

Seafood: Food Pattern Modeling Analysis

RESEARCH QUESTION: What is the impact on nutrient adequacy of increasing seafood in the USDA food patterns to:

- 4 oz per week of seafood high in n-3 fatty acids (EPA and DHA) (HI3)?
- 8 oz per week of seafood, including seafood both low (LO3) and high in n-3 fatty acids in proportions currently consumed?
- 12 oz per week of seafood low in n-3 fatty acids?

BACKGROUND

The 2005 *Dietary Guidelines for Americans* encourages fish for variety from the Meat & Beans group and as a source of unsaturated fats. It does not, however, include a quantified fish recommendation for the general public because the evidence available at the time was not considered to be strong for the role of fish in primary disease prevention. The 2005 *Dietary Guidelines* state a recommendation for secondary prevention, “Evidence suggests that consuming approximately two servings of fish per week (approximately 8 ounces total) may reduce the risk of mortality from coronary heart disease and that consuming EPA and DHA may reduce the risk of mortality from cardiovascular disease in people who have already experienced a cardiac event” (*Dietary Guidelines for Americans*, page 31).

After reviewing the evidence on health outcomes related to seafood (finfish and shellfish) consumption, the Fatty Acids and Cholesterol and the Food Safety and Technology Subcommittees of the 2010 Dietary Guidelines Advisory Committee requested a sensitivity analysis to determine the effects of increasing the amounts of seafood in the USDA food patterns on the nutrient content of those patterns, especially on EPA and DHA levels.

In the USDA food patterns, seafood is grouped with meats, poultry, eggs, processed soy products, nuts, and seeds (collectively abbreviated as MPFEN) into a food group called Meat & Beans. The nutrient profile of this food group has been calculated assuming a proportionate amount of each subgroup of food equal to the proportion consumed by the population. The meats and poultry selected as representative foods are the leanest choices within each item cluster. (See *Modeling Analysis: Updating USDA Food Patterns* for more information about the development of the base USDA food patterns.)

The amounts of each food subgroup within the base MPFEN food group are proportionate to the amounts consumed by the US population, as shown in Table 1.

Table 1. Consumption percentages and amounts in base USDA food patterns of meats, poultry, seafood, eggs, nuts and seeds, and processed soy products¹

Food category	Percent of consumption ²	Daily amount in base 2000 kcal food pattern	Weekly amount in base 2000 kcal food pattern
Meats (beef, pork, lamb, etc.)	44.6%	2.5 oz eq	17.2 oz eq
Poultry (chicken, turkey, etc.)	27.9%	1.5 oz eq	10.7 oz eq
Seafood (high n-3)	2.2%	0.1 oz eq	0.8 oz eq
Seafood (low n-3)	7.1%	0.4 oz eq	2.7 oz eq
Eggs	7.9%	0.4 oz eq	3.1 oz eq
Nuts and seeds	9.4%	0.5 oz eq	3.6 oz eq
Processed soy products (tofu, meat analogs, TVP)	0.9%	0.05 oz eq	0.3 oz eq
Total	100.0%	5.5 oz eq	38.5 oz eq

¹ Legumes may also be considered part of the Meat and Beans group, but in the base patterns are counted in the Vegetable group.

² Estimated from NHANES 2003-04

METHODS

The modeling analysis was designed to determine the amounts of foods to include in the Meat & Beans group to create food patterns that meet nutrient recommendations, without altering the calorie level of the patterns, and to assess the EPA and DHA content under the following three conditions:

- 4 oz per week of HI3 seafood
 - 8 oz per week of seafood, including both LO3 and HI3 sources of n-3 fatty acids in proportions currently consumed
 - 12 oz per week of LO3 seafood
1. Used the USDA food patterns at 12 calorie levels, with nutrient profiles based on 2 days of NHANES 2003-2004 weighted consumption data and USDA National Nutrient Database for Standard Reference (SR), Release 22 (2009) nutrient data, as the basis for this analysis.
 2. Used the MPED groupings that separated all seafood item groups into LO3 or HI3 subgroups. The cutoff value for placement into the LO3 or HI3 group was 500 mg of EPA plus DHA per 3 cooked ounces of the seafood. For a few varieties, only raw values were available and were used. Appendix A1 lists the EPA and DHA content of seafood used in this analysis.
 3. Calculated a nutrient profile for each subgroup, using a weighted average based on relative consumption of each item cluster in the subgroup.
 4. Tuna was handled separately because NHANES does not distinguish between types of tuna (light or white). Based on 2008 purchase estimates, 66.5% of the total amount of tuna consumed was assigned to light tuna and 33.5% to white (albacore) tuna (AC Nielsen Channel Views purchase data for all retail outlets). Light tuna was then added to the LO3 group, and

white tuna was added to HI3 group (Table 2). An overall nutrient profile for each subgroup (LO3 and HI3 seafood) was calculated (Table 3).

5. The nutrient profiles for the HI3 and LO3 subcategories were then applied to model the three levels of seafood requested by the Fatty Acids and Cholesterol and Food Safety and Technology Subcommittees. The 8 ounces per week amount was applied to the representative 2000-calorie pattern, which has a total of 5.5 ounces per day from the MPFEN group. The percentage of the MPFEN group assigned to the meat and poultry subgroups was decreased to accommodate intake of (a) 4 ounces of HI3 seafood per week, (b) 8 ounces of both HI3 and LO3 seafood per week, and (c) 12 ounces of LO3 seafood per week. For the 4 ounces of HI3 seafood per week, all seafood intake was assigned to HI3 seafood, and LO3 seafood intake was set to zero. For the 8 ounces of seafood per week scenario, the ratio between LO3 and HI3 seafood was maintained at current intake proportions. For the 12 ounces of LO3 seafood per week, all seafood intake was assigned to LO3 seafood, and HI3 seafood intake was set to zero. In each of the scenarios, the amounts of eggs, nuts and seeds, and soy products were held constant. The amounts of solid fats in the patterns were not adjusted.
6. Amounts were adjusted for the higher and lower calorie patterns using the same proportions for each subcategory as in the 2000 calorie pattern.
7. The three new scenarios were used in all food patterns to assess nutrient outcomes, including EPA and DHA levels.
8. Assessed nutrient adequacy of the food patterns in comparison to Recommended Dietary Allowances (RDAs) (IOM, 2006). Since there is no RDA for EPA or DHA, the amounts in the three seafood scenarios were compared to the base patterns. Identified changes in nutrient amounts and in nutrient goals that were met or not met for the patterns at each calorie level.
9. Reviewed the published evidence identified by the Food Safety and Technology Subcommittee (EPA/FDA, 2004; Ginsberg and Toal, 2009; IOM, 2007) regarding potential levels of seafood intake that could be of concern due to exposure to methyl mercury. Compared these seafood levels to those assigned in the patterns.

This analysis did not address vegetarian diets.

RESULTS

To disaggregate tuna into white and light and adjust the HI3 and LO3 consumption levels, tuna was split based on the estimates of 33% white and 67% light and added to their corresponding seafood group as shown in Table 2.

Table 2. Estimated seafood consumption by subgroup, with tuna in HI3 (33%) and LO3 (67%) groups, US, 2003-2004

Type of seafood	Percent of total seafood consumption	
HI3 seafood	18%	
White tuna ¹	6%	
HI3 seafood with tuna		24%
LO3 seafood	64%	
Light tuna ¹	12%	
LO3 seafood with tuna		76%
Totals		100%

¹The proportions of white and light tuna were estimated from sales data. (Available through the Nielson Company© http://en-us.nielson.com/tab/product_families/nielsen_scantrack).

The resulting amounts of EPA and DHA in the two seafood subgroups are shown in Table 3. The amounts are the weighted averages of the EPA and DHA content of each type of seafood in the group, with weights based on relative consumption of the seafood.

Table 3. Mean EPA and DHA content of HI3 and LO3 seafood subgroups

	EPA	DHA	EPA + DHA
HI3 seafood	143 mg/oz	308 mg/oz	451 mg/oz
LO3 seafood	39 mg/oz	63 mg/oz	102 mg/oz

Food Subgroup Amounts

The amounts of seafood were modified iteratively by decreasing the proportions of the meat and poultry subgroups and increasing seafood until the levels specified in the three seafood scenarios were achieved at the 2000 calorie level.

Table 4 shows the percent of each subgroup of the Meat & Beans group in the base pattern and in the three seafood scenarios.

Table 4. Percentage of Meat & Beans subgroups in the base USDA patterns and three seafood scenarios

Food category	Base USDA patterns	4 oz HI3 seafood	8 oz LO3/HI3 seafood	12 oz LO3 seafood
	%	%	%	%
Meats (beef, pork, lamb, etc)	44.6%	43.2%	33.5%	30.0%
Poultry (chicken, turkey, etc.)	27.9%	28.0%	26.9%	21.0%
Seafood (high n-3)	2.2%	10.5%	5.2%	0.0%
Seafood (low n-3)	7.1%	0.0%	16.7%	31.1%
Eggs	7.9%	7.9%	7.9%	7.9%
Processed soy products	0.9%	0.9%	0.9%	0.9%
Nuts and seeds	9.4%	9.5%	9.5%	9.5%
Total	100%	100%	100%	100%

Table 5 shows the amounts of each component of the Meat & Beans group in the base pattern and in the three seafood scenarios at the reference 2000-calorie level. The amount of seafood in the USDA base pattern at the 2000-calorie level based on weighted consumption was 0.5 ounces per day or 3.6 ounces per week. Food group amounts used to calculate nutrients in patterns at all calorie levels are shown in Appendices B1 and B2.

Table 5. Amounts of the Meat & Beans subgroups in the base USDA pattern and the three seafood scenarios at the 2000-calorie level. Amounts shown in ounce equivalents per day and approximate ounce equivalents per week.

