



Acupuncture and Nutritional Counseling Centre

David R Wurzel, PE, MAC, LAC
 8370 Court Avenue – Suite 102
 Ellicott City, MD, 21043

(443) 812-1665

www.TheChiFarm.com

dave@TheChiFarm.com

Nutrition Information Series

Food Labels

The Nutrition Labeling and Education Act requires most foods to have nutrition labeling and requires that the labels contain certain nutrient claims and health messages that comply with specific requirements. Many of these requirements do more to serve the food industry and its marketing programs rather than the consumers' health. The good news is by learning how to read and understand food label, you can start to take control of your health via better eating.

Serving size →

Calories →

Fat Content →

Carbohydrate Content →

Protein Content →

Vitamin Isolate Content →

% RDA Based on Government Regulations →

← **Calories from Fat**

Nutrition Facts	
Serving Size 1/2 cup (130g)	
Servings Per Container About 4.5	
Amount Per Serving	
Calories 140	Calories from Fat 60
% Daily Value*	
Total Fat 7g	11%
Saturated Fat 1.5g	6%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 530mg	22%
Total Carbohydrate 15g	5%
Dietary Fiber 4g	15%
Sugars <1g	
Protein 5g	
Vitamin A 0%	Vitamin C 4%
Calcium 2%	Iron 6%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

Serving size

Serving size is perhaps the most important piece of information on a food label. Serving size amounts are based on the FDA's *Reference amounts customarily consumed per eating occasion* (21 CFR 101.12) and "are based on data set forth in appropriate national food consumption surveys." The problem with the stated serving size is that they often do not match what real people actually eat. For example, the serving size on the above label is 1/2 of a cup. That is fine if the product is raw-cashews, but not so great if it is canned soup. A real life example of the issue of serving size can be found on the food label of Oreos: the serving size is 3 cookies. Ask yourself, "Is that really how many Oreos I would eat at a time?" If not, multiply the rest of the data on the label by the number of servings actually eaten.

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Calories

Calories are a measure of the energy contained in a food. The calories noted are actually kilocalories, or 1,000 calories and are designated with a capital C. The FDA requires food manufacturers to determine the Calories in each of the ingredients individually and then determine the total per serving from that data. For reference, carbohydrate and proteins contain 4 Calories/gram, fat contains 9 Calories/gram and alcohol 7 Calories/gram. By law, something can be termed “Calorie-Free” if its serving size contains less than 5 Calories.

Calories from Fat

This is a misleading piece of information and serves as an example of the unjust criticism of fats. Why? Nearly 80% of the caloric content of raw-almonds is from fat, yet almonds are a perfectly healthy food. Compare this the average candy, which is nearly 100% sugar, but no fat calories. Why are fats singled out, but not the calories from sugar and other carbohydrates, even though the latter are shown to be a major cause of disease?

Fat Content

The fat content listed is the total amount of triglycerides found in one serving. Foods with less than 0.5 grams of triglycerides per serving can be declared, “Fat Free”. Saturated fat content is required to be listed under total fat (based on bad science) as well as *trans* fat, but only if the amounts are greater than 0.5 grams per serving. Manufacturers may voluntarily include polyunsaturated and monounsaturated fat if including them helps with marketing the product. Cholesterol is listed separately from fat and is not included in the fat calories.

Carbohydrate Content

Total carbohydrate is calculated by subtracting the weight of crude protein, total fat, moisture, and ash from the total weight of the sample of food. In other words, if it isn't anything else, it's probably carbohydrate. The quantity of Dietary Fiber can be subtracted from the Total Carbohydrate when calculating total carbohydrate intake (dietary fiber is not digested by humans, but does serve as a prebiotic for intestinal flora). The Sugars value is the weight in grams of all free monosaccharides and disaccharides in the sample of food.

Protein Content

Proteins are an essential component of the human body and are made of amino acid chains. The body is able to make some amino acids, but others, known as essential or indispensable amino acids, must be consumed in food. The Protein Content listed on food labels is not actually the amount of protein in the food, but rather a calculated value based on its content of essential amino acids and how well these are digested. In other words, Protein Content is a measure of how well a food meets the essential amino acid requirements of the body. It should also be noted that antacids may block the body's ability to break down proteins and thus the person taking them may not be absorbing the amount of protein listed.

Vitamin Isolate Content

When found in nature, vitamins have biologically active components. Unfortunately, the FDA only recognizes the parts of vitamins that can be made in a laboratory or factory and these are the biologically inactive components. Saying these non-living isolates are the same as a whole vitamin found in nature is like saying four tires is the same as a whole car. It just is not true. The values listed on food labels are based only on the man-made non-living vitamin isolates that provide little, if any, benefit to the human body.

% RDA Based on Government Regulations

The listing of Recommended Daily Allowance is required by FDA regulations and is based on a 2000 calorie per day diet as expressed in *The Dietary Guidelines for Americans*, jointly published by US Department of Agriculture (USDA) and the US Department for Health and Human Services (HHS). One major issue with the Dietary Guidelines is the conflicting missions of the two government agencies responsible for its content: HHS is charged with promoting the nation's health (albeit largely influenced by the food and drug industries) while the USDA's task is to promote and market agricultural products. Furthermore, while a panel of nutrition scientists were involved with the Guideline's development, the scientists had no say in the final wording of the document. A specific issue with the RDA is the recommendation that adults consume 300 grams of carbohydrates per day, or 60% of the total caloric intake, while research shows that this value should be limited to 60 grams of carbohydrates per day (from non-vegetable sources).

In summary, while reading and understanding Nutrition Facts labels can put you in better control of your health and nutrition, following the RDA values, being led to believe saturated fats and cholesterol are bad, and that laboratory-made vitamin isolates are good for you can lead you down a path of disease.

Note: this information is for educational purposes only and is not intended to diagnose, treat, or cure any diseases. Please consult a qualified healthcare professional for nutritional advice.