

Research in a Large Food Company: Challenges in Public Trust

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I said it all before, but no one was listening, so I am going to say it all again.



Research for perceived profit is problematic.

<http://nutritionfacts.org/videos/dietary-guidelines-advisory-committee-conflicts-of-interest/>



Institute of Medicine guidelines on conflict of interest

- To meet these institutional obligations and commitments, it is essential that individuals who participate in institutional decision making processes not be compromised by any significant conflict of interest with respect to such decisions, or by the direct and substantial appearance of a conflict of interest.
- For this purpose, the term "conflict of interest" means any financial or other interest which conflicts with the participation of an individual in particular decisions of the institution because the interest (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.

Institute of Medicine guidelines on conflict of interest

- ...particular attention will be given to the following kinds of financial interests if they are relevant to the functions to be performed:
- employment relationships (including private and public sector employment and self- employment);
- consulting relationships (including commercial and professional consulting and service arrangements, scientific and technical advisory board memberships, serving as an expert witness in litigation, and providing services in exchange for honorariums and travel expense reimbursements);...

Institute of Medicine guidelines on conflict of interest

- The conclusion that an actual or apparent conflict of interest exists is not intended to be an assessment of any individual's actual behavior or character.
- The normal institutional response to a potential conflict of interest, or the direct and substantial appearance of a conflict of interest, is to remove or recuse the individual in question from particular institutional decisions to the extent necessary to eliminate the conflict.

An example of no good deed going unpunished

- "Dannon sued over probiotic yogurt claims", CTV News, Jan 24, 2008
- "I'm aware of four studies on Activia's effect on regularity alone. So this is certainly not a case where they made outrageous claims about Activia with no data whatsoever. The science behind DanActive, as well, has been very well documented - certainly over 100 papers, many of which were clinical trials. So to say there is no data is not true at all." Dr. Gregor Reid, University of Western Ontario (probiotics expert).

An example of no good deed going unpunished

- DanActive labels that say the yogurt has "a positive effect on your digestive tract's immune system" will be reworded to say the yogurt will "interact with your digestive tract's immune system."
- Dannon agreed to more clearly convey that Activia's beneficial effects on irregularity and transit time are confirmed on three servings per day. Dannon also agreed that DanActive will not be marketed as a cold or flu remedy, which Dannon maintains it has never done.

Research for basic science is not problematic.

The “mechanics” of sodium in food

- Unique salty taste
- Flavor enhancement / balance
- Reduce off notes, e.g. bitterness



Taste



Preservation

- Reduction of food RH (a_w)
- Inhibit microbial growth (pathogens & spoilage)
- Prevent spore germination (*Clostridium botulinum*)



Texture and Yield

- Texture / firming
- WHC
- Solubilizing protein
- Koshering
- Brining
- Perceived thickness/fullness



Leavening

- Strengthening gluten
- Controlling fermentation
- Regulating enzyme activity
- Stabilizing frozen egg yolk

soft foods

Applying the mechanics

Tactical

Strategic

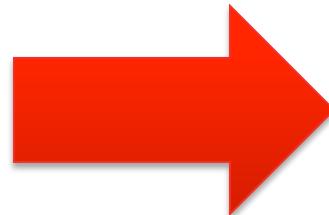
Activity	Notes
Internally developed salt replacers	Commercialization and cost optimization underway
Sodium Screening Program	External & Internal salty taste enhancers, bitter blockers
Product development or reformulation initiatives	Business Unit led

Activity	Notes
Multi-Industry sponsored salty taste research consortium*	Fundamental knowledge building of human salty taste mechanism

*Human Salty Taste Research Consortium:

- A number of companies sponsoring research at the Monell Chemical Senses Institute studying the mechanism of human salty taste of NaCl.
- It is hoped that groundbreaking understanding might lead to new approaches for the discovery of novel salt substitutes/ salty taste enhancers that would enable the next generation Na⁺ reduction in foods without sacrificing salty taste.

It is still about sales volume...



"Hint of Salt" communication maintains taste appeal

Does anyone doubt the research that lead to this sodium reduction?



Do people, and the Public Health Community, trust Kraft Foods to reduce sodium? Yes & No

- Specific sodium reduction targets for a food company, in actual pounds of sodium, can be developed for the total portfolio of that company, and this can be monitored.
- At that point, it is up to the food company to find the best way to remove that sodium from their portfolio – the “what” is determined for the food company, but the “how” is up to the food company to determine.
- Thus, each food company can determine how best to allocate scarce resources to have the greatest impact on sodium reduction goals.
- This will mean that some foods will see very little in terms of sodium reduction, while other foods will see significant reductions.



What is the best approach for Na⁺ reduction?

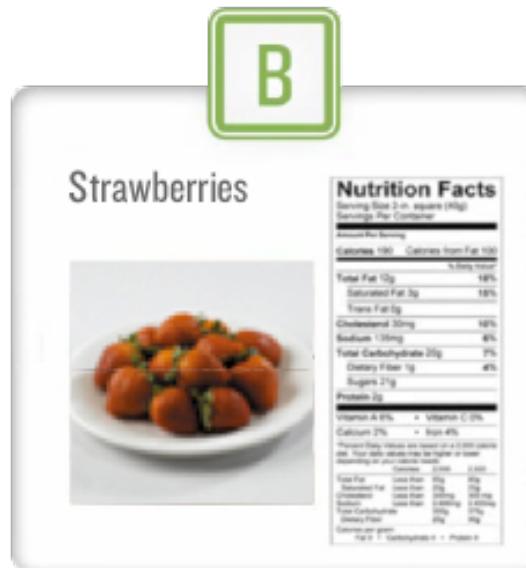
- For example, reducing 15 mg Na⁺/serve in 100 MM lb annual sales will have twice the public health impact compared to a reduction of 200 mg Na⁺/serve in 3 MM lb annual sales (sodium removed)
- Therefore, in addition to overall feasibility, sales volumes become a critical component in helping a food company prioritize Na⁺ reduction efforts

What about research that falls
“in the middle” of the spectrum?