Food category	Base USDA pattern	4 oz HI3 seafood	8 oz LO3/HI3 seafood	12 oz LO3 seafood
Meats (beef, pork, lamb, etc)	2.5 (17) ¹	2.4 (17.0)	1.8 (12.9)	1.7 (11.6)
Poultry (chicken, turkey, etc.)	1.5 (11)	1.5 (11.0)	1.5 (10.3)	1.1 (8.1)
Seafood (high n-3)	0.1 (0.6)	0.6 (4.0)	0.3 (2.0)	0.0 (0.0)
Seafood (low n-3)	0.4 (3)	0.0 (0.0)	0.9 (6.4)	1.7 (12.0)
<i>Total seafood</i>	<i>0.5 (3.6)</i>	<i>0.6 (4.0)</i>	<i>1.2 (8.4)</i>	<i>1.7 (12.0)</i>
Eggs	0.4 (3)	0.4 (3.0)	0.4 (3.0)	0.4 (3.0)
Processed soy products	0.05 (0.4)	0.05 (0.3)	0.04 (0.3)	0.05 (0.3)
Nuts and seeds	0.6 (4)	0.5 (3.7)	0.5 (3.7)	0.5 (3.7)
Total per day	5.5 oz eq	5.5 oz eq	5.5 oz eq	5.5 oz eq

¹Ounce equivalents per day (approximate ounce equivalents per week).

Nutrients in the Three Seafood Scenarios

The amounts and percents of goals for selected nutrients in the 2000-calorie level pattern for women 19-30 years are presented in Table 6. Nutrients and percents of goals for all calorie levels and nutrients are presented in Appendix Tables C1 and C2.

The three seafood scenarios met almost all goals for nutrient adequacy, paralleling the USDA base patterns. Amounts of energy, protein, fat, and carbohydrate changed little.

No nutrients decreased substantially. Nutrients that increased substantially included selenium, vitamin D, and vitamin B-12. For the 12-ounce LO3 scenario, selenium increased by more than 10% from the 1600-3200 calorie levels. For the 4-ounce HI3 scenario, vitamin D increased by more than 10% from the 1600-2600 calorie levels and by 20% at 2800 calories and higher. For the 8-ounce HI3/LO3 scenario, vitamin D increased by more than 10% at almost all calorie levels 1600 and higher. Vitamin B-12 increased 21-47% in the 8-ounce HI3/LO3 scenario across all calorie levels and by 49-69% in the 12-ounce LO3 scenario from the 1600-3200 calorie levels.

Table 6. Selected nutrients in the base food patterns and in the three seafood scenarios at the reference 2000-calorie level, and comparison to goals for women age 19-30

Food pattern	USDA base pattern	4 oz HI3 seafood	8 oz LO3/HI3 seafood	12 oz LO3 seafood
Macronutrients				
Energy	1997 kcal	2004 kcal	1989 kcal	1976 kcal
% of goal	99.8%	100.2%	99.5%	98.8%
Protein	91 g	91 g	91 g	90 g
% of RDA	198%	198.0%	197%	196%
% of calories	18%	18%	18%	18%
Total lipid (fat)	71 g	72 g	71 g	69 g
% of calories	32%	32%	32%	32%
Minerals				
Selenium	106 µg	106 µg	109 µg ¹	113 µg ¹
% of RDA	192%	192%	199% ¹	206% ¹
Vitamins				
Vitamin D	258 IU	289 IU ¹	281 IU ¹	273 IU
% of RDA	129%	145% ¹	141% ¹	136%
Vitamin B-12	6.5 µg	6.4 µg ¹	7.1 µg ¹	7.8 µg ¹
% of RDA	272%	266% ¹	295% ¹	326% ¹
Fats and Fatty Acids				
Cholesterol	229 mg	225 mg	231 mg	237 mg
% of limit (<300mg/day)	76%	75%	77%	79%
Saturated fatty acids	18.7 g	18.8 g	18.4 g	18.0 g
% of calories	8.4%	8.5%	8.3%	8.2%
Monounsaturated fatty acids	26.1 g	26.3 g	25.8 g	25.3 g
% of calories	11.8%	11.8%	11.7%	11.5%
Polyunsaturated fatty acids	20.9 g	21.2 g	21.1 g	20.8 g
% of calories	9.4%	9.5%	9.5%	9.5%
EPA + DHA	126 mg	292 mg	253 mg	201 mg
% above base pattern	(Base)	132%	101%	60%

¹Differences observed for at least one calorie level of at least 10% of the standard between the base pattern and the seafood scenario.

EPA and DHA

The levels of EPA and DHA were substantially higher than in the base patterns for all three seafood scenarios. In the base patterns, the total amounts of EPA and DHA range from 46-161 mg per day. Table 7 shows the amounts for the 12 calorie levels, which ranged from 107-373 mg/day for 4 ounces of HI3 per week, 90-321 mg/day for 8 ounces of HI3 and LO3 per week, and 74-257 mg/day for 12 ounces of LO3 seafood per week.

Table 7. Daily amounts of seafood and associated EPA and DHA content of USDA base food patterns and of the three seafood scenarios

CALORIE LEVEL	Base patterns Seafood (oz)	Base patterns EPA+DHA (mg)	Increased HI3 Seafood (oz)	Increased HI3 EPA+DHA (mg)	Increased LO3+HI3 Seafood (oz)	Increased LO3+HI3 EPA+DHA (mg)	Increased LO3 Seafood (oz)	Increased LO3 EPA+DHA (mg)
1000	0.2	46	0.2	107	0.4	90	0.6	74
1200	0.3	69	0.3	160	0.7	139	0.9	110
1400	0.4	92	0.4	213	0.9	181	1.2	147
1600	0.5	114	0.5	266	1.1	229	1.6	183
1800	0.5	114	0.5	266	1.1	229	1.6	183
2000	0.5	126	0.6	292	1.2	253	1.7	201
2200	0.6	137	0.6	319	1.3	277	1.9	220
2400	0.6	149	0.7	346	1.4	302	2.0	238
2600	0.6	150	0.7	346	1.4	303	2.0	238
2800	0.7	161	0.7	373	1.5	321	2.2	257
3000	0.7	161	0.7	373	1.5	321	2.2	257
3200	0.7	161	0.7	373	1.5	321	2.2	257

Methyl Mercury

Of the seafood varieties identified by the literature (EPA/FDA, 2004; Ginsberg and Toal, 2009; IOM, 2007) to be of concern, four (king mackerel, tilefish, yellowfin tuna, and Atlantic cod) are not in the patterns; five (sea bass, white tuna, light tuna, lobster, and halibut) are substantially below the levels of potential concern; and the two for which any level of consumption could be of concern (swordfish and shark), amounts are minimal (0.01 and 0.03 ounces per week, respectively, at the highest calorie level).

Summary

The amounts of seafood in the base USDA food patterns could be increased to 8 oz per week without any negative impact on nutrient adequacy. The three seafood scenarios resulted in 292 mg/d (4 oz HI3), 253 mg/d (8 oz LO3+HI3), and 201 mg/d (12 oz LO3) in the reference 2000 calorie pattern. The 4 oz HI3 and the 12 oz LO3 scenarios reached 250 mg at the 2800 calorie levels and higher. A formal analysis of the methyl mercury content of the patterns was not possible, as methyl mercury is not part of the food composition database on which this work is based. However, the amounts of the seafood varieties of interest found in the patterns is either zero or minimal. This analysis did not address vegetarian diets.

References

Environmental Protection Agency and Food and Drug Administration. *What You Need to Know about Mercury in Fish and Shellfish*. <http://www.epa.gov/waterscience/fish/advice/>. Updated March 9, 2010. Accessed July 13, 2009.

Ginsberg GL, Toal BF. Quantitative approach for incorporating methylmercury risks and omega-3 fatty acid benefits in developing species-specific fish consumption advice. *Environ Health Perspect*. 2009;117(2):267-75.

Institute of Medicine (IOM). *Dietary Reference Intakes: The Essential Guide to Nutrient Requirements*. Washington DC: National Academies Press, 2006.

Institute of Medicine. *Seafood Choices: Balancing Benefits and Risks*. Washington, DC: The National Academies Press; 2007.

U.S. Department of Health and Human Services and U.S. Department of Agriculture. *Nutrition and Your Health: Dietary Guidelines for Americans*, 6th ed. HHS-ODPHP-205-01-DGA-A; USDA-Home and Garden Bulletin No. 232, 2005.

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Table A 1. EPA and DHA content of seafood used in all patterns

High n-3 Seafood Variety	EPA mg/oz	DHA mg/oz	EPA+DHA mg/oz
Roe	39	55	94
Herring	30	36	66
Salmon	20	41	61
Anchovy	22	37	59
Mackerel	16	22	38
Trout	9	23	33
Sardines	14	15	29
Smelt	10	15	25
Tuna-high n-3 (canned white)	7	18	24
Shark	9	15	24
Swordfish	4	19	23
Mussels	8	14	22
Sea bass	6	16	22
Low n-3 Seafood Variety	EPA mg/oz	DHA mg/oz	EPA+DHA mg/oz
Oysters (Pacific)*	25	14	39
Pompano	7	15	21
Unknown Fish (Atlantic pollock)	3	13	15
Fish sticks (Atlantic pollock)	3	13	15
Restructured fish (Atlantic pollock)	3	13	15
Whiting	8	7	15
Flounder	7	7	14
Crab	7	7	13
Halibut	3	11	13
Carp	9	4	13
Scallops	5	6	11
Mullet	5	4	9
Snapper	1	8	9
Shrimp	5	4	9
Octopus/squid	4	5	9
Perch	2	6	8
Clams	4	4	8
Cod	3	5	8
Tuna-low n-3 (canned light)	1	6	8
Haddock	2	5	7
Croaker	3	3	6
Porgy	2	3	5
Catfish	1	4	5
Crayfish	4	1	5
Pike	1	3	4
Snails	3	0	3
Lobster	2	1	2
Turtle/terrapin	1	1	2
Frog	0	1	1

Table B 1. Daily amounts* of the meat & beans subgroups in the Base Food Intake Patterns and the 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios. All amounts in ounce equivalents.

