

THE NUTRISAVINGS SCORING SYSTEM

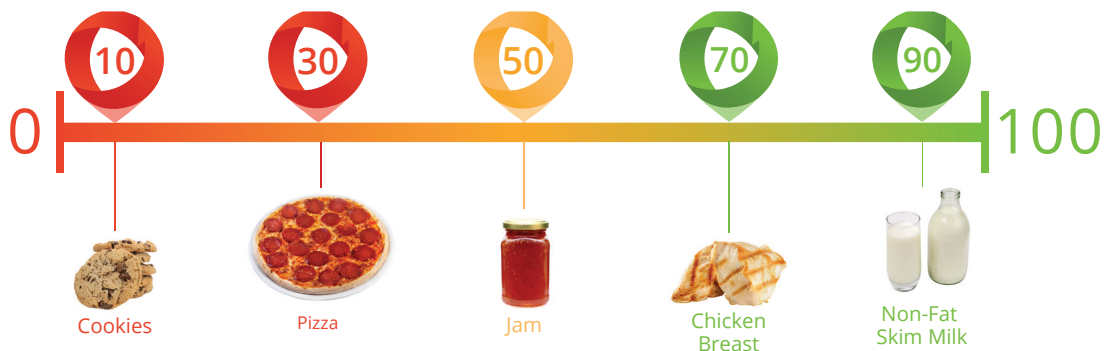
Why Create A Scoring System?

Everyone who has gone grocery shopping knows that health claims and nutrition labeling on packages are confusing. What does it mean if a product is “heart healthy” or “gluten free”? Should I care? Is it ok if a product has 12 grams of sugar per serving?

Reading the Nutrition Facts label and Ingredient List on a product package is not always intuitive. To remove the stress out of healthy shopping, we developed a scoring system that empowers costumers to make healthier decisions.

How Does It Work?

Our scoring system interprets the information on a product’s package, including the nutrition facts panel and ingredients, and uses this information to score grocery items between 0 and 100. Our goal is to incentivize costumers to purchase healthier alternatives, while offering a comprehensive overview of their grocery shopping trip.



Products that score between the range of 70 and 100 are considered healthy food items. These items can and should be consumed on a regular basis, sometimes with respect to portion size. For example, fresh fruits and vegetables score 100 points, and should be consumed on a daily basis in higher quantities. Additionally, healthy fats such as nuts and nut butters that score above 70 should also be consumed on a daily basis, with regards to portion size since they are higher in calories.

Products scoring between 40 and 69 are to be eaten in moderation, with a consideration for the portion size. However, products in this range likely have a healthier alternative. For instance, honey roasted peanuts may score 50 points, but plain peanuts without added sugars and sodium will score higher.

Finally, products scoring between 0 to 39 points should be consumed sparingly for the promotion of a healthy daily diet. Attention needs to be given to the serving size as these unfavorable food items typically contain trans-fat, large amounts of saturated fat, sodium, or added sugars.

The Mechanics

First Step: The Nutrition Panel Our scoring system is based on two published formulas: the RRR (Ratio of Recommended to Restricted) and the NRF 9.3 (Nutrient Rich Foods).

The RRR was published by Douglas M. Scheidt (PhD) and Eileen Daniel (DED, RD) in 2004. This ratio was built to clearly determine the overall nutrient density of foods. It divides the mean of the percentage daily values of recommended food components (protein, dietary fiber, calcium, iron, vitamin A and vitamin C) by the mean of the percentage daily values of restricted food components (calories, sugars, cholesterol, saturated fat and sodium).

The NRF 9.3 was published by Adam Drewnowski (PhD, MA) in 2009. This formula determines nutritional value of foods by calculating the sum of most desirable nutrients (% Daily Values) minus the sum of least desirable nutrients (% Maximum Recommended Values). Favorable nutrients are protein, fiber, vitamin A, C, E, calcium, iron, potassium, and magnesium. Nutrients to limit are saturated fat, added sugar, and sodium.

With our own team of Registered Dietitians and nutrition experts, we modified this formula to include the following:

Most Desirable Nutrients (to recommend):

Fiber	Calcium
Protein	Iron
Potassium	Magnesium
Vitamin A	Vitamin E
Vitamin C	Unsaturated Fats

Less Desirable Nutrients (to limit):

Trans Fat	Sodium
Saturated Fat	Added Sugar

Our calculation was then modified to include the Dietary Reference Intakes (DRI) as defined by the National Academy of Sciences Institute of Medicine Food and Nutrition Board. The DRI, composed of both Recommended Daily Allowances and Adequate Intakes, are a more specific set of national recommendations for the generally healthy American population in comparison to the % Daily Value, typically found on the Nutrition Facts Label and defined by the United States Department of Agriculture (USDA). Therefore, NutriSavings' nutrition scoring system is more conservative to encourage best health practices. For instance, we follow the Institute of Medicine's recommendation to consume 4,700 mg of potassium per day, instead of the USDA's 3,500 mg recommendation used on the Nutrition Facts Label.

