

Handout 6-1: Using the Exchange System to Estimate Protein

The exchange system provides an easy way to estimate dietary protein. The foods on the milk and meat lists supply protein in abundance: a cup of milk provides 8 grams of protein; an ounce of meat, 7 grams. The starch and vegetable lists contribute small amounts of protein, but they can add up to significant quantities; fruits and fats provide no protein.

Exchange	Protein (g)
Milks	8
Meats/meat substitutes	7
Starch	3
Nonstarchy vegetables	2
Fruits	---
Fats	---

To estimate the protein in a meal consisting of a bean and cheese burrito, 1 cup of milk, and an apple, you first need to recognize that the burrito contains about $\frac{1}{2}$ cup pinto beans and $\frac{1}{2}$ ounce shredded cheese wrapped in a tortilla. Then you need to translate these portions into exchanges: 1 $\frac{1}{2}$ meats, 1 starch, 1 milk, and 1 fruit, respectively.

Using the exchange system to estimate, this lunch provides about 22 grams of protein. A computer diet analysis program calculated the same. The exchange system sometimes over- or underestimates the protein contents of individual foods, but for most, its estimates of daily intakes are close. In any case, for nutrients eaten in such large quantities as protein, a difference of a few grams in a day's total is insignificant.

Lunch	Exchange	Protein (g)	
		Estimate	Actual
$\frac{1}{2}$ cup pinto beans	= 1 meat	7	} 14
$\frac{1}{2}$ oz. cheese	= $\frac{1}{2}$ meat	4	
1 tortilla	= 1 starch	3	
1 cup milk	= 1 milk	8	8
1 apple	= 1 fruit	---	---
		22	22