Calorie Level	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200
Meats/Beans-oz. eq.	2	3	4	5	5	5.5	6	6.5	6.5	7	7	7
Base pattern, daily amount												
Meats	0.9	1.3	1.8	2.2	2.2	2.5	2.7	2.9	2.9	3.1	3.1	3.1
Poultry	0.6	0.8	1.1	1.4	1.4	1.5	1.7	1.8	1.8	2.0	2.0	2.0
Fish-Hi n3	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Fish-Lo n3	0.1	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
Eggs	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6
Soy products	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Nuts & Seeds	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Modified to 4 ounces HI3 fish per week, daily amount												
Meats	0.9	1.3	1.7	2.2	2.2	2.4	2.6	2.8	2.8	3.0	3.0	3.0
Poultry	0.6	0.8	1.1	1.4	1.4	1.5	1.7	1.8	1.8	2.0	2.0	2.0
Fish-Hi n3	0.2	0.3	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7
Fish-Lo n3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Eggs	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6
Soy products	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Nuts & Seeds	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Modified to 8 ounces HI3/LO3 fish per week, daily amount												
Meats	0.7	1.0	1.3	1.7	1.7	1.8	2.0	2.2	2.2	2.3	2.3	2.3
Poultry	0.5	0.8	1.1	1.3	1.3	1.5	1.6	1.7	1.7	1.9	1.9	1.9
Fish-Hi n3	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
Fish-Lo n3	0.3	0.5	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.2
Eggs	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6
Soy products	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Nuts & Seeds	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Modified to 12 ounces LO3 fish per week, daily amount												
Meats	0.6	0.9	1.2	1.5	1.5	1.7	1.8	2.0	2.0	2.1	2.1	2.1
Poultry	0.4	0.6	0.8	1.1	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.5
Fish-Hi n3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fish-Lo n3	0.6	0.9	1.2	1.6	1.6	1.7	1.9	2.0	2.0	2.2	2.2	2.2
Eggs	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6
Soy products	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Nuts & Seeds	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7

* Amounts differ slightly from those in the report text due to rounding.

Table B 2. Weekly amounts* of the meat & beans subgroups in the Base Food Intake Patterns and the 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios. All amounts in ounce equivalents.

Calorie Level	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200
Meats/Beans-oz. eq.	2	3	4	5	5	5.5	6	6.5	6.5	7	7	7
Base pattern, weekly amount												
Meats	6.2	9.4	12.5	15.6	15.6	17.2	18.7	20.3	20.3	21.8	21.8	21.8
Poultry	3.9	5.9	7.8	9.8	9.8	10.7	11.7	12.7	12.7	13.7	13.7	13.7
Fish-Hi n3	0.3	0.5	0.6	0.8	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.1
Fish-Lo n3	1.0	1.5	2.0	2.5	2.5	2.7	3.0	3.2	3.2	3.5	3.5	3.5
Eggs	1.1	1.7	2.2	2.8	2.8	3.1	3.3	3.6	3.6	3.9	3.9	3.9
Soy products	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Nuts & Seeds	1.3	2.0	2.6	3.3	3.3	3.6	4.0	4.3	4.3	4.6	4.6	4.6
Modified to 4 ounces HI3 fish per week, weekly amount												
Meats	6.0	9.1	12.1	15.1	15.1	16.6	18.1	19.7	19.7	21.2	21.2	21.2
Poultry	3.9	5.9	7.8	9.8	9.8	10.8	11.8	12.7	12.7	13.7	13.7	13.7
Fish-Hi n3	1.5	2.2	2.9	3.7	3.7	4.0	4.4	4.8	4.8	5.1	5.1	5.1
Fish-Lo n3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Eggs	1.1	1.7	2.2	2.8	2.8	3.0	3.3	3.6	3.6	3.9	3.9	3.9
Soy products	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Nuts & Seeds	1.3	2.0	2.7	3.3	3.3	3.7	4.0	4.3	4.3	4.7	4.7	4.7
Modified to 8 ounces HI3/LO3 fish per week, weekly amount												
Meats	4.7	7.0	9.4	11.7	11.7	12.9	14.0	15.2	15.2	16.4	16.4	16.4
Poultry	3.8	5.6	7.5	9.4	9.4	10.3	11.3	12.2	12.2	13.2	13.2	13.2
Fish-Hi n3	0.7	1.1	1.4	1.8	1.8	2.0	2.2	2.4	2.4	2.5	2.5	2.5
Fish-Lo n3	2.3	3.5	4.7	5.8	5.8	6.4	7.0	7.6	7.6	8.2	8.2	8.2
Eggs	1.1	1.7	2.2	2.8	2.8	3.0	3.3	3.6	3.6	3.9	3.9	3.9
Soy products	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Nuts & Seeds	1.3	2.0	2.7	3.3	3.3	3.7	4.0	4.3	4.3	4.7	4.7	4.7
Modified to 12 ounces LO3 fish per week, weekly amount												
Meats	4.2	6.3	8.4	10.5	10.5	11.6	12.6	13.7	13.7	14.7	14.7	14.7
Poultry	2.9	4.4	5.9	7.4	7.4	8.1	8.8	9.6	9.6	10.3	10.3	10.3
Fish-Hi n3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fish-Lo n3	4.4	6.5	8.7	10.9	10.9	12.0	13.1	14.2	14.2	15.2	15.2	15.2
Eggs	1.1	1.7	2.2	2.8	2.8	3.0	3.3	3.6	3.6	3.9	3.9	3.9
Soy products	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Nuts & Seeds	1.3	2.0	2.7	3.3	3.3	3.7	4.0	4.3	4.3	4.7	4.7	4.7

* Amounts differ slightly from those in the report text due to rounding.

Table C 1. Nutrients in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios

Calorie Level	Food Pattern	Energy kcal	Protein g	Total lipid g	Carbo-hydrate g	Dietary Fiber g	Calcium mg	Iron mg	Magnesium mg
1000	Base	992	44	36	128	14	751	8	169
1000	4 oz. HI3	994	44	37	128	14	751	8	169
1000	8 oz. HILO	989	43	36	128	14	753	8	170
1000	12 oz. LO3	984	43	36	128	14	755	8	171
1200	Base	1200	55	43	155	17	803	10	212
1200	4 oz. HI3	1204	55	43	155	18	803	10	212
1200	8 oz. HILO	1196	54	43	155	17	807	10	214
1200	12 oz. LO3	1189	54	42	155	17	810	10	216
1400	Base	1389	65	47	184	21	849	13	250
1400	4 oz. HI3	1394	65	48	184	21	849	12	250
1400	8 oz. HILO	1385	64	47	185	21	854	13	253
1400	12 oz. LO3	1374	64	46	184	21	857	13	255
1600	Base	1602	83	55	203	25	1184	15	310
1600	4 oz. HI3	1608	83	56	203	25	1183	14	309
1600	8 oz. HILO	1596	82	54	203	25	1189	15	313
1600	12 oz. LO3	1583	82	53	203	25	1194	15	316
1800	Base	1797	87	61	234	28	1221	16	336
1800	4 oz. HI3	1803	87	62	234	28	1221	16	336
1800	8 oz. HILO	1791	87	61	234	28	1227	16	339
1800	12 oz. LO3	1778	86	60	234	28	1232	17	342
2000	Base	1997	91	71	260	30	1235	17	351
2000	4 oz. HI3	2004	91	72	260	30	1234	17	350
2000	8 oz. HILO	1989	91	71	260	30	1241	17	354
2000	12 oz. LO3	1976	90	69	260	30	1247	17	357
2200	Base	2190	100	77	287	34	1290	20	394
2200	4 oz. HI3	2198	100	78	287	34	1289	19	394
2200	8 oz. HILO	2183	99	77	287	34	1297	19	398
2200	12 oz. LO3	2168	98	75	287	34	1302	20	401
2400	Base	2384	106	86	312	37	1323	21	418
2400	4 oz. HI3	2392	106	86	312	37	1322	21	417
2400	8 oz. HILO	2376	105	85	312	37	1330	21	422
2400	12 oz. LO3	2360	104	83	312	36	1336	22	426
2600	Base	2583	111	92	343	41	1374	24	457
2600	4 oz. HI3	2592	111	93	343	41	1373	24	456
2600	8 oz. HILO	2575	110	92	343	41	1381	24	461
2600	12 oz. LO3	2559	109	90	343	41	1387	24	465
2800	Base	2795	118	99	376	44	1416	26	491
2800	4 oz. HI3	2804	118	100	376	44	1415	26	490
2800	8 oz. HILO	2787	117	98	376	44	1424	26	495
2800	12 oz. LO3	2769	116	97	376	44	1431	26	499
3000	Base	2985	120	111	396	47	1434	26	509
3000	4 oz. HI3	2994	120	112	396	47	1433	26	508
3000	8 oz. HILO	2977	119	110	396	47	1442	26	513
3000	12 oz. LO3	2959	118	109	396	47	1449	27	517
3200	Base	3182	120	126	412	48	1435	26	509
3200	4 oz. HI3	3191	120	127	412	48	1434	26	508
3200	8 oz. HILO	3174	119	125	412	48	1443	26	513
3200	12 oz. LO3	3156	118	124	412	48	1450	27	517

