

Supplementary Table S1: Food groups, examples of food items and percentage of consumers per food group.

Food group	Examples	% consumers
1. Tortilla	Maize tortilla	90.2
2. Cereals (except corn)	Potatoes, bread, wheat tortilla, salty cookie	63.6
3. Breakfast cereals	Breakfast cereals with low and high fiber content	30.1
4. Maize based food	Tamales, pozole, taco, tlacoyo, sope, atole (maize-drink)	49.1
5. Fast food	Hotdog, pizza, hamburger	13.1
6. Alcoholic drinks	Beer, wine, spirits	4.2
7. Legumes	Beans, lentils, chick peas, soy	90.0
8. Fruit	Apple, banana, grapes, grapefruit, kiwi, lemon, melon, papaya, pear, pineapple, strawberry, watermelon, others.	93.3
9. Vegetables	Bell pepper, carrots, chili pepper, col, corn, cucumber, dark green vegetables, jicama, lettuce, tomato, zucchini, others.	97.6
10. Poultry and red meat	Chicken, beef, pork, lamb, entrails	86.4
11. Fish and sea food	Tuna, sardines, dry fish, fresh fish, sea food	34.4
12. Processed meat	Ham, sausages, bacon, chorizo	45.5
13. Milk	Fat free and low fat milk, whole milk	68.5
14. Eggs		75.8
15. Saturated fat	Oil, butter, margarine, mayonnaise, cream	34.2
16. Sugar and sweets	Sugar, candies, chocolate, jelly	74.3
17. Cookies	Sweet cookies, granola bars	32.6
18. Salty snacks	Corn snacks and chips	51.0
19. Industrialized sweet-drinks	All types of soda and industrialized juice	84.9
20. Non-industrialized sweet-drinks	Natural juice, water with sugar, coffee or tea with sugar	83.3
21. Milk with added sugar	Milk with sugar, honey or chocolate, Yakult	5.9
22. Drinks without energy	Coffee or tea without sugar, water, diet sodas	8.8
23. Dairy products	Yogurt, cheese	70.5
24. Sandwich	Sandwich and torta (baguette type)	36.5
25. Fried dishes (plant based)	Breaded or capped vegetables, fried banana, fried potatoes, potato-tortita	28.5
26. Sweet-bakery	Cakes, sweet bread, doughnut, churros, muffin	60.5
27. Supplements	NUTRISANO and NUTRIVIDA (dietary supplements administrated by the health ministry)	0.3
28. Soups	Vegetable soup, vegetables cream, fideo soup	77.3
29. Dry soups	Rice, pasta	68.6
30. Avocado and nuts	Avocado and oily seeds (nuts, almond, soy)	39.0

Supplementary Table S2: Prevalence ratios of overweight-obesity and stunting, and dietary patterns among Mexican adolescents. Not adjusted for EI:BMR ratio

Dietary pattern	Total *	12-15 years § (n=4,451)	16-19 years § (n=2,929)	Boys ¥ (n=3,610)	Girls ¥ (n=3,770)
Overweight and obesity					
Non-traditional & breakfast/lunch-type	1.05 (0.99-1.11)	1.12 (1.03-1.21)	0.93 (0.84-1.02)	1.02 (0.94-1.11)	1.07 (0.99-1.16)
Western	1.05 (0.99-1.10)	1.09 (1.01-1.17)	0.96 (0.88-1.06)	1.13 (1.04-1.24)	0.98 (0.90-1.06)
Plant-based	0.95 (0.90-1.00)	0.96 (0.89-1.04)	0.93 (0.85-1.02)	0.96 (0.88-1.04)	0.95 (0.88-1.02)
Protein-rich	0.94 (0.89-0.99)	0.92 (0.86-0.98)	0.98 (0.88-1.08)	0.99 (0.90-1.09)	0.90 (0.83-0.97)
Stunting					
Non-traditional & breakfast/lunch-type	0.86 (0.79-0.94)	0.87 (0.78-0.98)	0.85 (0.76-0.94)	0.87 (0.80-0.95)	0.86 (0.75-0.97)
Western	0.91 (0.84-0.98)	0.94 (0.85-1.04)	0.89 (0.79-0.99)	0.90 (0.81-1.01)	1.01 (0.91-1.11)
Plant-based	0.95 (0.90-1.00)	0.96 (0.89-1.04)	0.93 (0.85-1.02)	0.96 (0.88-1.04)	0.90 (0.83-0.98)
Protein-rich	1.01 (0.95-1.07)	0.98 (0.90-1.08)	1.03 (0.95-1.12)	1.05 (0.95-1.16)	1.05 (0.95-1.17)

