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How Much Do Americans Pay for Fruits and Vegetables?

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Many Americans do not consume the recommended amount of fruits and vegetables. Almost half of Americans think eating more fruits and vegetables would make their diets healthier, so why don't they? One argument is that fruits and vegetables are expensive, especially when purchased fresh. According to an ERS study, a consumer can meet the recommendation of three servings of fruits and four servings of vegetables daily for 64 cents. This represents 12 percent of daily food expenditures per person, so consumers have 88 percent of their food dollars left to purchase the other three food groups; low-income households have 84 percent of their food dollar left. (Based on the Consumer Price Index for fruits and vegetables in 1999 and 2003, the prices in 2003 would be 10 percent higher on average than the prices in our study).

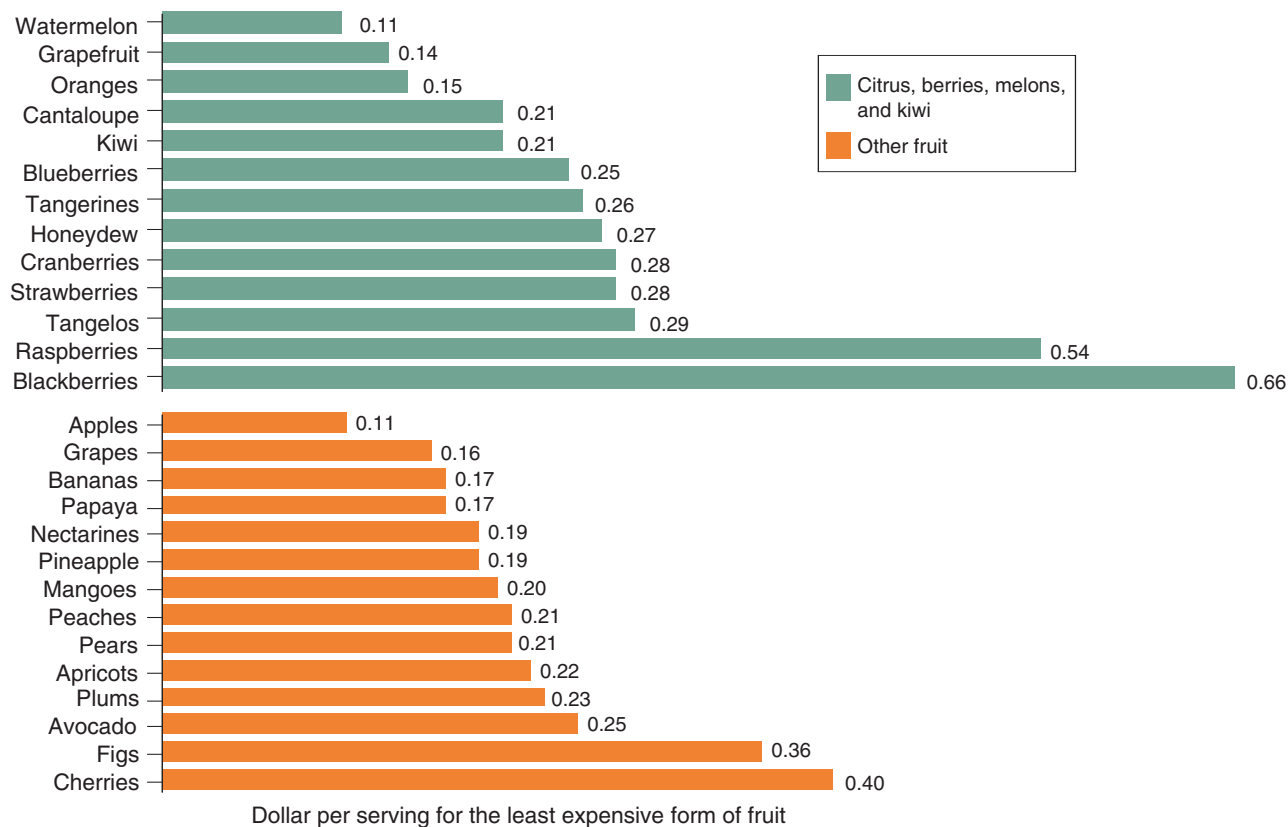
This analysis uses A.C. Nielsen Homescan data on household food purchases during 1999 (the latest year available to us) from all types of retail outlets to estimate an annual retail price per pound for 69 forms of fresh and processed fruits and 85 forms of fresh and processed vegetables. Since many fruits and vegetables contain much that is nonedible in the purchase weight, this analysis also estimated the number of edible servings per pound. More than half of all fruits and vegetables were estimated to cost 25 cents or less per serving in 1999; 86 percent of all vegetables and 78 percent of all fruit cost less than 50 cents a serving. That's 127 different ways to eat a serving of fruits and vegetables for less than the price of a 3-ounce candy bar.