NutriSavings therefore calculates the number of each nutrient in a product based on this modified Dietary Reference Intake amount. From there, NutriSavings averages this percentage of recommended amounts for all most desirable nutrients, and divide by the average percentage of recommended amounts for all less desirable nutrients.

In addition to the numerator and denominator nutrients, NutriSavings assigns a weighted coefficient to lower or increase the impact of certain nutrients on the score. For example, micronutrients, such as Vitamins A and C, are often extracted and added to products to boost their nutritional content, which may inflate their nutrition rating score. Therefore, these enriched nutrients count for less in the score in comparison to naturally occurring nutrients. Macronutrients, such as protein and fiber are often needed in greater amounts in the diet and proportionately count for more in the weighted system.

Second Step: Level Adjustments Certain nutrients, when found in high quantities, have an accumulative impact on your health. Let's take sodium as an example. Sodium, naturally found in foods, is necessary to include in the diet in order for your nerves and muscles to work properly. However, when salt is present in large quantities in a single serving, such as 500 mg, 750 mg or 1000 mg, it may increase your risk for chronic disease. Therefore, we remove extra points from products with excessive levels of added ingredients, most notably sodium and sugar. Similarly, for manufactured trans-fat, which was banned by the FDA in 2015 and has been strongly linked to heart disease, points are removed to ensure that they never receive too high of a score.

On the other hand, products that contain fiber, a nutrient important for colon health and weight management, will receive additional points. With these level adjustments, our goal is to encourage consumption of healthy food items and ingredients in the American diet.

Third Step: The Ingredient List Ingredients offer great insight into the overall nutritional benefits or detracting elements of a product. Ingredients will correspond to particular nutrient values on the Nutrition Facts Label. Does a product have 25 grams of sugar because it is a piece of fruit that naturally contains sugar, or because excess sugar has been added to sweeten the product?

NutriSavings looks for certain ingredients, such as high fructose corn syrup, partially hydrogenated oils, monosodium glutamate (MSG), artificial sweeteners, and artificial colors, and remove points for these ingredients since they have either been linked to increased risk of chronic disease, or may have unknown health consequences. On the other hand, products that contain whole wheat or whole grains as the first ingredient will receive extra points because the USDA Dietary Guidelines for Americans encourage the population to "make half your grains whole".

Fourth Step: Product Categories A product's category also influences its score. Examples of categories include Fish & Seafood, Spreads & Dips, Dairy, etc.

As a Choose MyPlate national strategy partner, NutriSavings applies their recommendations for a healthy eating pattern. According to the Choose MyPlate recommendations, five food groups should be consumed daily: fruits, vegetables, lean proteins, grains and dairy. Choose MyPlate recommends that fruits and vegetables represent half of your plate, lean proteins and grains the other half, and a serving of dairy be included on the side.

Certain foods and food groups, such as desserts, soda, and energy drinks, are not included on MyPlate. As a result, desserts scores can only reach a maximum of 50, as they should be consumed less often. Produce on the other hand will not score on the low end of the scale.

2015 Updates Nutrisavings proactively considered the proposed FDA changes to the Nutrition Facts Panel. It has been over 20 years since the original Nutrition Facts Panel was created, and new scientific evidence along with new public health data have led to these needed changes.

Examples of proposed changes included a line for "added sugars" in the Nutrition Facts Panel. Nutrisavings started distinguishing between sugars that naturally occur in a product and sugars that are added for palatability by scanning the list of ingredients. Additionally, all food labels will need to contain percentage values for potassium and vitamin D, as these are named nutrients of public concern by the 2010 Dietary Guidelines for Americans. We have included potassium into our scoring system already, and are prepared to include vitamin D once information is listed on all products. Lastly, new scientific evidence about the benefits of "healthy fats" has led to the removal of "calories from fat" on the Nutrition Facts Panel. Therefore, our new system scores healthy fats highly, but continues to remove points for excessive saturated fat and any trans-fat.

2016 Updates The official publication of the 2015-2020 Dietary Guidelines for Americans confirmed the addition of "added sugar" in the nutrition facts panel and recommended to "consume less than 10 percent of calories per day from added sugars." This is approximately a maximum of 50 grams of added sugars per day for the average 2,000 Calorie diet. In addition to the recent Dietary Guidelines, the Food and Drug Administration released an updated nutrition facts label which reflects new scientific information. Added sugar in grams and as a percent Daily Value will be located on the new design among other revisions. Thus, NutriSavings' is all set to take into account these new recommendations as soon as food manufactures update their products' packaging.

In addition, the Dietary Guidelines outline that “strong evidence has shown that lower intake of meats and processed poultry are associated with a reduced risk of cardiovascular disease in adults. Secondly, moderate evidence indicates that these eating patterns referenced are associated to a reduced risk of obesity, type 2 diabetes, and some cancers in adults.” This is also supported by the World Health Organization’s 2015 report. Therefore, NutriSavings’ scoring algorithm is now differentiating between lean meats and poultry, red meats, and processed meats.

Finally, the USDA has supported the use of added sugar for palatability of certain nutrient dense foods, such as dried cranberries, tart cherries and blueberries. The NutriSavings scoring system now takes into account this exemption given by the USDA.

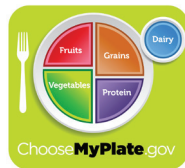
**Label Format:
Original vs New**

ORIGINAL	NEW																												
<p>Nutrition Facts Serving Size 2/3 cup (55g) Servings Per Container About 8</p> <hr/> <p>Amount Per Serving</p> <p>Calories 230 Calories from Fat 72</p> <hr/> <p style="text-align: right;">% Daily Value*</p> <p>Total Fat 8g 12% Saturated Fat 1g 5% <i>Trans Fat</i> 0g</p> <p>Cholesterol 0mg 0%</p> <p>Sodium 160mg 7%</p> <p>Total Carbohydrate 37g 12% Dietary Fiber 4g 16% Sugars 1g</p> <p>Protein 3g</p> <hr/> <p>Vitamin A 10% Vitamin C 8% Calcium 20% Iron 45%</p> <p><small>* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.</small></p> <table border="0"> <tr> <td></td> <td>Calories:</td> <td>2,000</td> <td>2,500</td> </tr> <tr> <td>Total Fat</td> <td>Less than</td> <td>65g</td> <td>80g</td> </tr> <tr> <td>Sat Fat</td> <td>Less than</td> <td>20g</td> <td>25g</td> </tr> <tr> <td>Cholesterol</td> <td>Less than</td> <td>300mg</td> <td>300mg</td> </tr> <tr> <td>Sodium</td> <td>Less than</td> <td>2,400mg</td> <td>2,400mg</td> </tr> <tr> <td>Total Carbohydrate</td> <td></td> <td>300g</td> <td>375g</td> </tr> <tr> <td>Dietary Fiber</td> <td></td> <td>25g</td> <td>30g</td> </tr> </table>		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	<p>Nutrition Facts 8 servings per container Serving size 2/3 cup (55g)</p> <hr/> <p>Amount per serving</p> <p>Calories 230</p> <hr/> <p style="text-align: right;">% Daily Value*</p> <p>Total Fat 8g 10% Saturated Fat 1g 5% <i>Trans Fat</i> 0g</p> <p>Cholesterol 0mg 0%</p> <p>Sodium 160mg 7%</p> <p>Total Carbohydrate 37g 13% Dietary Fiber 4g 14% Total Sugars 12g Includes 10g Added Sugars 20%</p> <p>Protein 3g</p> <hr/> <p>Vitamin D 2mcg 10% Calcium 260mg 20% Iron 8mg 45% Potassium 235mg 6%</p> <p><small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small></p>
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Increased size and visibility of “Calories” and “Serving size”

See amounts of sugar that are “Added Sugars”

Updated vitamins and minerals profile



NutriSavings is a national strategic partner of Choose MyPlate

Other Considerations

Our scoring system is derived from guidelines from the USDA, the Institute of Medicine, Registered Dietitians and all relevant research published by the scientific community.

As of now, there is limited research to concretely validate the greater nutritional value of organic foods over foods not grown organically. As a result, we do not currently take into account this factor in our formula. However, our system was built to be flexible, and as more scientific research becomes available, we plan to incorporate new information when proven relevant by leading authorities.

The NutriSavings scoring system does not measure levels of toxins or bacteria on foods, as no standard measure for this exists. Consumers should always wash their produce and cook raw food items to ensure safety.

Conclusion

We sincerely hope this document clearly explains the basis on which we built our scoring system. We thrive to deliver the best food product evaluations possible and continuously review and test our scoring system to provide our customers with the best tool available.

We follow strict Quality Assurance practices, but please note: our scoring system is not a replacement for any professional medical opinion. If you have any food related conditions, please consult your doctor or a registered dietitian to receive the best information possible based on your personal health needs.



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SOURCES:

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2. Office of Dietary Supplements: <http://ods.od.nih.gov/>
3. USDA Dietary Guidelines: <http://www.cnpp.usda.gov/dietaryguidelines.htm>
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5. WHO report on link between cancer and processed meats: [http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045\(15\)00444-1/abstract](http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(15)00444-1/abstract)
6. <https://www.hsph.harvard.edu/nutrition-source/2015/11/03/report-says-eating-processed-meat-is-carcinogenic-understanding-the-findings/>