\* Model adjusted for sex, living area, socioeconomic status, region, age § Model adjusted for sex, living area, socioeconomic status, region and ¥ Model adjusted for living area, socioeconomic status, region, age. None of the Prevalence Ratios were adjusted for EI:BMR ratio, for adjusted prevalence ratios see

Table 4 and 6.

Supplementary Table S3: Total energy and nutrient intake across quartiles (Q) of the four dietary patterns.

	Quartile of dietary pattern score				<i>p</i> -value
	Q <sub>1</sub>	Q <sub>2</sub>	Q <sub>3</sub>	Q <sub>4</sub>	
<b>Non-traditional &amp; breakfast/lunch-type</b>					
EI:BMR ratio (SD)	1.08 (0.42) <sup>2,3,4</sup>	0.85 (0.37) <sup>1,4</sup>	0.88 (0.37) <sup>1,4</sup>	1.01 (0.40) <sup>1,2,3</sup>	<0.0001
Energy kcal (SD)	2035.1 (805.4) <sup>2,3,4</sup>	1602.8 (688.0) <sup>1,4</sup>	1627.6 (711.1) <sup>1,4</sup>	1935.5 (774.6) <sup>1,2,3</sup>	<0.0001
Protein % (SD)	10.4 (1.7) <sup>2,3,4</sup>	10.7 (2.1) <sup>1,3,4</sup>	11.6 (2.2) <sup>1,2,4</sup>	12.6 (2.4) <sup>1,2,3</sup>	<0.0001
Fat % (SD)	22.3 (8.2) <sup>2,4</sup>	24.9 (7.7) <sup>1,3,4</sup>	27.7 (7.1) <sup>2,4</sup>	29.6 (6.3) <sup>1,2,3</sup>	<0.0001
Carbohydrates % (SD)	67.2 (8.8) <sup>2,3,4</sup>	64.1 (8.6) <sup>1,4</sup>	60.6 (8.2) <sup>1,4</sup>	57.7 (7.7) <sup>1,2,3</sup>	<0.0001
Fiber g (SD)	27.3 (12.3) <sup>2,3,4</sup>	19.4 (9.1) <sup>1,3,4</sup>	17.4 (9.4) <sup>1,2</sup>	18.4 (9.5) <sup>1,2</sup>	<0.0001
Sugar g (SD)	13.7 (20.0) <sup>3,4</sup>	13.5 (20.2) <sup>3,4</sup>	16.5 (22.8) <sup>1,2,4</sup>	21.2 (23.9) <sup>1,2,3</sup>	<0.0001
Ca mg (SD)	885.2 (450.4) <sup>2,3,4</sup>	677.9 (364.6) <sup>1,3,4</sup>	731.3 (388.0) <sup>1,2,4</sup>	1075.7 (472.4) <sup>1,2,3</sup>	<0.0001
Fe mg (SD)	13.7 (5.8) <sup>2,3,4</sup>	9.9 (4.9) <sup>1,4</sup>	9.9 (5.2) <sup>1,4</sup>	12.6 (6.2) <sup>1,2,3</sup>	<0.0001
Zn mg (SD)	7.6 (3.3) <sup>2,3,4</sup>	6.0 (3.2) <sup>1,3,4</sup>	6.5 (3.1) <sup>1,2,4</sup>	8.6 (3.8) <sup>1,2,3</sup>	<0.0001
Vit C mg (SD)	54.7 (78.0) <sup>2,3,4</sup>	60.7 (78.1) <sup>1,3,4</sup>	70.2 (80.1) <sup>1,2,4</sup>	97.0 (93.4) <sup>1,2,3</sup>	<0.0001