Table C1. Nutrients in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	Phosphorus mg	Potassium mg	Sodium mg	Zinc mg	Copper mg	Manganese mg	Selenium mcg	Vitamin A mcg RAE
1000	Base	886	1667	885	7	0.651	2	49	447
1000	4 oz. HI3	888	1668	883	7	0.643	2	50	446
1000	8 oz. HILO	886	1666	872	7	0.648	2	51	446
1000	12 oz. LO3	886	1668	867	7	0.657	2	52	447
1200	Base	1052	2059	1088	9	0.851	2	64	527
1200	4 oz. HI3	1054	2060	1085	9	0.841	2	64	526
1200	8 oz. HILO	1053	2059	1068	9	0.848	2	67	526
1200	12 oz. LO3	1051	2060	1061	8	0.862	2	68	527
1400	Base	1195	2374	1265	10	1.014	3	79	569
1400	4 oz. HI3	1198	2375	1261	10	1.000	3	79	567
1400	8 oz. HILO	1196	2374	1241	10	1.012	3	82	567
1400	12 oz. LO3	1194	2374	1229	10	1.028	3	84	569
1600	Base	1562	2971	1527	13	1.212	3	95	756
1600	4 oz. HI3	1566	2973	1523	13	1.194	3	95	754
1600	8 oz. HILO	1563	2969	1495	13	1.206	3	99	754
1600	12 oz. LO3	1561	2972	1482	13	1.229	3	102	756
1800	Base	1643	3272	1666	14	1.376	4	101	820
1800	4 oz. HI3	1647	3273	1661	14	1.358	4	102	818
1800	8 oz. HILO	1644	3269	1633	13	1.370	4	105	818
1800	12 oz. LO3	1642	3272	1621	13	1.393	4	108	820
2000	Base	1690	3478	1722	14	1.446	4	106	851
2000	4 oz. HI3	1694	3480	1718	14	1.426	4	106	849
2000	8 oz. HILO	1691	3476	1686	14	1.441	4	109	848
2000	12 oz. LO3	1689	3479	1674	14	1.465	4	113	851
2200	Base	1836	3836	1883	16	1.635	4	117	930
2200	4 oz. HI3	1840	3838	1878	16	1.613	4	117	928
2200	8 oz. HILO	1837	3835	1845	15	1.629	4	121	927
2200	12 oz. LO3	1834	3837	1830	15	1.655	4	125	930
2400	Base	1932	3945	2028	17	1.727	5	127	969
2400	4 oz. HI3	1937	3947	2023	17	1.704	5	127	966
2400	8 oz. HILO	1934	3944	1987	16	1.721	5	132	966
2400	12 oz. LO3	1931	3946	1971	16	1.750	5	136	969
2600	Base	2046	4275	2153	18	1.900	5	134	1056
2600	4 oz. HI3	2051	4277	2147	18	1.876	5	134	1053
2600	8 oz. HILO	2047	4273	2111	18	1.893	5	139	1053
2600	12 oz. LO3	2044	4275	2095	18	1.922	5	143	1055
2800	Base	2156	4544	2296	19	2.037	6	144	1098
2800	4 oz. HI3	2162	4546	2290	19	2.012	6	145	1095
2800	8 oz. HILO	2159	4544	2252	19	2.031	6	149	1095
2800	12 oz. LO3	2155	4545	2234	19	2.061	6	154	1097
3000	Base	2203	4780	2329	20	2.132	6	145	1133
3000	4 oz. HI3	2209	4782	2323	19	2.107	6	146	1130
3000	8 oz. HILO	2206	4779	2285	19	2.126	6	150	1131
3000	12 oz. LO3	2202	4781	2267	19	2.156	6	155	1133
3200	Base	2204	4781	2353	20	2.132	6	145	1160
3200	4 oz. HI3	2209	4783	2347	19	2.107	6	146	1157
3200	8 oz. HILO	2207	4780	2308	19	2.126	6	150	1157
3200	12 oz. LO3	2203	4781	2291	19	2.156	6	155	1159

**Table C1. Nutrients in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios
—continued**

Calorie Level	Food Pattern	Vitamin E mg AT	Vitamin D IU	Vitamin C mg	Thiamin mg	Riboflavin mg	Niacin mg
1000	Base	4.0	155	58	0.9	1.2	9.9
1000	4 oz. HI3	4.0	166	58	0.9	1.2	10.0
1000	8 oz. HILO	4.0	163	58	0.8	1.2	9.9
1000	12 oz. LO3	4.1	160	58	0.8	1.2	9.6
1200	Base	4.9	166	70	1.1	1.4	13.8
1200	4 oz. HI3	4.9	183	70	1.1	1.4	14.0
1200	8 oz. HILO	4.9	179	70	1.1	1.4	13.7
1200	12 oz. LO3	5.0	174	70	1.1	1.4	13.4
1400	Base	5.4	177	89	1.3	1.6	17.1
1400	4 oz. HI3	5.3	200	89	1.4	1.6	17.3
1400	8 oz. HILO	5.4	194	89	1.3	1.6	17.0
1400	12 oz. LO3	5.5	188	89	1.3	1.6	16.6
1600	Base	6.7	249	100	1.5	2.0	19.8
1600	4 oz. HI3	6.7	278	100	1.5	2.0	20.0
1600	8 oz. HILO	6.8	271	100	1.5	2.0	19.6
1600	12 oz. LO3	6.8	263	101	1.5	2.0	19.1
1800	Base	7.6	252	108	1.7	2.2	21.8
1800	4 oz. HI3	7.5	280	108	1.8	2.2	22.0
1800	8 oz. HILO	7.6	273	108	1.7	2.1	21.6
1800	12 oz. LO3	7.7	265	108	1.7	2.1	21.1
2000	Base	8.3	258	126	1.8	2.2	22.9
2000	4 oz. HI3	8.3	289	126	1.8	2.2	23.2
2000	8 oz. HILO	8.4	281	126	1.8	2.2	22.8
2000	12 oz. LO3	8.4	273	127	1.8	2.2	22.1
2200	Base	9.1	266	137	2.0	2.4	25.8
2200	4 oz. HI3	9.1	300	137	2.1	2.4	26.1
2200	8 oz. HILO	9.2	292	138	2.0	2.4	25.7
2200	12 oz. LO3	9.3	282	138	2.0	2.4	24.9
2400	Base	9.6	275	138	2.2	2.6	28.0
2400	4 oz. HI3	9.6	312	138	2.2	2.6	28.4
2400	8 oz. HILO	9.7	303	139	2.2	2.5	27.9
2400	12 oz. LO3	9.8	292	139	2.2	2.5	27.1
2600	Base	10.6	279	149	2.4	2.7	30.1
2600	4 oz. HI3	10.6	316	149	2.4	2.7	30.5
2600	8 oz. HILO	10.7	308	150	2.4	2.7	30.0
2600	12 oz. LO3	10.8	297	150	2.4	2.7	29.2
2800	Base	11.2	287	168	2.6	2.9	32.6
2800	4 oz. HI3	11.2	327	168	2.6	2.9	33.0
2800	8 oz. HILO	11.3	317	169	2.6	2.8	32.5
2800	12 oz. LO3	11.4	306	169	2.6	2.8	31.7
3000	Base	12.5	289	175	2.7	2.9	33.3
3000	4 oz. HI3	12.5	329	176	2.7	2.9	33.7
3000	8 oz. HILO	12.6	319	176	2.7	2.9	33.2
3000	12 oz. LO3	12.7	308	176	2.7	2.9	32.4
3200	Base	13.5	293	175	2.7	2.9	33.3
3200	4 oz. HI3	13.5	333	176	2.7	2.9	33.7
3200	8 oz. HILO	13.6	323	176	2.7	2.9	33.2
3200	12 oz. LO3	13.7	312	176	2.7	2.9	32.4

**Table C1. Nutrients in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios
—continued**

Calorie Level	Food Pattern	Vitamin B-6 mg	Vitamin B-12 mcg	Choline mg	Vitamin K mcg	Folate mcg DFE	Cholesterol mg
1000	Base	1.1	3.3	155	58	295	94
1000	4 oz. HI3	1.1	3.3	153	58	296	93
1000	8 oz. HILO	1.1	3.5	151	58	295	95
1000	12 oz. LO3	1.0	3.8	150	58	295	97
1200	Base	1.4	4.0	200	89	387	129
1200	4 oz. HI3	1.4	3.9	197	89	388	127
1200	8 oz. HILO	1.4	4.3	194	89	388	132
1200	12 oz. LO3	1.4	4.7	192	89	387	133
1400	Base	1.7	4.7	238	92	467	164
1400	4 oz. HI3	1.7	4.6	234	92	469	161
1400	8 oz. HILO	1.7	5.1	230	91	468	166
1400	12 oz. LO3	1.6	5.6	227	91	468	169
1600	Base	2.0	6.1	304	125	534	206
1600	4 oz. HI3	2.0	6.0	300	125	536	203
1600	8 oz. HILO	2.0	6.7	295	125	536	210
1600	12 oz. LO3	2.0	7.3	291	125	535	213
1800	Base	2.2	6.3	320	134	614	208
1800	4 oz. HI3	2.2	6.1	315	134	616	205
1800	8 oz. HILO	2.2	6.8	310	134	615	212
1800	12 oz. LO3	2.1	7.4	306	133	615	215
2000	Base	2.3	6.5	340	140	628	229
2000	4 oz. HI3	2.4	6.4	335	140	630	225
2000	8 oz. HILO	2.3	7.1	328	140	629	231
2000	12 oz. LO3	2.3	7.8	325	140	629	237
2200	Base	2.6	7.0	372	175	736	248
2200	4 oz. HI3	2.6	6.8	366	175	738	244
2200	8 oz. HILO	2.6	7.6	359	175	737	250
2200	12 oz. LO3	2.5	8.4	356	175	737	256
2400	Base	2.8	7.4	391	180	803	268
2400	4 oz. HI3	2.8	7.2	385	180	805	264
2400	8 oz. HILO	2.8	8.1	378	179	804	272
2400	12 oz. LO3	2.7	8.9	374	179	803	277
2600	Base	3.0	7.6	410	211	906	271
2600	4 oz. HI3	3.0	7.4	403	212	908	266
2600	8 oz. HILO	3.0	8.3	397	211	907	274
2600	12 oz. LO3	2.9	9.1	392	211	906	279
2800	Base	3.2	8.0	434	216	983	290
2800	4 oz. HI3	3.3	7.8	428	216	986	285
2800	8 oz. HILO	3.2	8.8	421	216	985	294
2800	12 oz. LO3	3.2	9.7	416	216	984	299
3000	Base	3.4	8.1	446	233	1015	292
3000	4 oz. HI3	3.4	7.9	439	233	1018	287
3000	8 oz. HILO	3.4	8.8	432	233	1017	297
3000	12 oz. LO3	3.3	9.7	427	232	1016	302
3200	Base	3.4	8.1	447	243	1015	298
3200	4 oz. HI3	3.4	8.0	440	243	1018	293
3200	8 oz. HILO	3.4	8.9	433	243	1017	303
3200	12 oz. LO3	3.3	9.8	428	243	1016	307