After adjusting for waste and serving size, 63 percent of fruits and 57 percent of vegetables were least expensive in their fresh form as compared to their processed counterparts. Even so, the difference in price per serving between the least and most expensive versions for many fruits and



vegetables was often less than 25 cents. For some, this price difference may be a small price to pay for the conveniences—such as longer shelflife, ease of preparation, and greater availability—associated with processed forms. However, these data do not consider spoilage. Expectations that fresh produce will go bad and be thrown out may be responsible for consumers' perception that fresh produce is more expensive than processed. Regardless, consumers need to be savvy and consider not only the price per pound

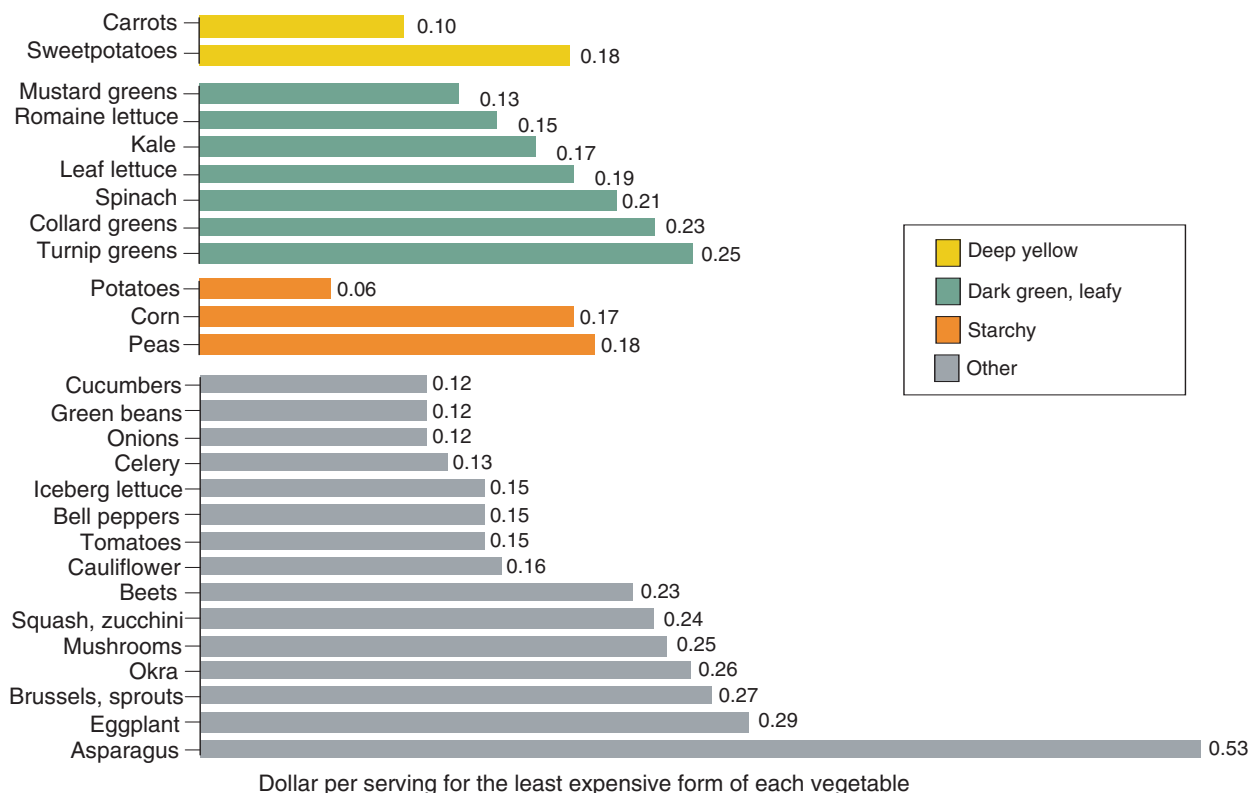
Pyramid subgroups - fruit



Source: Nielsen HomeScan data, 1999. Converted to servings using factors obtained from *The Food Buying Guide for Child Nutrition Programs*, U.S. Department of Agriculture, Food and Nutrition Service, revised November 2001.

Figure 2

Pyramid subgroups - vegetables



Source: Nielsen HomeScan data, 1999. Converted to servings using factors obtained from *The Food Buying Guide for Child Nutrition Programs*, U.S. Department of Agriculture, Food and Nutrition Service, revised November 2001.

but the number of servings obtainable from a pound (which varies considerably among different fruits and vegetables).

One of the problems consumers may face in working towards meeting the recommended servings of fruits and vegetables is that few know what constitutes a Food Guide Pyramid (FGP) serving. Many are confused because serving size on the nutrition label often differs from the FGP serving size and both probably differ from the amount consumers typically eat. Consumers may be unsure of the cost of eating a FGP serving of fruits or vegetables and may overestimate that cost. For example, some may balk at the idea of paying 97 cents for a pound of peaches, not realizing that they will be getting 4 ½-cup FGP servings in a pound, which translates to 21 cents per serving.

