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Label Literacy



How to protect yourself from sneaky
marketing and junk-filled products

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Published in beautiful North Carolina, where none of the plants in my garden come with labels.

Many labels were read during the making of this report.

The main ingredients in a natural and optimal human diet typically don't come with labels: fruits, vegetables, nuts and seeds, legumes, and whole grains.

So as long as you aren't living off of things that come from cans and boxes, you don't have to worry too much about reading food labels.

Sometimes, though, you may want to spice up your main ingredients with prepared sauces, spices, condiments, and plant foods that have been processed to some extent.

So you need to know a few things about reading labels.

Skill 1: Knowing what to ignore

Rule 1: Ignore all claims on the front of the package. The Arctic Zero frozen dessert on the right may be GMO-free, gluten-free, lactose-free, low glycemic, and contain protein and fiber, but it's still crap.

Second rule: ignore all claims not on the nutrition label or ingredients list.

Third rule: ignore most of what's on the food label.

Politicians, lobbyists and scientists spend a lot of time arguing about what should go on food labels.

Industry hacks and some scientist promote the inclusion of as many known nutrients as possible.

That's a terrible idea, for several reasons.

1. There's no clear connection between any given nutrient and any desirable or undesirable health outcome.
2. Listing nutrients gives the public the misleading impression that we should be counting and measuring these things.
3. It leads the public to believe that anything not on the list is not important.
4. It encourages processed food manufacturers to "fortify" their products with nutrient powders or slurries so they can tout them as nutritious. Many studies have shown that supplemental nutrients (such as those consumed as pills or in fortified foods) do little good, and can do considerable harm.

Simply ignore the amounts of vitamin A, riboflavin, iron, and so on. Your job is to get all the good stuff from real plants.

Your main job as a label reader is to keep the bad stuff out of your cart, off your shelf, away from your plate, and far away from your body.



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Skill 2: Reading the ingredients

Ingredients are listed in descending order of weight. That is, the first ingredient comprises the highest percentage of weight of the total product, and so on down the line.

Take a look at the ingredient list for Trader Joe's Salsa Verde: fresh tomatillos, green chile, water, onions, fresh jalapeños, salt, spices (see label below).

Assuming you know what tomatillos and jalapeños are, everything here looks perfectly normal. A bunch of plants, water, salt, and spices. No problems, right?

Hang on a second.

We've got two issues here. First, what are "spices"?

Huh? We all know what spices are, right? Cumin, coriander, cinnamon, curry, MSG, oregano, marjoram...

MSG? Monosodium glutamate?

Yup, that nasty flavor-enhancing chemical, which can cause headaches, muscle aches, fatigue, and a whole host of other symptoms, can legally hide behind the innocuous word "spices."



In this case, we don't appear to have to worry about MSG. According to TraderJoes.com, all Trader Joes labeled products are MSG-free.

Another hidden minefield word is "flavoring." If you see "natural flavorings," you probably imagine harmless essences of vanilla and rosewater.

But the truth is, "natural flavorings" on a label could mean pretty much anything. Flavor enhancers (yes, another chance for our old nemesis MSG to sneak back onto the menu), synthetic flavors, the sky's the limit.

Deciphering hidden ingredients

HIGH FRUCTOSE CORN SYRUP
CORN SYRUP
WATER
COCOA*
SUGAR
CONTAINS 2% OR LESS OF: POTASSIUM SORBATE, PRESERVATIVE
SALT
MONO- AND DIGLYCERIDES*
XANTHAN GUM
POLYSORBATE 60
VANILLIN, ARTIFICIAL FLAVOR *adds a negligible amount of fat

Let's look at Hershey's Chocolate Syrup.

Sorry, I mean Hershey's "Genuine Chocolate Flavor Syrup." They're technically not allowed to call it chocolate, because, well, it doesn't actually contain cocoa to be so named.

High fructose corn syrup (HFCS), the first ingredient, has become pretty well known in the past few years, thanks to various folks pointing out that the stuff is everywhere, heavily subsidized by the US government, and at least as bad for us as sugar (and probably

worse).

Now, just in case you're thinking, "Gee, if the first ingredient is basically sugar, this stuff must be plenty sweet," you should realize that sugar is actually listed twice more on the ingredient list: "corn syrup" (second item, just after HFCS), and sugar itself.

Perhaps Hershey's thinks that caring moms wouldn't like to see sugar as the main ingredient, so they put their scientists and marketers on the problem.

But let's take a look at some of the ingredients that follow sugar: potassium sorbate, mono- and diglycerides, polysorbate 60, and artificial flavor.

I don't want to get into the purposes, chemical makeup and health effects of these products here.

Instead, I'll just repeat what your grandmother knew instinctively: if you can't pronounce it, don't eat it.

If you can't trace it back to something in nature, don't eat it. If you can't make it without beakers, test tubes, and bunsen burners, don't eat it.

Avoiding animal ingredients

You also want to know the sneaky ways that marketers hide animal products in their ingredient lists. If you see whey, casein, caseinate, sodium caseinate, gelatin, lactose, lecithin (from eggs, if it doesn't specifically say "soy" or "sunflower"), rennet, monoglycerides, glycerides, and lots of other words, you're looking at animal products in your food.

Skill 3: Doing the math for serving size, fat, fiber, and salt

Let's head back to the nutritional label itself for the third big skill: doing the math. You might have wondered earlier when I was talking about the amount of sodium "per serving." Just how big is a serving?

