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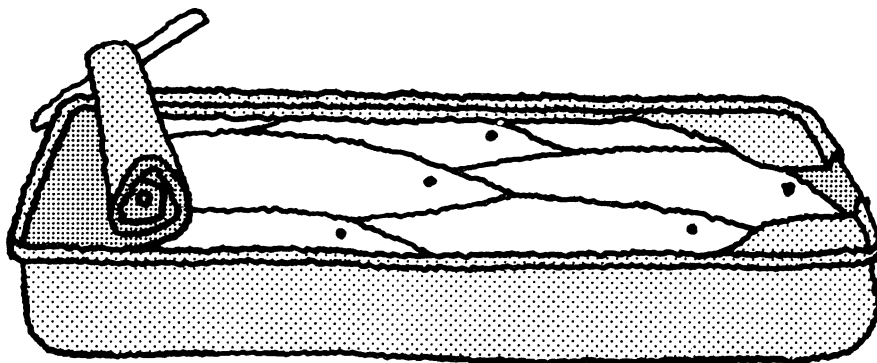
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Update: Cost of Protein in Foods

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Periodically in the *National Food Review*, we have provided data on the cost of selected foods per unit of protein. The data indicate that there is a wide diversity in cost for alternative protein sources. Significantly higher beef prices make this update more important this year.

The number of grams of protein per pound of each item is available in "The Nutritive Value of American Foods" (Agriculture Handbook No. 456). Given prices per unit weight, simple division yields the cost per gram of nutrient. A protein unit is defined as 20 grams of protein, or one-third the daily requirement recommended for a 20-year-old male. So multiplication by 20 yields the cost per protein unit. For example, in 1978, lamb chops were approximately \$3.00 per pound. A pound of lamb chops yields approximately 55 grams of protein. Hence, one would have to consume about \$1.09 worth of lamb chops in order to consume a unit of protein.

An Expensive Protein Source

As expected, red meats are still the most expensive source of protein. Lamb chops are at the top of the list, followed by bacon (99 cents), porterhouse steak (89 cents), and pork sausage (83 cents). Haddock fillet is also among the top five—72 cents a protein unit.

The most inexpensive protein source on this list is dry beans—13 cents per unit. Peanut butter and white bread are slightly more expensive. Eggs, milk, and cheese range from 20 to 35 cents a serving.

While meats are the most costly of the meat-poultry-fish category, there are some low to moderately priced red meats, ranging from 20 to 60 cents a serving. Included are liver, hamburger, chuck, ham, rump roast, pork loin, and sirloin. Poultry is still a better protein buy than most meats or fish (24 to 30 cents) and whole birds are more economical than cut-up. Fish can cost anywhere from 35 to 72 cents a serving, a price range which includes a great many meat substitutes. Prices of highly proc-

essed meats (frankfurters, salami, bologna, sausage, and bacon) are relatively high, 50 to 99 cents per 20 grams of protein.

From 1976 through 1978, the price per 20 grams of protein fell for only two of these selected commodities—eggs by 1 cent and ham by 3 cents a serving. The price of white bread remained unchanged. The others rose in price by amounts ranging from 1 to 25 cents per serving of protein over the 2-year period. Products recording the largest increases were perch (15 cents), haddock (13 cents), lamb chops (25 cents), and bacon (10 cents).

The average per-protein-unit price change from 1976 to 1978 for all the items on the list is approximately 5 cents; for red meats, 5.5 cents; for fish, 10.2 cents; and for poultry, 2 cents. Non-meat, poultry, and fish items increased by an average of two-thirds cents.

All of the foods on the list are sources of complete protein; they contain all of the essential amino acids in significant amounts and in proportions fairly similar to those found in body proteins. Essential amino acids are those which the body must have but cannot make from any material. However, serving sizes to supply the 20 grams of protein vary widely, due to the concentrations of proteins (and other nutrients) in each of the foods.

Most of the beef cuts, fish, and lamb supply 20 grams of protein with a 4-ounce serving; chicken, beef, or pork liver, slightly less than 4 ounces; and pork, slightly more than 4 ounces. Turkey requires only a 3-ounce portion, while pork sausage will supply the protein in approximately a 7-ounce serving. Bacon requires more than a half-pound serving to supply a protein unit.

More than 2-1/4 cups of whole or nonfat milk, 3 eggs, 5 tablespoons of peanut butter, or 10 slices of white bread provide equal amounts of protein. ■

Cost of 20 Grams of Protein From Specified Foods

	1966	1976	1978
	cents		
Dry beans	05	12	13
Peanut butter . .	10	16	17
White bread . . .	11	18	18
Beef liver	15	19	20
Eggs, large	15	21	20
Chicken (whole, ready to cook)	15	22	24
Hamburger	13	21	25
Fluid, whole milk .	10	24	25
Turkey (ready to cook)	18	26	28
Chicken breasts .	18	28	30
Tuna, canned . .	16	28	35
American processed cheese	16	33	35
Chuck beef	22	36	39
Ham, whole	26	43	40
Round beefsteak .	22	40	43
Liverwurst	NA	46	48
Rump roast	29	45	48
Frankfurters . . .	26	43	50
Pork loin	25	47	51
Salami	28	47	52
Sardines, canned .	13	50	56
Canned ham	28	53	56
Sirloin	33	56	60
Ocean perch	20	51	66
Bologna	39	59	67
Rib Roast	31	59	68
Pork chops	37	65	68
Veal	32	64	70
Haddock fillet . .	23	59	72
Pork sausage	37	77	83
Porterhouse	46	81	89
Bacon, sliced . . .	50	89	99
Lamb chops	48	84	109