Dietary recommendations for an average dietary intake of 2,200 calories call for three servings of fruit daily, with consumption fairly evenly divided between (a) citrus, melons, and berries; and (b) other fruit. Recommendations also call for four servings of vegetables daily, divided among (a) dark-green and leafy vegetables; (b) deep-yellow vegetables; (c) starchy vegetables, including potatoes, dry beans, peas, and lentils; and (d) other vegetables. Figures 1 and 2 show price per serving of all the fruits and vegetables in the study, based on the least expensive form for each fruit and vegetable.

Three servings of fruit, with equal servings from the two subgroups, can cost as little as 37 cents. This includes ½ cup each of cut, fresh watermelon and apple, a little less than ½ cup of grapefruit juice, and 1/8 cup of raisins. These fruits supply over 75 percent of the Daily Value for Vitamin C, at just 150 calories and less than 1 gram of fat.

Four servings of vegetables, with one serving from each of the four subgroups, can be obtained for an additional 27

cents. This includes ½ cup each of fresh carrots, broccoli fleurets, potatoes, and cabbage. Totaling just 75 calories, this combination provides 100 percent of the Daily Value for Vitamins A and C, and 15 percent of fiber.

Since consumers have different tastes and crave variety, table 1 shows seven different ways (one for each day of the week) to eat three servings of fruit and four servings of vegetables per day for a dollar or less.

Although the prices for fruits and vegetables in this study are national averages for the entire year and not the prices that any household might face on a given day, they amply demonstrate that cost need not be a barrier to consumption of the recommended amounts of fruits and vegetables. Consumers may cite cost as a barrier when other factors such as taste, preferences, and availability may be more important.

