Nutrition in the Media: Lost in Translation

Beth Kitchin PhD RDN
Assistant Professor
UAB Department of Nutrition Sciences
Eating too much added sugar may be killing you

Major worldwide study suggests that low-fat diets can kill you

Low-carb diet linked to early death, medical study suggests
The Scary New Science That Shows Milk Is Bad For You

Evidence suggests dairy doesn't do a body good—so why does the government still push three servings a day?

JOSH HARKINSON  NOVEMBER/DECEMBER 2015 ISSUE

Cheese is addictive. One doctor calls it 'dairy crack'

Jere Downs, @JereDowns  Published 7:22 a.m. ET March 7, 2017 | Updated 1:11 p.m. ET March 11, 2017

Researchers ask 'Is meat killing us?' and their answer sounds like yes

'The evidence is consistent that increased intake of red meat, especially processed red meat, is associated with increased all-cause mortality'

Ian Johnston Science Correspondent  @montaukian  Friday 6 May 2016 15:17  |  34 comments

Fruit Is Bad For You

Mark Sisson, Contributor  Former elite marathoner and triathlete; Author, ‘The Primal Blueprint’

Why Grains Are Unhealthy
Low-carb vs. low-fat: New research says it doesn’t really matter

Study claims red meat, cheese aren't as bad for your diet as previously thought

Full-fat dairy may actually benefit heart health

Science Finally Says That Eating Pasta Could Help You Lose Weight

Bring on the carbs.

By Renee Cherry | Apr 04, 2018
Opinion

Seriously, Juice Is Not Healthy

By Erika R. Cheng, Lauren G. Fiechtner and Aaron E. Carroll
The writers are professors of pediatrics.

July 7, 2018

Opinion

LETTER

Is Fruit Juice Bad for You? Not So Fast

July 17, 2018
Does the story . . .

1. story adequately discuss cost?
2. adequately discuss benefits?
3. adequately discuss harms?
4. seem to grasp the quality of evidence?
5. commit disease mongering?
Does the story . . .

6. use independent sources and identify conflicts of interest?
7. compare the new approach with existing alternatives?
8. establish availability of the procedure/product/procedure?
9. establish the true novelty of the approach?
10. appear to rely solely on a press release?
Editorial Team

Each of our reviewers signs an industry-independent disclosure agreement

Gary Schwitzer

Gary Schwitzer is publisher of the website HealthNewsReview.org, which he founded in 2006. The project has now grown to a team of about 50 people who grade daily health news reporting by major U.S. news organizations. In addition, in 2015 the project began reviewing health care-related news releases by industry, medical journals, hospitals and academic medical centers, and others.

In its first year, the project was honored with several journalism industry awards – the Mirror Award, honoring those who “hold a mirror to their own industry for the public’s benefit,” and the Knight-Batten Award for Innovations in Journalism.

He has worked in various forms of health care journalism and health care communication over a career spanning more than 40 years.
# News Organizations’ Overall Grades

## All Reviews

2616 Total Reviews with an average rating of 3.1 stars

<table>
<thead>
<tr>
<th>Rating</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>★★★★★</td>
<td>364/2616 = 14%</td>
</tr>
<tr>
<td>★★★★☆</td>
<td>665/2616 = 25%</td>
</tr>
<tr>
<td>★★★☆☆</td>
<td>769/2616 = 29%</td>
</tr>
<tr>
<td>★★★☆☆</td>
<td>574/2616 = 22%</td>
</tr>
<tr>
<td>★★☆☆☆</td>
<td>173/2616 = 7%</td>
</tr>
<tr>
<td>★☆☆☆☆</td>
<td>71/2616 = 3%</td>
</tr>
</tbody>
</table>

![Pie chart showing rating distribution](chart.png)
Sort by News Source: CNN

75 Total Reviews with an average rating of 3.36 stars

<table>
<thead>
<tr>
<th>Rating</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>★★★★★</td>
<td>11/75 = 15%</td>
</tr>
<tr>
<td>★★★★☆</td>
<td>23/75 = 31%</td>
</tr>
<tr>
<td>★★★★☆</td>
<td>27/75 = 36%</td>
</tr>
<tr>
<td>★★★☆</td>
<td>10/75 = 13%</td>
</tr>
<tr>
<td>★★★☆</td>
<td>4/75 = 5%</td>
</tr>
<tr>
<td>★★☆☆</td>
<td>0/75 = 0%</td>
</tr>
</tbody>
</table>

