The NuVal® System

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Anne Bernier
Sr Director of Operations, NuVal LLC
abernier@nuval.com
Typical Diet: Southeast Asia
Typical Diet: South America
Typical Diet: Northern Africa
Typical Diet: United States
It’s All So Confusing…
Origin of NuVal

2003
• The Overall Nutritional Quality Index (ONQI) concept was proposed.

2005
• Funding was provided entirely by Griffin Hospital.
• An expert panel, led by Dr. David Katz, was convened to develop the nutrient profiling system.

2008
• The project was coordinated at the Yale-Griffin Prevention Research Center.
• The ONQI was commercialized as the NuVal® Nutritional Scoring System by NuVal LLC.
A Science Based Solution

Development: The Scientific Expert Panel (SEP):
Chair: Dr. David Katz, Yale University School of Medicine
Dr. Keith Ayoob, Albert Einstein College of Medicine
Dr. Leonard Epstein, University of Buffalo; inventor, Traffic Light Diet
Dr. David Jenkins, University of Toronto; inventor, Glycemic Index
Dr. Francine Kaufman, UCLA; Former President, American Diabetes Association
Dr. Robert Kushner, Northwestern University
Dr. Ronald Prior, Arkansas Children’s Nutrition Center, USDA HNRC
Dr. Rebecca Reeves, President, American Dietetic Association
Dr. Barbara Rolls, Pennsylvania State University
Dr. Sachiko St. Jeor, University of Nevada
Dr. John Seffrin, President & CEO, American Cancer Society
Dr. Walter Willett, Harvard University

Maintenance: The Scientific Advisory Board (SAB):
Dr. David Katz, *Ex Officio*, Yale-Griffin Prevention Research Center
Dr. Keith Ayoob, Albert Einstein College of Medicine -SAB Chair
Dr. Gail Frank, California State University Long Beach
Dr. Frank Hu, Harvard University, Harvard School of Public Health
Dr. David Jenkins, University of Toronto
Dr. Rebecca Reeves, University of Texas School of Public Health
About the NuVal® System

- NuVal is a US food scoring system that helps consumers see at-a-glance, the nutritional value of a food on shelf tags.
- NuVal, powered by the ONQI® algorithm, scores food on a scale of 1 to 100. The higher the NuVal Score, the better the nutrition.
The ONQI® Algorithm

- The calculation of a NuVal Score incorporates over 30 nutrient entries from the Nutrition Facts Panel and beyond.
Trajectory Scores

• The ratio of the concentration of a given nutrient in a food to the recommended concentration of that nutrient in a healthy diet.

\[
\frac{\text{Nutrient Quantity per serving of food}}{\text{Total Calories per serving of food}} \div \frac{\text{Nutrient Quantity recommended per typical day}}{\text{Total Calories per intake for a typical day}}
\]
Trajectory Score: Sodium

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Serving Size (35 g)</strong></td>
</tr>
<tr>
<td><strong>Servings Per Container 16</strong></td>
</tr>
<tr>
<td><strong>Amount Per Serving</strong></td>
</tr>
<tr>
<td><strong>Calories</strong> 50 kcal</td>
</tr>
<tr>
<td><strong>Total Fat</strong> 0 g</td>
</tr>
<tr>
<td><strong>Saturated Fat</strong> 0 g</td>
</tr>
<tr>
<td><strong>Trans Fat</strong> 0 g</td>
</tr>
<tr>
<td><strong>Cholesterol</strong> 0 mg</td>
</tr>
<tr>
<td><strong>Sodium</strong> 350 mg</td>
</tr>
<tr>
<td><strong>Total Carbohydrate</strong> 11 g</td>
</tr>
<tr>
<td><strong>Dietary Fiber</strong> 0 g</td>
</tr>
</tbody>
</table>

% Daily Value:
- **Total Fat**: 0 %
- **Saturated Fat**: 0 %
- **Trans Fat**: 0 %
- **Cholesterol**: 0 %
- **Sodium**: 15 %
- **Total Carbohydrate**: 4 %
Trajectory Score: Sodium

(Sodium 350mg per serving / 50 Calories per serving) = 6.086

(Sodium 2300mg RDV / 2000 Calorie Diet)

6 times as concentrated in Sodium as is recommended for the overall diet.
Weighting Coefficients

• Prevalence, Severity, Strength of Association

All nutrients weighted differently based on their impact on one or more health conditions.

Eg. Fiber/Lower LDL Cholesterol Levels
Omega-3/Reduced Risk of Cardiovascular Disease
Trans Fat/Higher LDL levels, Coronary Heart Disease
Universal Adjustors

• Adjusts the nutrition score of a food based on the quality of its macronutrients.
  - Protein
  - Fat
  - Glycemic Load
  - Energy Density
INGREDIENTS: ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE [VITAMIN B1], RIBOFLAVIN [VITAMIN B2], FOLIC ACID), SOYBEAN OIL, SUGAR, PARTIALLY HYDROGENATED COTTONSEED OIL, SALT, LEAVENING (BAKING SODA AND/OR CALCIUM PHOSPHATE), HIGH FRUCTOSE CORN SYRUP, SOY LECITHIN (EMULSIFIER), NATURAL FLAVOR, CORNSTARCH.
Trading Up for Health - Snacks

1 NuVal®

26 NuVal®

26 NuVal®

100 NuVal®
Trading Up for Health - Dinner

Chef Boyardee Spaghetti & Meatballs

Francesco Rinaldi No Salt Added Traditional Sauce

Ronzoni Smart Taste Spaghetti
NuVal’s Reach Across the United States
ONQI and NuVal: Validated and Proven

• Numerous published studies that have validated the ONQI algorithm.
• Multitude of published research that proves NuVal makes an impact.
• For a reference sheet, email abernier@nuval.com
Harvard Study concluded that diets with higher NuVal Scoring foods were correlated with a lower risk of heart disease, diabetes and early death.

Proven: Harvard School of Public Health
Proven: McGill University

- NuVal Scores were found to be more favorable in guiding consumers to healthier choices when compared to the Nutrition Facts Panel, Traffic Light, and Heart labels.
Proven: University of Pittsburgh

- Data was collected on the purchasing patterns of 535,000 shoppers that are members of the retailer’s frequent shoppers’ program.
- 6 months pre and 6 months post NuVal implementation.
- They utilized data from eight product categories: frozen pizza, tomato products, soup, salad dressing, yogurt, spaghetti sauce, granola bars, and ice cream.
Proven: University of Pittsburgh

Nutrition Content of Purchases
Increased 21.8%

Price Sensitivity
Decreased 19%
Promotion Sensitivity
Increased 73%

Total Sales In the Eight Categories
Overall Increase
Wrap Up:

• Move from a diet of natural, plant based foods to pre-packaged “frankenfoods” has taken a severe toll.
• There are confusing messages on food packaging.
• Science-based FOP or shelf tag systems like NuVal can help consumers identify better-for-you foods.
• NuVal is proven to lead to better health outcomes, simplify the information, and change purchasing behavior.
• Without a doubt, the epidemic is reversible!
• Innovate and find the best solution.
• NuVal as the universal standard of nutrition density evaluation in the United States (and beyond!).
For more information:
info@nuval.com