Vit A	2306.0 (3262.2) <sup>2,3,4</sup>	2642.2 (3414.9) <sup>1,3,4</sup>	3162.8 (3542.6) <sup>1,2,4</sup>	4928.1 (4612.2) <sup>1,2,3</sup>	<0.0001
Folate	236.1 (132.2) <sup>2,3,4</sup>	192.7 (109.0) <sup>1,4</sup>	197.9 (111.2) <sup>1,3</sup>	249.6 (126.5) <sup>1,2,3</sup>	<0.0001
Vit B12	1.3 (1.4) <sup>2,3,4</sup>	1.5 (1.5) <sup>1,3,4</sup>	2.0 (1.5) <sup>1,2,4</sup>	3.2 (2.1) <sup>1,2,3</sup>	<0.0001
<b>Western</b>					
EI:BMR ratio (SD)	0.85 (0.37) <sup>3,4</sup>	0.85 (0.35) <sup>3,4</sup>	0.95 (0.37) <sup>1,2,4</sup>	1.189 (0.42) <sup>1,2,3</sup>	<0.0001
Energy kcal (SD)	1558.5 (677.8) <sup>3,4</sup>	1562.8 (647.4) <sup>3,4</sup>	1796.4 (689.5) <sup>1,2,4</sup>	2301.3 (807.4) <sup>1,2,3</sup>	<0.0001
Protein % (SD)	11.2 (2.0) <sup>4</sup>	11.3 (2.2) <sup>4</sup>	11.3 (2.4) <sup>4</sup>	11.1 (2.4) <sup>1,2,3</sup>	<0.0001
Fat % (SD)	21.3 (7.4) <sup>2,3,4</sup>	25.0 (7.0) <sup>1,3,4</sup>	28.1 (7.4) <sup>1,2,4</sup>	31.1 (6.6) <sup>1,2,3</sup>	<0.0001
Carbohydrates % (SD)	67.2 (8.6) <sup>2,3,4</sup>	63.6 (8.3) <sup>1,3,4</sup>	60.5 (8.4) <sup>1,2,4</sup>	57.6 (8.2) <sup>1,2,3</sup>	<0.0001
Fiber g (SD)	21.7 (10.97) <sup>2,3,4</sup>	19.4 (10.3) <sup>1,4</sup>	19.7 (11.0) <sup>1,4</sup>	20.6 (11.2) <sup>1,2,3</sup>	<0.0001
Sugar g (SD)	8.2 (13.2) <sup>2,3,4</sup>	13.7 (17.1) <sup>1,3,4</sup>	19.2 (21.0) <sup>1,2,4</sup>	29.3 (27.5) <sup>1,2,3</sup>	<0.0001
Ca mg (SD)	837.2 (444.1) <sup>2,4</sup>	762.1 (407.8) <sup>1,3,4</sup>	808.4 (448.1) <sup>2,4</sup>	896.8 (474.8) <sup>1,2,3</sup>	<0.0001
Fe mg (SD)	10.2 (5.4) <sup>3,4</sup>	9.9 (5.1) <sup>3,4</sup>	11.4 (5.4) <sup>1,2,4</sup>	14.3 (6.1) <sup>1,2,3</sup>	<0.0001
Zn mg (SD)	6.2 (3.0) <sup>3,4</sup>	6.2 (3.0) <sup>3,4</sup>	7.2 (3.3) <sup>1,2,4</sup>	9.2 (3.8) <sup>1,2,3</sup>	<0.0001
Vit C mg(SD)	77.8 (96.2) <sup>2,3</sup>	61.8 (80.2) <sup>1,4</sup>	66.3 (74.5) <sup>1,4</sup>	77.5 (82.3) <sup>2,3</sup>	<0.0001
Vit A	3600.3 (4593.7) <sup>2,3</sup>	2961.0 (3604.7) <sup>1,4</sup>	2922.1 (3594.3) <sup>1,4</sup>	3351.3 (3642.3) <sup>2,3</sup>	<0.0001
Folate	201.9 (118.8) <sup>3,4</sup>	197.0 (111.4) <sup>3,4</sup>	218.6 (118.5) <sup>1,2,4</sup>	257.0 (132.9) <sup>1,2,3</sup>	<0.0001
Vit B12	1.3 (1.5) <sup>2,3,4</sup>	1.6 (1.5) <sup>1,3,4</sup>	2.0 (1.7) <sup>1,2,4</sup>	3.0 (2.0) <sup>1,2,3</sup>	<0.0001
<b>Plant-based</b>					
EI:BMR ratio (SD)	0.75 (0.30) <sup>2,3,4</sup>	0.85 (0.33) <sup>1,3,4</sup>	0.99 (0.35) <sup>1,2,4</sup>	1.31 (0.41) <sup>1,2,3</sup>	<0.0001
Energy kcal (SD)	1423.2 (589.0) <sup>2,3,4</sup>	1581.0 (608.9) <sup>1,3,4</sup>	1846.3 (656.1) <sup>1,2,4</sup>	2448.2 (796.0) <sup>1,2,3</sup>	<0.0001
Protein % (SD)	11.6 (2.5) <sup>2,3,4</sup>	11.3 (2.2) <sup>1,3,4</sup>	11.1 (2.2) <sup>1,2,4</sup>	10.9 (2.2) <sup>1,2,3</sup>	<0.0001
Fat % (SD)	27.4 (8.4) <sup>2,3,4</sup>	26.0 (7.8) <sup>1,3,4</sup>	26.2 (7.7) <sup>1,2,4</sup>	26.5 (7.1) <sup>1,2,3</sup>	<0.0001
Carbohydrates % (SD)	60.9(9.9) <sup>2,3,4</sup>	62.5 (8.9) <sup>1,3,4</sup>	62.1 (8.8) <sup>1,2,4</sup>	62.5 (8.2) <sup>1,2,3</sup>	<0.0001
Fiber g (SD)	15.8 (8.6) <sup>2,3,4</sup>	18.1 (9.2) <sup>1,3,4</sup>	21.0 (9.7) <sup>1,2,4</sup>	28.1 (11.7) <sup>1,2,3</sup>	<0.0001
Sugar g (SD)	9.2 (19.5) <sup>2,3,4</sup>	13.7 (20.5) <sup>1,3,4</sup>	17.2 (21.3) <sup>1,2,4</sup>	24.6 (24.2) <sup>1,2,3</sup>	<0.0001
Ca mg (SD)	643.5 (356.7) <sup>2,3,4</sup>	744.2 (382.2) <sup>1,3,4</sup>	852.8 (411.0) <sup>1,2,4</sup>	1122.3 (485.2) <sup>1,2,3</sup>	<0.0001
Fe mg (SD)	9.5 (4.8) <sup>2,3,4</sup>	10.0 (5.0) <sup>1,3,4</sup>	11.6 (5.2) <sup>1,2,4</sup>	15.2 (6.2) <sup>1,2,3</sup>	<0.0001
Zn mg (SD)	5.9 (2.8) <sup>2,3,4</sup>	6.4 (2.9) <sup>1,3,4</sup>	7.2 (3.2) <sup>1,2,4</sup>	9.6 (3.8) <sup>1,2,3</sup>	<0.0001
Vit C mg (SD)	35.9 (45.9) <sup>2,3,4</sup>	54.5 (51.2) <sup>1,3,4</sup>	79.8 (69.4) <sup>1,2,4,2,4</sup>	147.3 (104.2) <sup>1,2,3</sup>	<0.0001
Vit A	1719.7 (1874.3) <sup>2,3,4</sup>	2500.5 (2606.6) <sup>1,3,4</sup>	3667.1 (3283.1) <sup>1,2,4</sup>	6309.7 (4908.1) <sup>1,2,3</sup>	<0.0001
Folate	178.3 (107.8) <sup>2,3,4</sup>	191.0 (102.8) <sup>1,3,4</sup>	218.3 (110.9) <sup>1,2,4</sup>	296.3 (130.7) <sup>1,2,3</sup>	<0.0001
Vit B12)	1.6 (1.5) <sup>3,4</sup>	1.7 (1.5) <sup>3,4</sup>	2.0 (1.8) <sup>1,2,4</sup>	1.9 (1.8) <sup>1,2,3</sup>	<0.0001
<b>Protein-rich</b>					
EI:BMR ratio	0.83 (0.36) <sup>2,3,4</sup>	0.88 (0.37) <sup>1,3,4</sup>	0.97 (0.39) <sup>1,2,4</sup>	1.17 (0.42) <sup>1,2,3</sup>	<0.0001
Energy kcal (SD)	1434.2 (662.0) <sup>2,3,4</sup>	1637.2 (688.2) <sup>1,3,4</sup>	1805.05 (736.4) <sup>1,2,4</sup>	2226.1 (803.3) <sup>1,2,3</sup>	<0.0001
Protein % (SD)	10.3 (2.2) <sup>2,3,4</sup>	11.0 (2.2) <sup>1,3,4</sup>	11.5 (2.1) <sup>1,2,4</sup>	12.0 (2.2) <sup>1,2,3</sup>	<0.0001
Fat % (SD)	25.3 (8.2) <sup>3,4</sup>	25.4 (7.7) <sup>3,4</sup>	27.0 (7.5) <sup>1,2,4</sup>	28.1 (7.3) <sup>1,2,3</sup>	<0.0001
Carbohydrates % (SD)	64.1 (9.2) <sup>2,3,4</sup>	63.5 (8.8) <sup>1,3,4</sup>	61.4 (8.6) <sup>1,2,4</sup>	59.7 (8.6) <sup>1,2,3</sup>	<0.0001
Fiber g (SD)	15.9 (8.7) <sup>2,3,4</sup>	18.5 (9.1) <sup>1,3,4</sup>	21.2 (10.3) <sup>1,2,4</sup>	27.0 (11.0) <sup>1,2,3</sup>	<0.0001
Sugar g (SD)	18.1 (23.1) <sup>2,3</sup>	14.2 (20.5) <sup>4,1</sup>	15.5 (22.1) <sup>4,1</sup>	17.2 (22.3) <sup>2,3</sup>	<0.0001
Ca mg (SD)	726.1 (402.2) <sup>2,3,4</sup>	769.3 (427.9) <sup>1,3,4</sup>	834.1 (440.7) <sup>1,2,4</sup>	973.5 (476.5) <sup>1,2,3</sup>	<0.0001
Fe mg (SD)	9.3 (5.0) <sup>2,3,4</sup>	10.3 (5.0) <sup>1,3,4</sup>	11.9 (5.3) <sup>1,2,4</sup>	14.8 (6.2) <sup>1,2,3</sup>	<0.0001
Zn mg (SD)	5.7 (2.9) <sup>2,3,4</sup>	6.5 (2.9) <sup>1,3,4</sup>	7.4 (3.3) <sup>1,2,4</sup>	9.5 (3.8) <sup>1,2,3</sup>	<0.0001
Vit C mg (SD)	56.1 (73.9) <sup>2,3,4</sup>	64.4 (78.5) <sup>1,3,4</sup>	76.7 (83.8) <sup>1,2,4</sup>	85.6 (95.0) <sup>1,2,3</sup>	<0.0001
Vit A	2257.0 (3323.2) <sup>2,3,4</sup>	2773.0 (3267.6) <sup>1,3,4</sup>	3522.7 (3536.8) <sup>1,2,4</sup>	4444.3 (4796.2) <sup>1,2,3</sup>	<0.0001
Folate	157.3 (88.7) <sup>2,3,4</sup>	190.6 (95.4) <sup>1,3,4</sup>	229.6 (106.9) <sup>1,2,4</sup>	308.3 (133.4) <sup>1,2,3</sup>	<0.0001
Vit B12	1.5 (1.5) <sup>2,3,4</sup>	1.7 (1.6) <sup>1,3,4</sup>	2.0 (1.8) <sup>1,2,4</sup>	2.6 (2.1) <sup>1,2,3</sup>	<0.0001

Q-quartile; median, SD- standard deviation; <sup>1,2,3,4</sup> indicate statistically significant results between quartiles (p-value ,0.05)