Pie chart showing:
- 3 star: 36%
- 4 star: 31%
- 5 star: 15%
- 2 star: 13%
- 1 star: 5%
Sort by News Source: FoxNews.com

40 Total Reviews with an average rating of 2.13 stars

<table>
<thead>
<tr>
<th>Rating</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>★★★★★</td>
<td>0/40 = 0%</td>
</tr>
<tr>
<td>★★★★</td>
<td>5/40 = 13%</td>
</tr>
<tr>
<td>★★★</td>
<td>4/40 = 10%</td>
</tr>
<tr>
<td>★★★★☆</td>
<td>22/40 = 55%</td>
</tr>
<tr>
<td>★★★☆☆</td>
<td>9/40 = 23%</td>
</tr>
<tr>
<td>★☆☆☆☆</td>
<td>0/40 = 0%</td>
</tr>
</tbody>
</table>
Sort by News Source: NPR

155 Total Reviews with an average rating of 3.41 stars

<table>
<thead>
<tr>
<th>Rating</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>★★★★</td>
<td>16/155 = 10%</td>
</tr>
<tr>
<td>★★★★☆</td>
<td>57/155 = 37%</td>
</tr>
<tr>
<td>★★★☆☆</td>
<td>59/155 = 38%</td>
</tr>
<tr>
<td>★★★☆☆☆</td>
<td>21/155 = 14%</td>
</tr>
<tr>
<td>★★★★★</td>
<td>2/155 = 1%</td>
</tr>
<tr>
<td>★★★★★★</td>
<td>0/155 = 0%</td>
</tr>
</tbody>
</table>

Pie chart showing the distribution of ratings:
- 3 star: 38%
- 4 star: 37%
- 2 star: 14%
- 5 star: 10%
- 1 star: 1%
Sort by News Source: Vox

26 Total Reviews with an average rating of 4.46 stars

<table>
<thead>
<tr>
<th>Rating</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>⭐⭐⭐⭐⭐</td>
<td>16/26 = 62%</td>
</tr>
<tr>
<td>⭐⭐⭐⭐</td>
<td>8/26 = 31%</td>
</tr>
<tr>
<td>⭐⭐⭐</td>
<td>0/26 = 0%</td>
</tr>
<tr>
<td>⭐⭐⭐⭐</td>
<td>2/26 = 8%</td>
</tr>
<tr>
<td>⭐⭐⭐⭐⭐</td>
<td>0/26 = 0%</td>
</tr>
<tr>
<td>⭐⭐⭐⭐⭐</td>
<td>0/26 = 0%</td>
</tr>
</tbody>
</table>
What Are We Up Against?

SHRINK YOUR FAT CELLS

SHED EXCESS POUNDS

REDUCE INFLAMMATION

BEAT BLOAT
Randomly selected 40 episodes from early 2013:

- Evidence Supported: 46%
- Evidence Contradicted: 15%
- No Evidence Found: 39%
- 12 recommendations per show
  - 39% were dietary advice
  - Magnitude of the effect was describe for 17% of the recommendations

*BMJ 2014;349:g7346 doi: 10.1136/bmj.g7346 (Published 17 December 2014)*
Charlatans like Dr. Oz and Dr. "Grain Brain" Perlmutter are giving doctors a bad name

By Julia Belluz | juliaoftoronto | julia.belluz@voxmedia.com | Jun 24, 2015, 12:50pm EDT
Release claiming chocolate milk improves concussion symptoms in student athletes is out-of-bounds

Reviewed by

Rating

Categories

Tags

University of Maryland

Concussion-Related Measures Improved in High School Football Players Who Drank New Chocolate Milk, UMD Study Shows
JAMA Journals Retract Six Papers by Cornell Food Scientist

Problems with Brian Wansink's research articles surfaced in 2017 and have now resulted in 13 retractions total.
The Joy of Cooking Too Much: 70 Years of Calorie Increases in Classic Recipes

Table. Average Caloric Content and Number of Servings in The Joy of Cooking, by Publication Year

