



Basic Health Info

Daily Value

By Chet Zelasko, PhD

One of the questions I'm asked most frequently goes something like this:

"I was reading the Nutrition Facts on a food product I want to drink (or eat), and it said the food contained 3,000% of the Daily Value for a specific nutrient. What does the Daily Value mean? Would that mean it's too much of that nutrient?"

This Basic Health Info will give you an explanation of the Daily Value and what it means and what it doesn't mean to your health. First, go to the kitchen and find any food with a Nutrition Facts label and keep it next to the computer—I'll refer to it occasionally. If that isn't convenient, there's a nutrition label on the last page.

Daily Value—Macronutrients

The Daily Value (DV) is the amount of a nutrient that a person should eat on a diet of 2,000 calories per day (1); you can see that on the Nutrition Facts label at the bottom. It was designed by the U.S. Food and Drug Administration (FDA) to help consumers better understand how much of key nutrients are in the foods they're eating. The DV is represented as a percentage next to the nutrient on the label. Take a look at the label for the column on the right labeled "% Daily Value"; I think that's where the confusion begins.

Percentages are sometimes tricky to understand because they depend on the size of what you're analyzing: 10% of \$5 is a lot less than 10% of \$500. The FDA experts picked what they felt was a caloric intake that would be meaningful to the greatest number of people: 2,000 calories per day. If that's what you eat, great. But if you eat more or less than that, the percentages shown on the labels will be a little off as percentages of what you should eat.

For the macronutrients—proteins, carbohydrates, and fats—the "% Daily Value" or %DV represents the percentage of that nutrient you get from that food if you're eating 2,000 calories per day. The distribution of nutrients is based on the Food Guide Pyramid. Macronutrients don't have Recommended Daily Allowances established by the Institutes of Medicine as micronutrients do, but they do have a recommended amount, and the percentage is based on that.

Keeping track of the percentages is an alternative to counting the actual grams of a nutrient such as fat. To keep track of your fat intake, all you have to do is add up the %DV for fat from everything you eat; when it gets to 100%, you're done for the day. If you eat 2,000 calories per day, you'll know you're right on target. If you eat more or fewer calories, you'd be slightly off but probably still in a healthy range.

Fortunately, the FDA decided to put the grams for macronutrients on the Nutrition Facts labels also. That way, if you're eating more or less than 2,000 calories per day, you can keep track of the grams of each nutrient in the foods you eat.

Daily Value—Micronutrients

Micronutrients include vitamins, minerals, and fiber. Sodium and fiber are required to be on the label as well as the macronutrients. Most labels also have vitamin A, vitamin C, calcium, and iron in a box at the bottom of the label. Other vitamins, minerals, and nutrients are allowed on the label as well, but there's no

consistency and not everything has a Recommended Dietary Allowance (RDA)—individual amino acids, for example.

Here's the really confusing part. The RDAs are based on age, not weight, and therefore do not fluctuate based on your body weight. Unlike the %DV for the macronutrients, they're not dependent on caloric intake—the amount you need remains constant. The RDAs vary according to age and gender, but in most cases the recommended amounts are fairly close.

The %DV you see on Nutrition Facts labels for vitamins and minerals are based on the RDAs for adults. That could be problematic for children—because their bodies are smaller, so are their nutrient needs. However, children eat less than adults so their serving sizes are usually smaller. Sometimes kids go through a phase where all they want to eat is one specific food, but no matter which food it is, that's a bad idea and one parents must veto. As always, a varied diet is your best option to make sure your child gets a healthy variety and amount of nutrients.

Calculate

Going back to the question that started this: if a vitamin or mineral is reported as a percentage of the Daily Value, how do you know how much of the nutrient that is? For example, the RDA for vitamin C for an adult male is 90 milligrams per day. The label on the last page of this Update says that food has 2% of the RDA; that means it contains roughly 2 mg of vitamin C.