Table C1. Nutrients in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	Saturated fatty acids	Mono-unsaturated fatty acids	Poly-unsaturated fatty acids	18:2 Linoleic	18:3 Linolenic	20:5 n-3 EPA	22:6 n-3 DHA	18:0 Stearic
		g	g	g	g	g	g	g	g
1000	Base	9.7	13.1	10.9	9.8	0.98	0.015	0.031	2.6
1000	4 oz. HI3	9.8	13.2	11.0	9.8	0.98	0.033	0.073	2.6
1000	8 oz. HILO	9.6	13.0	10.9	9.8	0.98	0.030	0.060	2.5
1000	12 oz. LO3	9.5	12.8	10.9	9.7	0.98	0.027	0.046	2.5
1200	Base	11.2	15.7	12.8	11.5	1.13	0.022	0.047	3.0
1200	4 oz. HI3	11.3	15.9	13.0	11.5	1.14	0.050	0.110	3.0
1200	8 oz. HILO	11.0	15.6	12.9	11.5	1.14	0.046	0.093	2.9
1200	12 oz. LO3	10.8	15.3	12.7	11.4	1.13	0.040	0.070	2.9
1400	Base	12.3	17.3	13.7	12.3	1.19	0.029	0.062	3.3
1400	4 oz. HI3	12.4	17.5	14.0	12.4	1.19	0.066	0.147	3.3
1400	8 oz. HILO	12.0	17.1	13.8	12.3	1.19	0.060	0.121	3.2
1400	12 oz. LO3	11.8	16.7	13.6	12.2	1.18	0.054	0.093	3.1
1600	Base	14.0	20.0	16.4	14.7	1.45	0.037	0.078	3.6
1600	4 oz. HI3	14.1	20.2	16.7	14.7	1.46	0.082	0.184	3.6
1600	8 oz. HILO	13.7	19.7	16.5	14.6	1.45	0.076	0.153	3.5
1600	12 oz. LO3	13.4	19.3	16.3	14.5	1.45	0.067	0.116	3.4
1800	Base	15.8	22.4	18.2	16.3	1.63	0.037	0.078	4.2
1800	4 oz. HI3	15.9	22.7	18.6	16.4	1.64	0.082	0.184	4.2
1800	8 oz. HILO	15.5	22.1	18.4	16.3	1.63	0.076	0.153	4.0
1800	12 oz. LO3	15.2	21.7	18.1	16.2	1.62	0.067	0.116	4.0
2000	Base	18.7	26.1	20.9	18.7	1.85	0.040	0.086	5.0
2000	4 oz. HI3	18.8	26.3	21.2	18.8	1.86	0.090	0.202	5.0
2000	8 oz. HILO	18.4	25.8	21.1	18.7	1.86	0.084	0.169	4.9
2000	12 oz. LO3	18.0	25.3	20.8	18.6	1.85	0.073	0.128	4.8
2200	Base	20.1	28.4	22.8	20.4	2.03	0.044	0.093	5.4
2200	4 oz. HI3	20.3	28.7	23.1	20.5	2.04	0.099	0.220	5.4
2200	8 oz. HILO	19.8	28.1	22.9	20.4	2.03	0.092	0.185	5.2
2200	12 oz. LO3	19.4	27.6	22.6	20.2	2.02	0.080	0.139	5.1
2400	Base	22.5	31.4	25.0	22.4	2.20	0.048	0.101	6.0
2400	4 oz. HI3	22.6	31.7	25.4	22.5	2.21	0.107	0.239	6.1
2400	8 oz. HILO	22.1	31.1	25.2	22.4	2.20	0.101	0.202	5.9
2400	12 oz. LO3	21.7	30.5	24.8	22.2	2.19	0.087	0.151	5.8
2600	Base	24.0	33.8	27.2	24.4	2.42	0.048	0.101	6.5
2600	4 oz. HI3	24.2	34.1	27.6	24.5	2.43	0.107	0.239	6.5
2600	8 oz. HILO	23.6	33.5	27.4	24.4	2.42	0.101	0.202	6.3
2600	12 oz. LO3	23.2	32.9	27.1	24.3	2.41	0.088	0.151	6.2
2800	Base	25.7	36.2	29.1	26.2	2.57	0.052	0.109	6.9
2800	4 oz. HI3	25.9	36.5	29.6	26.3	2.59	0.116	0.257	6.9
2800	8 oz. HILO	25.3	35.8	29.3	26.2	2.58	0.107	0.214	6.8
2800	12 oz. LO3	24.8	35.2	29.0	26.0	2.56	0.095	0.163	6.7
3000	Base	28.4	40.7	33.5	30.2	3.01	0.052	0.109	7.7
3000	4 oz. HI3	28.6	41.0	34.0	30.2	3.02	0.116	0.257	7.7
3000	8 oz. HILO	28.0	40.3	33.7	30.1	3.01	0.107	0.214	7.5
3000	12 oz. LO3	27.5	39.7	33.4	30.0	3.00	0.095	0.163	7.4
3200	Base	32.6	46.1	38.2	34.4	3.42	0.052	0.109	8.9
3200	4 oz. HI3	32.7	46.5	38.6	34.5	3.44	0.116	0.257	8.9
3200	8 oz. HILO	32.2	45.8	38.4	34.4	3.43	0.107	0.214	8.7
3200	12 oz. LO3	31.7	45.2	38.1	34.2	3.42	0.095	0.163	8.6

Table C 2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios

Calorie Level	Food Pattern	% of goal for:	Energy % kcal	Protein % RDA	Carbo-hydrate % RDA	Dietary Fiber %goal ¹	Protein % of kcal	Carbo-hydrate % of kcal	Total lipid % kcal	Calcium % AI	Iron % RDA	Mag-nesium % RDA
1000	Base	M/F 1 to 3	99%	335%	99%	97%	18%	52%	33%	150%	110%	211%
1000	4 oz. HI3	M/F 1 to 3	99%	335%	99%	97%	18%	52%	33%	150%	110%	211%
1000	8 oz. HILO	M/F 1 to 3	99%	334%	99%	97%	18%	52%	33%	151%	110%	213%
1000	12 oz. LO3	M/F 1 to 3	98%	332%	99%	97%	18%	52%	33%	151%	111%	214%
1200	Base	M/F 4 to 8	100%	287%	119%	104%	18%	52%	32%	100%	104%	163%
1200	4 oz. HI3	M/F 4 to 8	100%	287%	119%	104%	18%	52%	32%	100%	103%	163%
1200	8 oz. HILO	M/F 4 to 8	100%	286%	119%	104%	18%	52%	32%	101%	103%	165%
1200	12 oz. LO3	M/F 4 to 8	99%	284%	119%	104%	18%	52%	32%	101%	104%	166%
1400	Base	M/F 4 to 8	99%	340%	142%	105%	19%	53%	31%	106%	126%	193%
1400	4 oz. HI3	M/F 4 to 8	100%	340%	142%	105%	19%	53%	31%	106%	125%	192%
1400	8 oz. HILO	M/F 4 to 8	99%	339%	142%	105%	19%	53%	30%	107%	126%	195%
1400	12 oz. LO3	M/F 4 to 8	98%	336%	142%	105%	19%	54%	30%	107%	127%	196%
1600	Base	M/F 9 to 13	100%	243%	157%	110%	21%	51%	31%	91%	182%	129%
1600	Base	F 51 to 70	100%	180%	157%	110%	21%	51%	31%	99%	182%	97%
1600	4 oz. HI3	M/F 9 to 13	101%	243%	157%	110%	21%	51%	31%	91%	180%	129%
1600	4 oz. HI3	F 51 to 70	101%	180%	157%	110%	21%	51%	31%	99%	180%	97%
1600	8 oz. HILO	M/F 9 to 13	100%	242%	157%	110%	21%	51%	31%	91%	182%	130%
1600	8 oz. HILO	F 51 to 70	100%	179%	157%	110%	21%	51%	31%	99%	182%	98%
1600	12 oz. LO3	M/F 9 to 13	99%	240%	156%	110%	21%	51%	30%	92%	184%	132%
1600	12 oz. LO3	F 51 to 70	99%	178%	156%	110%	21%	51%	30%	99%	184%	99%
1800	Base	M/F 9 to 13	100%	256%	180%	112%	19%	52%	31%	94%	206%	140%
1800	Base	F 14-18	100%	189%	180%	112%	19%	52%	31%	94%	110%	93%
1800	Base	F 31-50	100%	189%	180%	112%	19%	52%	31%	122%	91%	105%
1800	4 oz. HI3	M/F 9 to 13	100%	256%	180%	112%	19%	52%	31%	94%	204%	140%
1800	4 oz. HI3	F 14-18	100%	189%	180%	112%	19%	52%	31%	94%	109%	93%
1800	4 oz. HI3	F 31-50	100%	189%	180%	112%	19%	52%	31%	122%	91%	105%
1800	8 oz. HILO	M/F 9 to 13	99%	255%	180%	112%	19%	52%	31%	94%	205%	141%
1800	8 oz. HILO	F 14-18	99%	188%	180%	112%	19%	52%	31%	94%	109%	94%
1800	8 oz. HILO	F 31-50	99%	188%	180%	112%	19%	52%	31%	123%	91%	106%
1800	12 oz. LO3	M/F 9 to 13	99%	253%	180%	112%	19%	53%	30%	95%	207%	143%
1800	12 oz. LO3	F 14-18	99%	187%	180%	112%	19%	53%	30%	95%	111%	95%
1800	12 oz. LO3	F 31-50	99%	187%	180%	112%	19%	53%	30%	123%	92%	107%

¹Goal for fiber is 14 grams per 1000 calories.