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean total calories per recipe (SD)</td>
<td>2123.8 (1050.0)</td>
<td>2122.3 (1002.3)</td>
<td>2089.9 (1009.6)</td>
<td>2250.0 (1078.6)</td>
<td>2234.2 (1089.2)</td>
<td>2249.6 (1094.8)</td>
<td>3051.9 (1496.2)</td>
</tr>
<tr>
<td>Mean average calories per serving (SD)</td>
<td>268.1 (124.8)</td>
<td>271.1 (124.2)</td>
<td>280.9 (116.2)</td>
<td>294.7 (117.7)</td>
<td>285.6 (118.3)</td>
<td>288.6 (122.0)</td>
<td>384.4 (168.3)</td>
</tr>
<tr>
<td>Mean number of servings per recipe (SD)</td>
<td>12.9 (13.3)</td>
<td>12.9 (13.3)</td>
<td>13.0 (14.5)</td>
<td>12.7 (14.6)</td>
<td>12.4 (14.3)</td>
<td>12.4 (14.3)</td>
<td>12.7 (13.0)</td>
</tr>
</tbody>
</table>
Study that took aim at 'Joy of Cooking' is retracted

A reanalysis by the study's co-author, Brian Wansink, resulted in numbers that differed – "many substantially so" – from the published versions, a medical journal said.

Dec. 6, 2018 / 4:09 PM EST

By Associated Press

More work by a prominent food researcher, including a study that took aim at "The Joy of Cooking," has been retracted because of problems with the data.

The Annals of Internal Medicine this week retracted a study that said the book's recipes changed with updated editions to include more calories and bigger portions. It said a reanalysis by co-author Brian Wansink resulted in numbers that differed – "many substantially so" – from the published versions.
<table>
<thead>
<tr>
<th>Title/Subject(s)/Journal</th>
<th>Publisher/Affiliation(s)/Retraction Watch Post URL(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meal Size, Not Body Size, Explains Errors in Estimating the Calorie Content of Meals</td>
<td>(HSC) Nutrition; (SOC) Psychology; Annals of Internal Medicine --- American College of Physicians</td>
</tr>
<tr>
<td></td>
<td>Cornell University, Ithaca, New York, INSEAD, Fontainebleau, France</td>
</tr>
<tr>
<td></td>
<td><a href="http://retractionwatch.com/?s=brian+wansink">http://retractionwatch.com/?s=brian+wansink</a></td>
</tr>
<tr>
<td>The Joy of Cooking Too Much: 70 Years of Calorie Increases in Classic Recipes</td>
<td>(BLS) Nutrition; Annals of Internal Medicine --- American College of Physicians</td>
</tr>
<tr>
<td></td>
<td>Cornell University, Ithaca, NY 14853, and New Mexico State University, Las Cruces, NM, 88003</td>
</tr>
<tr>
<td></td>
<td><a href="http://retractionwatch.com/?s=brian+wansink">http://retractionwatch.com/?s=brian+wansink</a></td>
</tr>
</tbody>
</table>
Attractive names sustain increased vegetable intake in schools

(B/T) Business - Marketing; (BLS) Nutrition;

Preventive Medicine --- Elsevier

Department of Applied Economics and Management at Cornell University, 15 Warren Hall, Ithaca, NY 14853-7801, USA

Department of Applied Economics and Management at Cornell University, 16 Warren Hall, Ithaca, NY 14853-7801, USA

New Mexico State University, College of Business, MSC 5280, PO Box 30001, Las Cruces, NM 88003-8001, USA

Half Hollow Hills High School East, 50 Vanderbilt Parkway, Dix Hills, NY 11746, USA

---

Television Watching and Effects on Food Intake - Reply

(B/T) Business - Marketing; (BLS) Nutrition; (SOC) Psychology;

JAMA Internal Medicine --- American Medical Association

Department of Neuroscience, Uppsala University, Uppsala, Sweden

http://retractionwatch.com/?s=brian+wansink

The sweet tooth hypothesis: How fruit consumption relates to snack consumption

(B/T) Business - Marketing; (BLS) Nutrition; (SOC) Psychology; (SOC) Sociology;

Appetite --- Elsevier

110 Warren Hall, Cornell University, Ithaca, NY 14853, USA

HEC, Cergy, FRANCE

University of Pennsylvania, Philadelphia, PA, USA

http://retractionwatch.com/?s=brian+wansink
Why Everything We 'Know' About Diet and Nutrition Is Wrong

By Ross Pomeroy
June 09, 2015

The FDA's phony nutrition science: How Big Food and Agriculture trumps real science — and why the government allows it

Sugar and corn syrup have been pumped into the food chain, causing a dramatic increase in illnesses. Here's why

What The Government Got Wrong About Nutrition — And How It Can Fix It

By Meredith Melnick and Sabrina Siddiqui
03/29/2014 01:47 pm ET / Updated Dec 06, 2017
Adverse Outcomes Associated With Media Exposure to Contradictory Nutrition Messages