Sneaky Serving Sizes

To find out what the manufacturer means by serving, you have to check out the Serving Size and Servings Per Container information on the label.

For example, one serving of Hershey's syrup consists of 1 tablespoon (Tbsp.) of syrup. For most hot sauces, one teaspoon is a single serving.

Why is serving size so important? Because the important information on the nutrition label is per single serving. Many manufacturers try to get serving sizes as small as possible, so they can make their food seem less bad than it is.

As you can see from the label on the right, there are just 160 calories in a serving of Oreo cookies. But a serving is defined as three cookies.

I don't know about you, but when I was eating Oreos, a serving was more like the entire package (unless I had company, in which case I waited until the person left to open the box so I wouldn't have to share).

% Calories from Fat

Depending on your metabolism and lifestyle, you'll want to limit fat intake to 10-20% of calories.

If you eat mostly processed foods, you'll find that ratio extremely challenging.

First of all, nowhere on the label are we told these percentages directly.

We have to figure them out. It's easy at the moment, but the new FDA nutritional label regulations will make it trickier in the future.

The Current Label

First, find the total calories per serving size. In the Oreos, it's 160. Now look for calories from fat: 60.

Time for a little arithmetic.

The percentage of calories from fat = $60 / 160 = 37.5\%$.

As you can see, the Oreos contain about 2-4 times the fat than you can get from eating a whole food, plant-based diet.

Now, some foods and ingredients will contain more than 10% fat. An average avocado gets about 80% of its calories from fat, so I don't recommend an all-avocado diet.

But avocados are whole plant foods, and they also contain water, fiber, and more nutrients than science will ever discover and name.

The important thing isn't the ratio for each item; it's the overall dietary ratio.

An avocado can easily be (a small) part of a health-promoting diet. An Oreo cannot.

The New Label

The "calories from fat" line item is gone. Now, you've got to add a second step to find out that figure.

Look for the Total Fat line item. In the example on the right, that's 8g, or 8 grams.

Here's the key number: there are 9 calories in each gram of fat.

So in this case, you multiple 8g x 9 calories per gram to get a total of 72 calories from fat per serving.

Now you can perform your percent of calories from fat calculation by diving 72 calories from fat by the total of 230 calories per serving:

$72 / 230 = 31.3\%$ of calories from fat.

NUTRITION FACTS	
Serving Size: 34 g	
Serving per container about 44	
Amount Per Serving	3 Cookies
Calories 160	
Calories from Fat 60	
	% Daily Value*
Total Fat 7g	11%
Saturated Fat 2g	10%
Trans Fat 0g	0%
Monounsaturated Fat 3g	0%
Cholesterol 0mg	0%
Sodium 140mg	6%
Potassium 55mg	2%
Total Carbohydrate 25g	8%
Dietary Fiber 1g	3%
Sugars 14g	
Protein 1g	

Carbohydrates to Fiber Ratio

Another important metric that helps us avoid highly processed foods is the fiber to carbohydrate ratio. In nature, there are very few foods with lots of carbohydrates and very little fiber.

So when you see foods with lots of carbohydrates and very little fiber, you know that the food has been processed to remove that fiber and just give you calories that get digested way too quickly.

Dr. Michael Greger of [NutritionFacts.org](https://nutritionfacts.org) recommends a carbohydrates to fiber ratio of no more than 5:1. In the above label, we can see 37 grams of total carbohydrate, and just 4 grams of fiber. Doing the math: $37 / 4 = 9.25$

9.25 is greater than 5, so this is not an acceptable food.

Salt Content

Pepperidge Farm® Fresh Breads & Rolls	
Farmhouse™ Hearty White Bread	
Nutrition Facts*	
Amount per Serving (serving size) = 1 slice	
Calories 110	Protein 4g
Fat Calories 10	
Total Fat 1.5g	% Daily Values**
Sat. Fat 0g	Vitamin A 0%
Trans Fat 0g	Vitamin C 0%
Polyunsat. Fat 0.5g	Thiamin 8%
Monounsat. Fat 0g	Riboflavin 8%
Cholesterol 0mg	Niacin 8%
Sodium 240mg	Folic Acid 8%
Total Carb. 22g	Calcium 4%
Dietary Fiber 1g	Iron 6%
Sugars 4g	

The rule of thumb here is, no more sodium than calories. That is, if you consume 2000 calories per day, you should limit your intake of sodium (salt) to 2000 milligrams (mg).

So for any food with a label, the ratio of sodium mg to calories should be no greater than 1.

On the left is the nutrition facts for Pepperidge Farm Farmhouse™ Hearty White Bread. I've highlighted the calories and sodium per serving. As you can see, there's 2.4 times as much sodium as calories. So this is a sodium no-no.

The Bottom Line on Reading Food Labels

1. Ignore of the information on the label. It's not important.
2. Reject long lists of ingredients, as well as unpronounceable and "sneaky" ingredients.
3. Check the serving size and make sure it's realistic for you.
4. Reject foods with more than 20% of calories from fat
5. Reject foods with a carbohydrate: fiber ratio greater than 5.
6. Reject foods with more milligrams of sodium than calories per serving.
7. The exception to rules 4-6: condiments with very few calories that you eat in tiny amounts.
8. And remember, foods that come from cans, boxes, and jars are your condiments and extras. The basis of your healthy diet is plants, as close to their natural state as possible.



I hope this report has been helpful to you, and will empower you to take greater control over your health destiny.

Be healthy on purpose.

Be happy.

Peace,
Howard