Table C2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	% of goal for:	Energy % kcal	Protein % RDA	Carbo-hydrate % RDA	Dietary Fiber %goal ¹	Protein % of kcal	Carbo-hydrate % of kcal	Total lipid % kcal	Calcium % AI	Iron % RDA	Mag-nesium % RDA
2000	Base	M 51-70	100%	163%	200%	106%	18%	52%	32%	103%	211%	83%
2000	Base	F19-30	100%	198%	200%	106%	18%	52%	32%	124%	94%	113%
2000	4 oz. HI3	M 51-70	100%	163%	200%	106%	18%	52%	32%	103%	209%	83%
2000	4 oz. HI3	F19-30	100%	198%	200%	106%	18%	52%	32%	123%	93%	113%
2000	8 oz. HILO	M 51-70	99%	162%	200%	106%	18%	52%	32%	103%	211%	84%
2000	8 oz. HILO	F19-30	99%	197%	200%	106%	18%	52%	32%	124%	94%	114%
2000	12 oz. LO3	M 51-70	99%	161%	200%	106%	18%	53%	32%	104%	213%	85%
2000	12 oz. LO3	F19-30	99%	196%	200%	106%	18%	53%	32%	125%	95%	115%
2200	Base	M 14-18	100%	192%	221%	112%	18%	52%	32%	99%	177%	96%
2200	Base	M 31-50	100%	178%	221%	112%	18%	52%	32%	129%	244%	94%
2200	4 oz. HI3	M 14-18	100%	192%	221%	112%	18%	52%	32%	99%	176%	96%
2200	4 oz. HI3	M 31-50	100%	178%	221%	112%	18%	52%	32%	129%	242%	94%
2200	8 oz. HILO	M 14-18	99%	191%	221%	112%	18%	53%	32%	100%	177%	97%
2200	8 oz. HILO	M 31-50	99%	177%	221%	112%	18%	53%	32%	130%	244%	95%
2200	12 oz. LO3	M 14-18	99%	189%	221%	111%	18%	53%	31%	100%	179%	98%
2200	12 oz. LO3	M 31-50	99%	176%	221%	111%	18%	53%	31%	130%	246%	96%
2400	Base	M 19-30	99%	189%	240%	109%	18%	52%	32%	132%	266%	104%
2400	4 oz. HI3	M 19-30	100%	189%	240%	109%	18%	52%	33%	132%	264%	104%
2400	8 oz. HILO	M 19-30	99%	188%	240%	109%	18%	52%	32%	133%	266%	105%
2400	12 oz. LO3	M 19-30	98%	186%	240%	109%	18%	53%	32%	134%	269%	106%
2600	Base	M 19-30	99%	198%	264%	113%	17%	53%	32%	137%	297%	114%
2600	4 oz. HI3	M 19-30	100%	198%	264%	113%	17%	53%	32%	137%	295%	114%
2600	8 oz. HILO	M 19-30	99%	197%	264%	113%	17%	53%	32%	138%	297%	115%
2600	12 oz. LO3	M 19-30	98%	195%	264%	113%	17%	54%	32%	139%	299%	116%
2800	Base	M 14-18	100%	226%	289%	113%	17%	54%	32%	109%	234%	120%
2800	4 oz. HI3	M 14-18	100%	226%	289%	113%	17%	54%	32%	109%	232%	120%
2800	8 oz. HILO	M 14-18	100%	225%	289%	113%	17%	54%	32%	110%	234%	121%
2800	12 oz. LO3	M 14-18	99%	223%	289%	113%	17%	54%	31%	110%	236%	122%
3000	Base	M 19-30	99%	214%	304%	112%	16%	53%	33%	143%	331%	127%
3000	4 oz. HI3	M 19-30	100%	214%	304%	112%	16%	53%	34%	143%	329%	127%
3000	8 oz. HILO	M 19-30	99%	213%	304%	112%	16%	53%	33%	144%	331%	128%
3000	12 oz. LO3	M 19-30	99%	211%	304%	112%	16%	53%	33%	145%	334%	129%
3200	Base	M 14-18	99%	230%	317%	106%	15%	52%	36%	110%	241%	124%
3200	4 oz. HI3	M 14-18	100%	230%	317%	106%	15%	52%	36%	110%	239%	124%
3200	8 oz. HILO	M 14-18	99%	229%	317%	106%	15%	52%	36%	111%	241%	125%
3200	12 oz. LO3	M 14-18	99%	228%	317%	106%	15%	52%	35%	112%	243%	126%

¹Goal for fiber is 14 grams per 1000 calories.

Table C2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	% of goal for:	Phosphorus % RDA	Potassium % AI	Sodium % UL	Zinc % RDA	Copper % RDA	Manganese % AI	Selenium % RDA	Vitamin A % RDA	Vitamin E % RDA	Vitamin D % AI	Vitamin C % RDA
1000	Base	M/F 1 to 3	193%	56%	59%	231%	191%	148%	247%	149%	67%	77%	388%
1000	4 oz. HI3	M/F 1 to 3	193%	56%	59%	229%	189%	149%	248%	149%	67%	83%	388%
1000	8 oz. HILO	M/F 1 to 3	193%	56%	58%	225%	190%	148%	254%	149%	67%	81%	389%
1000	12 oz. LO3	M/F 1 to 3	193%	56%	58%	224%	193%	148%	261%	149%	68%	80%	389%
1200	Base	M/F 4 to 8	210%	54%	57%	176%	194%	156%	214%	132%	70%	83%	279%
1200	4 oz. HI3	M/F 4 to 8	211%	54%	57%	174%	191%	158%	215%	131%	69%	92%	279%
1200	8 oz. HILO	M/F 4 to 8	211%	54%	56%	170%	193%	157%	222%	131%	70%	90%	280%
1200	12 oz. LO3	M/F 4 to 8	210%	54%	56%	170%	196%	157%	228%	132%	71%	87%	280%
1400	Base	M/F 4 to 8	239%	62%	67%	210%	231%	192%	262%	142%	77%	89%	356%
1400	4 oz. HI3	M/F 4 to 8	240%	63%	66%	207%	227%	194%	263%	142%	76%	100%	356%
1400	8 oz. HILO	M/F 4 to 8	239%	62%	65%	203%	230%	193%	272%	142%	77%	97%	357%
1400	12 oz. LO3	M/F 4 to 8	239%	62%	65%	201%	234%	193%	281%	142%	78%	94%	357%
1600	Base	M/F 9 to 13	125%	66%	69%	166%	173%	210%	237%	126%	61%	125%	222%
1600	Base	F 51 to 70	223%	63%	66%	166%	135%	187%	172%	108%	45%	62%	133%
1600	4 oz. HI3	M/F 9 to 13	125%	66%	69%	164%	171%	212%	238%	126%	61%	139%	223%
1600	4 oz. HI3	F 51 to 70	224%	63%	66%	164%	133%	189%	173%	108%	45%	69%	134%
1600	8 oz. HILO	M/F 9 to 13	125%	66%	68%	161%	172%	212%	246%	126%	61%	135%	223%
1600	8 oz. HILO	F 51 to 70	223%	63%	65%	161%	134%	188%	179%	108%	45%	68%	134%
1600	12 oz. LO3	M/F 9 to 13	125%	66%	67%	160%	176%	211%	254%	126%	62%	131%	223%
1600	12 oz. LO3	F 51 to 70	223%	63%	64%	160%	137%	188%	185%	108%	46%	66%	134%
1800	Base	M/F 9 to 13	131%	73%	76%	173%	197%	193%	253%	137%	69%	126%	240%
1800	Base	F 14-18	131%	70%	72%	154%	155%	229%	184%	117%	50%	126%	166%
1800	Base	F 31-50	235%	70%	72%	173%	153%	203%	184%	117%	50%	126%	144%
1800	4 oz. HI3	M/F 9 to 13	132%	73%	76%	171%	194%	194%	254%	136%	68%	140%	240%
1800	4 oz. HI3	F 14-18	132%	70%	72%	152%	153%	231%	185%	117%	50%	140%	166%
1800	4 oz. HI3	F 31-50	235%	70%	72%	171%	151%	205%	185%	117%	50%	140%	144%
1800	8 oz. HILO	M/F 9 to 13	132%	73%	74%	167%	196%	194%	262%	136%	69%	137%	240%
1800	8 oz. HILO	F 14-18	132%	70%	71%	149%	154%	230%	191%	117%	51%	137%	166%
1800	8 oz. HILO	F 31-50	235%	70%	71%	167%	152%	204%	191%	117%	51%	137%	144%
1800	12 oz. LO3	M/F 9 to 13	131%	73%	74%	167%	199%	193%	270%	137%	70%	133%	241%
1800	12 oz. LO3	F 14-18	131%	70%	70%	148%	156%	229%	197%	117%	51%	133%	167%
1800	12 oz. LO3	F 31-50	235%	70%	70%	167%	155%	204%	197%	117%	51%	133%	144%