REBEKAH H. NAGLER

• A majority of U.S. adults in the sample reported coming across conflicting nutrition information in the media
• Those who reported exposure to conflicting information reported greater levels of nutrition confusion
• Greater confusion was associated with greater backlash and inversely associated with intentions to engage in healthy behaviors
Children 'Exceed Sugar Consumption Limit by Age 10'

Peter Russell
January 02, 2019
ADHD kids? Get rid of the sugar, add yoga and try this new technology to calm the mind

BY CAITLIN GRANFIELD
JULY 27, 2018 09:00 AM, UPDATED AUGUST 01, 2018 03:31 PM

Miriam Amselem, a South Florida yoga instructor and holistic nutritionist, says that meditation and yoga have a “calming effect” on children with ADHD. Here, she is teaching yoga to children on Hollywood Beach.

CAITLIN GRANFIELD MIAMI HERALD FILE PHOTO
Your Toolkit for Fighting Food Fallacies & Conflicting Messages

The Biggies:

• Misinterpreting Study Design

• Exaggerate Study Findings

• Outcome Measures

• Statistical vs. Clinical Significance

• Personal Bias
Ask the Right Questions:

- What is the Study Design?
  - Animal Studies
  - Observational Studies

- What Do the Stats Show?

- What Were the Outcome Measures?

- Have I Checked My Biases?
What Can You Say About These Studies?

Basic Research:
• Lab
• Animal

Observational/
Epidemiological
In 2006, a team of scientists from the University of Toronto reviewed 76 of the most highly cited animal studies published between 1980 and 2000, the vast majority published in prestigious journals like *Cell, Science,* and *Nature.* The reviewers found that only 37 percent of the works had been replicated in randomized trials on humans. Of the remaining 48 studies, 14 were contradicted in further trials and 34 remained untested more than a decade after being published.
In their study, pregnant rats were randomly assigned to slake any thirst with either milk or tap water. Each mom continued to get the same beverage after delivering her pups. And at weaning, female pups got mom’s designated beverage as well — until they reached sexual maturity at around 33 days old.
(Our discovery) implies that humans frequently ingesting low-calorie sweet products in a state of hunger may be more likely to ‘relapse’ and choose high-calorie alternatives in the future”
-Professor Ivan de Araujo
Yale University School of Medicine
Specifically, it implies that humans frequently ingesting low-calorie sweet products in a state of hunger or exhaustion may be more likely to ‘relapse’ and choose high calorie alternatives in the future.

The results suggest that a ‘happy medium’ could be a solution; combining sweeteners with minimal amounts of sugar so that energy metabolism doesn’t drop, while caloric intake is kept to a minimum.”

The research was performed in mice, using a combination of behavioural testing involving sweeteners and sugars, whilst measuring chemical responses in brain circuits for reward.

Professor de Araujo said: 'According to the data, when we apply substances that interfere with a critical step of the ‘sugar-to-energy pathway’, the interest of the animals in consuming artificial sweetener decreases significantly, along with important reductions in brain dopamine levels.
“De novo lipogenesis”

Animals
50% Fructose
FAT

Humans
< 3% Fructose
FAT

...COOK YOUR OWN MEALS!!
...READ THE LABELS!!
Many Nutrition Studies are Observational:

**Low-fat diet could kill you, major study shows**

Butter has been demonised, some heart experts say  CREDIT: GUILLAUME SOUVANT
When studies find an **association** between two things, it does **not** mean one thing **caused** the other one to happen.
Two things that happen at the same time are not necessarily related nor causal.
Many of the studies on HFCS have:
• Been in rats
• Have used pure fructose
• Looked at HFCS but did not compare it to sucrose
• Have not been human randomized controlled trials
Research, Recommendations, Consumer Advice, & Policy
WHY THE NUMBERS MATTER

RELATIVE RISK

"New wonder drug reduces heart attack risk 50%"

ABSOLUTE RISK

"New wonder drug reduced heart attacks from 2 per 100 to 1 per 100"

The absolute risk is more useful at conveying the true impact of an intervention, yet is often under-reported in the research and the news.
Reporting Statistics: Relative vs. Absolute Risk or Benefit

“A recent study shows that women who take hormone replacement therapy are twice as likely to die from ovarian cancer than women who do not”

**Absolute Risk** takes the original risk into account: the risk went from 1% to 2% (yes it doubled but this number is much less frightening and more realistic).
Reporting Statistics: Relative vs. