**Supplementary Material 1.** Pan American Health Organization (PAHO) nutrient profile model criteria for identifying processed and ultra-processed products that contains sweeteners, or excessive amounts of sodium, free sugars, saturated fat, total fat, and *trans* fat.

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| --- | --- | --- | --- | --- | --- |
| **Sodium** | **Free sugars** | **Other sweeteners** | **Total fat** | **Saturated fat** | ***Trans* fat** |
| ≥1 mg of sodium per 1 kcal | ≥10% of total energy from free sugars | Any amount of other sweeteners | ≥30% of total energy from total fat | ≥10% of total energy from saturated fat | ≥1% of total energy from *trans* fat |

**Supplementary Material 2.** Prevalence of grain-based food products with high contents of free sugar, trans fat, saturated fat, and sodium as well as noncaloric sweeteners according to the Pan American Health Organization (PAHO) nutrient profile model by the presence of “whole grains” claims, 2017 (n=775).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Food categories** | **Presence of “whole grain” claim** | | | |
| **No** | | **Yes** | |
| **% (CI 95%)** | | **% (CI 95%)** | |
| ***High content of free sugar\**** | | | | |
| **Breads** | 0.0 |  | 0.0 |
| **Cakes and other bakery products** | 0.0 |  | 0.0 |  |
| **Breakfast cereals and granola bars** | 57.9 | (34.6;78.1) | 83.3 | (30.2;98.3) |
| **Cereals grain and flours** | 0.0 |  | 0.0 |  |
| **Cookies** | 76.9 | (56.3;89.6) | 52.9 | (28.8;75.8) |
| **Pasta** | 0.0 |  | 0.0 |  |
| **Savory snacks** | 0.0 |  | 0.0 |  |
| ***High content of trans fat*** | | | | |
| **Breads** | 20.8 | (12.9;31.8) | 3.0 | (0.4;19.3) |
| **Cakes and other bakery products** | 30.2 | (20.0;42.6) | 0.0 |  |
| **Breakfast cereals and granola bars** | 2.7 | (0.7;10.1) | 0.0 |  |
| **Cereals grain and flours** | 0.0 |  | 0.0 |  |
| **Cookies** | 10.8 | (7.0;16.3) | 0.0 |  |
| **Pasta** | 0.0 |  | 0.0 |  |
| **Savory snacks** | 2.9 | (0.9;8.7) | 0.0 |  |
| ***High content of saturated fat*** | | | | |
| **Breads** | 20.5 | (12.7;31.4) | 2.9 | (0.4;18.8) |
| **Cakes and other bakery products** | 33.3 | (22.7;45.9) | 80.0 | (25.3;97.9) |
| **Breakfast cereals and granola bars** | 34.7 | (24.7;46.2) | 30.0 | (13.7;53.5) |
| **Cereals grain and flours** | 1.5 | (0.2;10.1) | 0.0 |  |
| **Cookies** | 71.3 | (64.2;77.4) | 34.1 | (21.5;49.4) |
| **Pasta** | 4.5 | (1.5;13.3) | 10.0 | (1.2;50.0) |
| **Savory snacks** | 63.7 | (53.9;72.5) | 75.0 | (17.7;97.7) |
| ***High content of total fat*** | | | | |
| **Breads** | 247 | (16.1;3.9) | 5.9 | (1.4;21.2) |
| **Cakes and other bakery products** | 36.5 | (25.5;49.1) | 100.0 |  |
| **Breakfast cereals and granola bars** | 21.3 | (13.4;32.1) | 5.0 | (0.6;29.6) |
| **Cereals grain and flours** | 0.0 |  | 0.0 |  |
| **Cookies** | 64.1 | (56.8;70.8) | 65.9 | (50.6;78.5) |
| **Pasta** | 6.1 | (2.3;15.2) | 10.0 | (1.2;50.0) |
| **Savory snacks** | 81.7 | (73.1;88.1) | 75.0 | (17.7;97.7) |
| ***High content of sodium*** | | | | |
| **Breads** | 90.4 | (81.1;95.4) | 85.3 | (68.7;93.9) |
| **Cakes and other bakery products** | 30.2 | (20.0;42.6) | 0.0 |  |
| **Breakfast cereals and granola bars** | 2.7 | (0.7;10.1) | 10.0 | (2.4;33.5) |
| **Cereals grain and flours** | 0.0 |  | 0.0 |  |
| **Cookies** | 26.3 | (20.3;33.2) | 18.2 | (9.2;32.7) |
| **Pasta** | 28.8 | (19.1;40.9) | 30.0 | (9.2;64.3) |
| **Savory snacks** | 54.4 | (44.6;63.8) | 75.0 | (17.7;97.7) |
| ***Presence of noncaloric sweeteners*** | | | | |
| **Breads** | 1.4 | (0.2;9.2) | 2.9 | (0.4;18.8) |
| **Cakes and other bakery products** | 27.0 | (17.4;39.3) | 80.0 | (25.3;97.9) |
| **Breakfast cereals and granola bars** | 36.0 | (25.9;47.5) | 35.0 | (17.2;58.2) |
| **Cereals grain and flours** | 0.0 |  | 0.0 |  |
| **Cookies** | 4.4 | (2.2;8.6) | 25.0 | (14.2;40.1) |
| **Pasta** | 0.0 |  | 0.0 |  |
| **Savory snacks** | 1.9 | (0.5;7.4) | 0.0 |  |

CI: confidence interval.

\* Free sugar content was only available for some foods since at the time of the data collection, this information was not mandatory by the Brazilian legislation.