Let's look at vitamin B12 as another example. The RDA for an adult is 2.4 micrograms per day. Another way to put it is that 2.4 mcg is 100% of the Daily Value for vitamin B12. If you used the %DV in the initial question—3,000%—you would multiply the RDA of 2.4 times 30 (3,000% divided by 100% is 30). That would equal 72 mcg. But there's no Upper Tolerable Limit for vitamin B12 set by the Institutes of Medicine, so there's no amount that's been shown to be unsafe. And in the case of vitamin B12, the more that's ingested, the less is absorbed—unless your body needs it (2)—so a food with 3,000% the RDA would supply all you might possibly need without being unsafe.

You could use the same logic for any of the vitamins or minerals on any Nutritional Facts label. The link in the Reference section will take you to the Dietary Reference Intake and Upper Tolerable Limit for all vitamins and minerals on the FDA website (3).

Now that you know how to calculate the actual meaning of the Daily Value for any vitamin and mineral, you can determine exactly how much of a nutrient is in any food with a label. The only question left is the nutrient content of minimally processed foods you eat such as fruits, meats, nuts, and other foods. The best thing to do if you have questions is to go to <http://www.nutritiondata.com>. They have Nutrition Facts labels for every food you can imagine, including herbs typically used in cooking. With that information, you can add up your intake from everything you eat to determine your daily total.

The Bottom Line

Knowledge is power. You now know how to evaluate Nutrition Facts labels for processed foods as well as the other foods you eat. That can help you choose foods based on your body's needs and put your mind at ease that you're getting the nutrients you need for optimal health.

References

1. www.fda.gov/Food/LabelingNutrition/ConsumerInformation/ucm078889.htm
2. Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline. Food and Nutrition Board. Institutes of Medicine. 2000.
3. http://iom.edu/en/Global/News%20Announcements/~/_media/Files/Activity%20Files/Nutrition/DRIs/DRISummaryListing2.ashx

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per 2/3 cup	
Calories	230
% DV*	
12%	Total Fat 8g
5%	Saturated Fat 1g
	<i>Trans Fat</i> 0g
0%	Cholesterol 0mg
7%	Sodium 160mg
12%	Total Carbs 37g
14%	Dietary Fiber 4g
	Sugars 1g
	Added Sugars 0g
	Protein 3g
10%	Vitamin D 2 mcg
20%	Calcium 260 mg
45%	Iron 8mg
5%	Potassium 235 mg
* Footnote on Daily Values (DV) and calories reference to be inserted here.	

Reference: Food and Drug Administration, Department of Health and Human Services and the Food Safety and Inspection Service, U.S. Department of Agriculture

For a detailed explanation of the Nutrition Facts labeling system, click on the following link:
<https://www.fda.gov/food/ingredientpackaginglabeling/labelingnutrition/ucm274593.htm>

Dr. Chet Zelasko is dedicated to helping men and women get healthy and fit. As a health and fitness consultant with a PhD in Exercise Physiology and Health Education from Michigan State University, he provides health information based on the most recent research and delivers it in a way that's easy to understand. Whether in person during seminars, in audio recordings, or in the written word, he makes sense out of the health news people hear so they can make better health choices and achieve optimal health. He's conducted research and been published in peer-reviewed journals. He is certified by the American College of Sports Medicine as a Health and Fitness Specialist and has taught in ACSM certification workshops throughout the United States; he also belongs to the American Society of Nutrition. Although Grand Rapids, Michigan, is home, he has presented seminars on health to groups all over North America, Mexico, and the Caribbean and has written extensively on the health benefits of a good diet, regular exercise, and targeted supplementation.

The health information in this Basic Health Info is designed for educational purposes only. It's not a substitute for medical advice from your healthcare provider, and you should not use it to diagnose or treat a health problem or disease. It's designed to motivate you to work toward better health, and that includes seeing your healthcare professional regularly. If what you've read raises any questions or concerns about health problems or possible diseases, talk to your healthcare provider today.

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