Research “in the middle” of the spectrum

Comparative food choices assessed by 300 certified diabetes educators

- Identified foods most appropriate for people with type 2 diabetes



Research “in the middle” of the spectrum

Meal plans built by registered dietitians

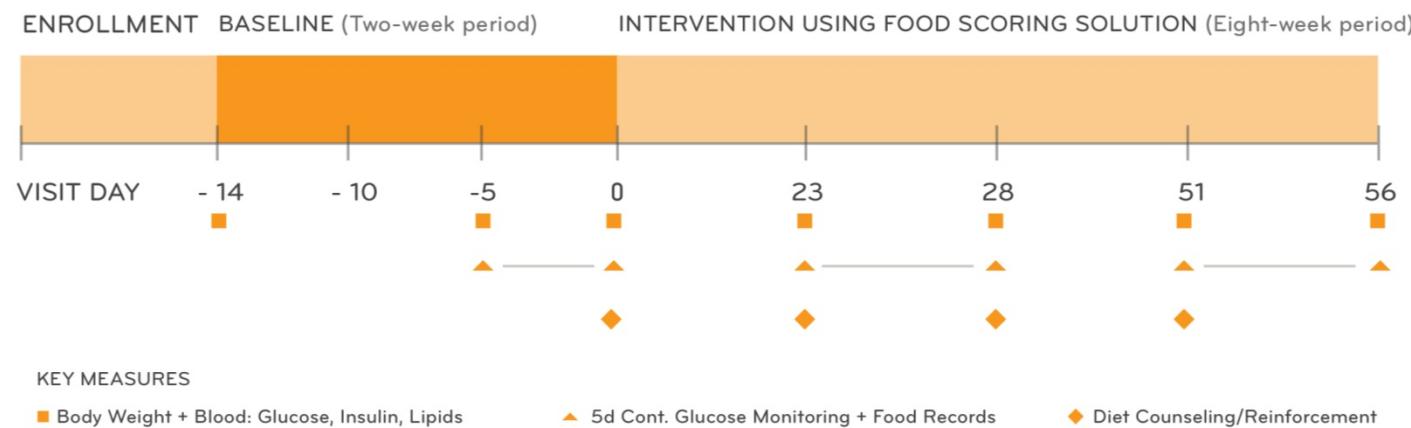
- Hundreds of customizable meal plans serve up variety, convenience and appetite appeal
- Nutritional composition assessed and alignment with expert recommendations confirmed
- Personalized Scores meet energy needs: 1200–2800 calories/day



Research “in the middle” of the spectrum

Pilot clinical study showed improved outcomes and quality of life

- Evaluated effect on dietary intake and 24-hour average blood glucose
- 51 people with type 2 diabetes on oral medications
- 2 groups: Energy-restricted score and energy-maintaining score



Analysis of study results is underway and a manuscript will be submitted for publication.

Research “in the middle” of the spectrum

Pilot clinical study showed improved outcomes and quality of life

- Improved daily blood glucose fluctuation
- Decreased intake of carbohydrates, fat and saturated fat
- Positive results on quality-of-life surveys

96% overall retention rate

Research “in the middle” of the spectrum

Pilot clinical study showed improved outcomes and quality of life



“Easy to follow. You can enjoy the foods you enjoy currently.”

“I had more energy and felt less tired.”

Research “in the middle” of the spectrum

Consumer panel under way to confirm engagement

- 775 people using THR!VE365 for three months
- Evaluating engagement with program and interaction with tools
- Encouraging outcomes to date
- Overall THR!VE365 users
 - 97% program retention rate
 - 41% e-mail open rates—higher than industry average
 - About half of participants notice positive impact on health
 - 75% would recommend to a loved one

Research “in the middle” of the spectrum

Encouraging results for THR!VE365 users age 55-65

Health changes noticed	
Reduced blood glucose	38%
Lost weight	38%
Increased energy levels	31%
Lifestyle changes noticed	
Logging in once a week	41%
Making better food choices	61%
Monitoring blood glucose more	29%
More engaged with T2D lifestyle changes	38%

Research “in the middle” of the spectrum



American
Diabetes
Association.



**Diabetes Care
and Education**
a dietetic practice group of the
 American Dietetic
Association

Research in a Large Food Company: Challenges in Public Trust

- There is obvious concern regarding the appearance of conflict of interest in research, as well as in policy debates.
- Research studies targeting health benefits of specific foods, especially proprietary research where a market advantage could be gained, receive enormous scrutiny (even litigation).
- Research studies targeting basic mechanisms (physiologic, chemical, etc.), with no obvious link to a market advantage, are readily accepted by the broader community.
- Research studies which are “food agnostic” may represent a common ground for developing a workable partnership between the Public Health Community and the Food Industry in areas directly targeting health benefits.

