5,1.8) | 2.8(2.7,2.9) | <.0001 |
|  |  | Legume products | 18.1(17.3,18.8) | 18.1(17.5,18.6) | 19.5(18.8,20.2) | 13.6(13.2,14) | <.0001 |
| **Incomplete protein** | | |  |  |  |  |  |
|  |  | Grain | 186.6(185.1,188.1) | 138.8(137.7,139.9) | 115.3(114.2,116.4) | 88.4(87.5,89.3) | <.0001 |
|  |  | Tuber | 2.1(1.8,2.3) | 3.3(3,3.6) | 3.2(3,3.5) | 3.2(3,3.4) | <.0001 |
|  |  | Nuts | 2.5(2.3,2.6) | 2.5(2.4,2.6) | 2.8(2.7,2.9) | 2.8(2.7,2.8) | <.0001 |
|  |  | Other | 45.4(44.5,46.2) | 45.9(45.1,46.8) | 51.5(50.6,52.4) | 57.4(56.6,58.2) | <.0001 |
| **Fat** | |  |  |  |  |  |  |
| **High-quality fat** | | |  |  |  |  |  |
|  |  | Nuts | 8.8(7.8,9.8) | 13.8(12.6,15) | 13.6(12.4,14.7) | 13.7(12.9,14.5) | <.0001 |
|  |  | Seafood | 8.1(7.7,8.4) | 10.0(9.6,10.4) | 11.5(11,11.9) | 7.9(7.6,8.2) | <.0001 |
|  |  | Plant oil | 202.9(198.3,207.4) | 301.4(295.7,307.1) | 305.8(300.7,310.9) | 330.2(323.7,336.7) | <.0001 |
| **Low-quality fat** | | |  |  |  |  |  |
|  |  | Livestock and poultry | 166(161.7,170.2) | 201.1(196.8,205.3) | 214.7(210.5,218.8) | 222.3(218.9,225.8) | <.0001 |
|  |  | Animal oil | 102.5(98.4,106.7) | 75.7(72.2,79.2) | 42.9(40.5,45.3) | 32.8(28.5,37) | <.0001 |
|  |  | Grain | 65.8(64.7,66.9) | 46.0(45.1,46.9) | 47.4(46.3,48.5) | 35.5(34.8,36.2) | <.0001 |
|  |  | Other | 53.5(52.3,54.8) | 68.7(67.4,70) | 90.8(89,92.5) | 98.9(97.4,100.3) | <.0001 |