Information Sources

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Table 1—Seven ways to eat 3 servings of fruit and 4 servings of vegetables per day for a dollar or less, 1999

Item	Number of servings	Serving size	Dollars	Item	Number of servings	Serving size	Dollars
Total cost				Total cost			
1.00				0.90			
Apple juice, frozen	1	3/4 cup	0.13	Apricots, fresh	1	1/2 cup	0.25
Orange juice, frozen	1	3/4 cup	0.15	Orange juice, frozen	1	3/4 cup	0.15
Bananas, fresh	1/2	1/2 cup	0.09	Grapefruit, fresh	1/2	1/2 cup	0.09
Cantaloupe, fresh	1/2	1/2 cup	0.11	Apple, fresh	1/2	1/2 cup	0.06
Fruit				Fruit			
0.48				0.55			
Radishes, fresh	1	1/2 cup	0.11	Cabbage, fresh	1	1/2 cup	0.04
Carrots, fresh	1	1/2 cup	0.10	Sweetpotatoes, fresh	1	1/2 cup	0.18
Green peas, canned	1	1/2 cup	0.18	Potatoes, fresh	1	1/2 cup	0.06
Mustard greens, fresh	1	1 cup	0.13	Broccoli, fresh fleurets	1	1/2 cup	0.07
Vegetables				Vegetables			
0.52				0.35			
Total cost				Total cost			
1.00				0.82			
Apple juice, frozen	1	3/4 cup	0.13	Watermelon, fresh	1	1/2 cup	0.11
Raisins	1/2	1/4 cup	0.08	Peaches, fresh	1	1/2 cup	0.21
Kiwi, fresh	1/2	1/2 cup	0.11	Grapefruit juice, frozen	1/2	3/4 cup	0.07
Orange juice, frozen	1/2	3/4 cup	0.08	Raisins	1/2	1/4 cup	0.08
Fruit				Fruit			
0.40				0.47			
Green beans, canned	1	1/2 cup	0.12	Broccoli, fresh fleurets	1	1/2 cup	0.07
Sweetpotatoes, fresh	1	1/2 cup	0.18	Potatoes, fresh	1	1/2 cup	0.06
Sweet corn, canned	1	1/2 cup	0.17	Carrots, fresh	1	1/2 cup	0.10
Mustard greens, fresh	1	1 cup	0.13	Green beans, canned	1	1/2 cup	0.12
Vegetables				Vegetables			
0.60				0.35			
Total cost				Total cost			
0.99				0.64			
Banana, fresh	1	1/2 cup	0.17	Watermelon, fresh	1	1/2 cup	0.11
Apple juice, frozen	1	3/4 cup	0.13	Apple, fresh	1	1/2 cup	0.11
Cantaloupe, fresh	1/2	1/2 cup	0.11	Grapefruit juice, frozen	1/2	3/4 cup	0.07
Grapefruit, fresh	1/2	1/2 cup	0.09	Raisins	1/2	1/4 cup	0.08
Fruit				Fruit			
0.50				0.37			
Radishes, fresh	1	1/2 cup	0.11	Carrots, fresh	1	1/2 cup	0.10
Carrots, fresh	1	1/2 cup	0.10	Broccoli, fresh fleurets	1	1/2 cup	0.07
Lettuce, Romaine	1	1 cup	0.15	Potatoes, fresh	1	1/2 cup	0.06
Celery, fresh	1	1/2 cup	0.13	Cabbage, fresh	1	1/2 cup	0.04
Vegetables				Vegetables			
0.49				0.27			
Total cost				Total cost			
.96				0.47			
Orange juice, frozen	1	3/4 cup	0.15	Potatoes, fresh	1	1/2 cup	0.06
Watermelon, fresh	1	1/2 cup	0.11	Sweetpotatoes, fresh	1	1/2 cup	0.18
Pears, fresh	1/2	1/2 cup	0.11	Cucumbers, fresh	1	1/2 cup	0.12
Pineapple, juice	1/2	3/4 cup	0.10	Mustard greens, fresh	1	1 cup	0.13
Fruit				Vegetables			
0.47				0.49			

Source: Nielsen Homescan Database, 1999.