Table C2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	% of goal for:	Phosphorus % RDA	Potassium % AI	Sodium % UL	Zinc % RDA	Copper % RDA	Manganese % AI	Selenium % RDA	Vitamin A % RDA	Vitamin E % RDA	Vitamin D % AI	Vitamin C % RDA
2000	Base	M 51-70	241%	74%	75%	130%	161%	164%	192%	95%	55%	64%	140%
2000	Base	F19-30	241%	74%	75%	179%	161%	210%	192%	122%	55%	129%	168%
2000	4 oz. HI3	M 51-70	242%	74%	75%	129%	158%	165%	192%	94%	55%	72%	140%
2000	4 oz. HI3	F19-30	242%	74%	75%	177%	158%	211%	192%	121%	55%	145%	168%
2000	8 oz. HILO	M 51-70	242%	74%	73%	126%	160%	165%	199%	94%	56%	70%	140%
2000	8 oz. HILO	F19-30	242%	74%	73%	173%	160%	211%	199%	121%	56%	141%	169%
2000	12 oz. LO3	M 51-70	241%	74%	73%	125%	163%	165%	206%	95%	56%	68%	141%
2000	12 oz. LO3	F19-30	241%	74%	73%	172%	163%	210%	206%	122%	56%	136%	169%
2200	Base	M 14-18	147%	82%	82%	144%	184%	199%	212%	103%	61%	133%	183%
2200	Base	M 31-50	262%	82%	82%	144%	182%	190%	212%	103%	61%	133%	153%
2200	4 oz. HI3	M 14-18	147%	82%	82%	142%	181%	200%	213%	103%	61%	150%	183%
2200	4 oz. HI3	M 31-50	263%	82%	82%	142%	179%	192%	213%	103%	61%	150%	153%
2200	8 oz. HILO	M 14-18	147%	82%	80%	139%	183%	200%	220%	103%	61%	146%	184%
2200	8 oz. HILO	M 31-50	262%	82%	80%	139%	181%	191%	220%	103%	61%	146%	153%
2200	12 oz. LO3	M 14-18	147%	82%	80%	139%	186%	199%	227%	103%	62%	141%	184%
2200	12 oz. LO3	M 31-50	262%	82%	80%	139%	184%	191%	227%	103%	62%	141%	153%
2400	Base	M 19-30	276%	84%	88%	155%	192%	208%	231%	108%	64%	137%	153%
2400	4 oz. HI3	M 19-30	277%	84%	88%	153%	189%	210%	231%	107%	64%	156%	154%
2400	8 oz. HILO	M 19-30	276%	84%	86%	150%	191%	210%	240%	107%	65%	152%	154%
2400	12 oz. LO3	M 19-30	276%	84%	86%	149%	194%	209%	247%	108%	65%	146%	154%
2600	Base	M 19-30	292%	91%	94%	165%	211%	234%	243%	117%	71%	140%	166%
2600	4 oz. HI3	M 19-30	293%	91%	93%	163%	208%	235%	244%	117%	70%	158%	166%
2600	8 oz. HILO	M 19-30	292%	91%	92%	160%	210%	235%	252%	117%	71%	154%	166%
2600	12 oz. LO3	M 19-30	292%	91%	91%	159%	214%	234%	260%	117%	72%	148%	166%
2800	Base	M 14-18	173%	97%	100%	177%	229%	268%	262%	122%	75%	144%	224%
2800	4 oz. HI3	M 14-18	173%	97%	100%	174%	226%	270%	263%	122%	75%	164%	225%
2800	8 oz. HILO	M 14-18	173%	97%	98%	171%	228%	269%	272%	122%	75%	159%	225%
2800	12 oz. LO3	M 14-18	172%	97%	97%	170%	232%	268%	280%	122%	76%	153%	225%
3000	Base	M 19-30	315%	102%	101%	180%	237%	263%	264%	126%	84%	145%	195%
3000	4 oz. HI3	M 19-30	316%	102%	101%	177%	234%	265%	265%	126%	83%	165%	195%
3000	8 oz. HILO	M 19-30	315%	102%	99%	174%	236%	264%	274%	126%	84%	160%	195%
3000	12 oz. LO3	M 19-30	315%	102%	99%	173%	240%	264%	281%	126%	85%	154%	196%
3200	Base	M 14-18	176%	102%	102%	180%	240%	275%	264%	129%	90%	146%	234%
3200	4 oz. HI3	M 14-18	177%	102%	102%	177%	237%	277%	265%	129%	90%	166%	234%
3200	8 oz. HILO	M 14-18	177%	102%	100%	174%	239%	276%	274%	129%	91%	161%	234%
3200	12 oz. LO3	M 14-18	176%	102%	100%	173%	242%	276%	281%	129%	91%	156%	235%

Table C2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	% of goal for:	Thiamin % RDA	Riboflavin % RDA	Niacin % RDA	Vitamin B-6 % RDA	Vitamin B-12 % RDA	Choline % AI	Vitamin K % AI	Folate % RDA	Cholesterol % limit ¹
1000	Base	M/F 1 to 3	172%	239%	165%	213%	371%	78%	193%	197%	31%
1000	4 oz. HI3	M/F 1 to 3	173%	239%	167%	215%	365%	77%	194%	197%	31%
1000	8 oz. HILO	M/F 1 to 3	170%	237%	164%	212%	392%	76%	193%	197%	32%
1000	12 oz. LO3	M/F 1 to 3	169%	236%	160%	208%	423%	75%	193%	197%	32%
1200	Base	M/F 4 to 8	186%	234%	172%	233%	335%	80%	162%	193%	43%
1200	4 oz. HI3	M/F 4 to 8	188%	234%	175%	235%	328%	79%	162%	194%	42%
1200	8 oz. HILO	M/F 4 to 8	185%	232%	172%	231%	361%	78%	162%	194%	44%
1200	12 oz. LO3	M/F 4 to 8	184%	231%	167%	227%	394%	77%	162%	194%	44%
1400	Base	M/F 4 to 8	224%	269%	214%	280%	390%	95%	167%	234%	55%
1400	4 oz. HI3	M/F 4 to 8	226%	269%	217%	283%	381%	94%	167%	234%	54%
1400	8 oz. HILO	M/F 4 to 8	223%	266%	213%	278%	425%	92%	166%	234%	55%
1400	12 oz. LO3	M/F 4 to 8	220%	264%	207%	273%	469%	91%	166%	234%	56%
1600	Base	M/F 9 to 13	171%	226%	165%	202%	341%	81%	209%	178%	69%
1600	Base	F 51 to 70	140%	185%	141%	134%	256%	72%	139%	134%	69%
1600	4 oz. HI3	M/F 9 to 13	172%	226%	167%	204%	334%	80%	209%	179%	68%
1600	4 oz. HI3	F 51 to 70	141%	185%	143%	136%	251%	71%	139%	134%	68%
1600	8 oz. HILO	M/F 9 to 13	169%	224%	164%	200%	370%	79%	209%	179%	70%
1600	8 oz. HILO	F 51 to 70	138%	183%	140%	133%	277%	69%	139%	134%	70%
1600	12 oz. LO3	M/F 9 to 13	168%	222%	159%	196%	407%	78%	208%	178%	71%
1600	12 oz. LO3	F 51 to 70	137%	182%	136%	131%	305%	69%	139%	134%	71%
1800	Base	M/F 9 to 13	193%	241%	181%	220%	347%	85%	223%	205%	69%
1800	Base	F 14-18	174%	217%	155%	183%	261%	80%	178%	154%	69%
1800	Base	F 31-50	158%	197%	155%	169%	261%	75%	149%	154%	69%
1800	4 oz. HI3	M/F 9 to 13	195%	241%	184%	222%	340%	84%	223%	205%	68%
1800	4 oz. HI3	F 14-18	175%	217%	157%	185%	255%	79%	179%	154%	68%
1800	4 oz. HI3	F 31-50	159%	197%	157%	171%	255%	74%	149%	154%	68%
1800	8 oz. HILO	M/F 9 to 13	192%	239%	180%	218%	376%	83%	223%	205%	71%
1800	8 oz. HILO	F 14-18	172%	215%	155%	182%	282%	78%	178%	154%	71%
1800	8 oz. HILO	F 31-50	157%	195%	155%	168%	282%	73%	148%	154%	71%
1800	12 oz. LO3	M/F 9 to 13	190%	237%	175%	214%	413%	82%	222%	205%	72%
1800	12 oz. LO3	F 14-18	171%	213%	150%	178%	310%	77%	178%	154%	72%
1800	12 oz. LO3	F 31-50	156%	194%	150%	164%	310%	72%	148%	154%	72%

¹Limit for cholesterol is less than 300 mg per day.

Table C2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	% of goal for:	Thiamin % RDA	Riboflavin % RDA	Niacin % RDA	Vitamin B-6 % RDA	Vitamin B-12 % RDA	Choline % AI	Vitamin K % AI	Folate % RDA	Cholesterol % limit ¹
2000	Base	M 51-70	150%	172%	143%	137%	272%	62%	117%	157%	76%
2000	Base	F19-30	164%	203%	163%	180%	272%	80%	156%	157%	76%
2000	4 oz. HI3	M 51-70	151%	172%	145%	139%	266%	61%	117%	158%	75%
2000	4 oz. HI3	F19-30	165%	203%	166%	182%	266%	79%	156%	158%	75%
2000	8 oz. HILO	M 51-70	148%	170%	142%	136%	295%	60%	117%	157%	77%
2000	8 oz. HILO	F19-30	162%	201%	163%	178%	295%	77%	156%	157%	77%
2000	12 oz. LO3	M 51-70	148%	169%	138%	134%	326%	59%	117%	157%	79%
2000	12 oz. LO3	F19-30	161%	200%	158%	175%	326%	76%	155%	157%	79%
2200	Base	M 14-18	170%	186%	161%	201%	290%	68%	234%	184%	83%
2200	Base	M 31-50	170%	186%	161%	201%	290%	68%	146%	184%	83%
2200	4 oz. HI3	M 14-18	172%	186%	163%	203%	283%	67%	234%	185%	81%
2200	4 oz. HI3	M 31-50	172%	186%	163%	203%	283%	67%	146%	185%	81%
2200	8 oz. HILO	M 14-18	169%	184%	160%	200%	316%	65%	234%	184%	83%
2200	8 oz. HILO	M 31-50	169%	184%	160%	200%	316%	65%	146%	184%	83%
2200	12 oz. LO3	M 14-18	168%	183%	156%	196%	349%	65%	233%	184%	85%
2200	12 oz. LO3	M 31-50	168%	183%	156%	196%	349%	65%	146%	184%	85%
2400	Base	M 19-30	184%	197%	175%	213%	308%	71%	150%	201%	89%
2400	4 oz. HI3	M 19-30	186%	197%	177%	216%	301%	70%	150%	201%	88%
2400	8 oz. HILO	M 19-30	183%	195%	174%	212%	336%	69%	150%	201%	91%
2400	12 oz. LO3	M 19-30	181%	193%	169%	207%	372%	68%	149%	201%	92%
2600	Base	M 19-30	202%	208%	188%	231%	317%	74%	176%	226%	90%
2600	4 oz. HI3	M 19-30	204%	208%	191%	233%	309%	73%	176%	227%	89%
2600	8 oz. HILO	M 19-30	201%	206%	188%	229%	345%	72%	176%	227%	91%
2600	12 oz. LO3	M 19-30	199%	205%	183%	225%	381%	71%	176%	227%	93%
2800	Base	M 14-18	219%	221%	204%	249%	335%	79%	288%	246%	97%
2800	4 oz. HI3	M 14-18	220%	221%	206%	252%	327%	78%	289%	247%	95%
2800	8 oz. HILO	M 14-18	217%	219%	203%	248%	365%	77%	288%	246%	98%
2800	12 oz. LO3	M 14-18	216%	217%	198%	243%	404%	76%	288%	246%	100%
3000	Base	M 19-30	225%	224%	208%	259%	337%	81%	194%	254%	97%
3000	4 oz. HI3	M 19-30	227%	224%	211%	262%	330%	80%	194%	254%	96%
3000	8 oz. HILO	M 19-30	223%	222%	208%	258%	367%	79%	194%	254%	99%
3000	12 oz. LO3	M 19-30	222%	220%	202%	253%	406%	78%	194%	254%	101%
3200	Base	M 14-18	225%	224%	208%	261%	340%	81%	324%	254%	99%
3200	4 oz. HI3	M 14-18	227%	224%	211%	263%	332%	80%	324%	254%	98%
3200	8 oz. HILO	M 14-18	223%	222%	208%	259%	370%	79%	324%	254%	101%
3200	12 oz. LO3	M 14-18	222%	220%	202%	255%	408%	78%	323%	254%	102%

¹Limit for cholesterol is less than 300 mg per day.

Table C2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	% of goal for:	Saturated fatty acids % of kcal	Mono-unsaturated fatty acids % of kcal	Poly-unsaturated fatty acids % of kcal	18:2 Linoleic % AI	18:3 Linolenic %AI
1000	Base	M/F 1 to 3	9%	12%	10%	140%	140%
1000	4 oz. HI3	M/F 1 to 3	9%	12%	10%	140%	141%
1000	8 oz. HILO	M/F 1 to 3	9%	12%	10%	140%	140%
1000	12 oz. LO3	M/F 1 to 3	9%	12%	10%	139%	140%
1200	Base	M/F 4 to 8	8%	12%	10%	115%	126%
1200	4 oz. HI3	M/F 4 to 8	8%	12%	10%	115%	127%
1200	8 oz. HILO	M/F 4 to 8	8%	12%	10%	115%	126%
1200	12 oz. LO3	M/F 4 to 8	8%	12%	10%	114%	126%
1400	Base	M/F 4 to 8	8%	11%	9%	123%	132%
1400	4 oz. HI3	M/F 4 to 8	8%	11%	9%	124%	133%
1400	8 oz. HILO	M/F 4 to 8	8%	11%	9%	123%	132%
1400	12 oz. LO3	M/F 4 to 8	8%	11%	9%	122%	131%
1600	Base	M/F 9 to 13	8%	11%	9%	147%	145%
1600	Base	F 51 to 70	8%	11%	9%	133%	132%
1600	4 oz. HI3	M/F 9 to 13	8%	11%	9%	147%	146%
1600	4 oz. HI3	F 51 to 70	8%	11%	9%	134%	133%
1600	8 oz. HILO	M/F 9 to 13	8%	11%	9%	146%	145%
1600	8 oz. HILO	F 51 to 70	8%	11%	9%	133%	132%
1600	12 oz. LO3	M/F 9 to 13	8%	11%	9%	145%	145%
1600	12 oz. LO3	F 51 to 70	8%	11%	9%	132%	131%
1800	Base	M/F 9 to 13	8%	11%	9%	136%	135%
1800	Base	F 14-18	8%	11%	9%	149%	148%
1800	Base	F 31-50	8%	11%	9%	136%	148%
1800	4 oz. HI3	M/F 9 to 13	8%	11%	9%	137%	136%
1800	4 oz. HI3	F 14-18	8%	11%	9%	149%	149%
1800	4 oz. HI3	F 31-50	8%	11%	9%	137%	149%
1800	8 oz. HILO	M/F 9 to 13	8%	11%	9%	136%	136%
1800	8 oz. HILO	F 14-18	8%	11%	9%	148%	148%
1800	8 oz. HILO	F 31-50	8%	11%	9%	136%	148%
1800	12 oz. LO3	M/F 9 to 13	8%	11%	9%	135%	135%
1800	12 oz. LO3	F 14-18	8%	11%	9%	147%	147%
1800	12 oz. LO3	F 31-50	8%	11%	9%	135%	147%

Table C2. Comparison of nutrients to goals in Base Food Intake Patterns and 4 oz HI3, 8 oz HI3/LO3, and 12 oz LO3 scenarios—continued

Calorie Level	Food Pattern	% of goal for:	Saturated fatty acids % of kcal	Mono-unsaturated fatty acids % of kcal	Poly-unsaturated fatty acids % of kcal	18:2 Linoleic g	18:3 Linolenic g
2000	Base	M 51-70	8%	12%	9%	134%	116%
2000	Base	F19-30	8%	12%	9%	156%	168%
2000	4 oz. HI3	M 51-70	8%	12%	10%	134%	116%
2000	4 oz. HI3	F19-30	8%	12%	10%	157%	169%
2000	8 oz. HILO	M 51-70	8%	12%	10%	134%	116%
2000	8 oz. HILO	F19-30	8%	12%	10%	156%	169%
2000	12 oz. LO3	M 51-70	8%	12%	9%	133%	115%
2000	12 oz. LO3	F19-30	8%	12%	9%	155%	168%
2200	Base	M 14-18	8%	12%	9%	128%	127%
2200	Base	M 31-50	8%	12%	9%	120%	127%
2200	4 oz. HI3	M 14-18	8%	12%	9%	128%	127%
2200	4 oz. HI3	M 31-50	8%	12%	9%	120%	127%
2200	8 oz. HILO	M 14-18	8%	12%	9%	127%	127%
2200	8 oz. HILO	M 31-50	8%	12%	9%	120%	127%
2200	12 oz. LO3	M 14-18	8%	11%	9%	126%	126%
2200	12 oz. LO3	M 31-50	8%	11%	9%	119%	126%
2400	Base	M 19-30	8%	12%	9%	132%	137%
2400	4 oz. HI3	M 19-30	9%	12%	10%	132%	138%
2400	8 oz. HILO	M 19-30	8%	12%	10%	132%	138%
2400	12 oz. LO3	M 19-30	8%	12%	9%	131%	137%
2600	Base	M 19-30	8%	12%	9%	144%	151%
2600	4 oz. HI3	M 19-30	8%	12%	10%	144%	152%
2600	8 oz. HILO	M 19-30	8%	12%	10%	144%	151%
2600	12 oz. LO3	M 19-30	8%	12%	10%	143%	150%
2800	Base	M 14-18	8%	12%	9%	164%	161%
2800	4 oz. HI3	M 14-18	8%	12%	9%	164%	162%
2800	8 oz. HILO	M 14-18	8%	12%	9%	164%	161%
2800	12 oz. LO3	M 14-18	8%	11%	9%	162%	160%
3000	Base	M 19-30	9%	12%	10%	177%	188%
3000	4 oz. HI3	M 19-30	9%	12%	10%	178%	189%
3000	8 oz. HILO	M 19-30	8%	12%	10%	177%	188%
3000	12 oz. LO3	M 19-30	8%	12%	10%	176%	187%
3200	Base	M 14-18	9%	13%	11%	188%	188%
3200	4 oz. HI3	M 14-18	9%	13%	11%	189%	189%
3200	8 oz. HILO	M 14-18	9%	13%	11%	188%	188%
3200	12 oz. LO3	M 14-18	9%	13%	11%	187%	187%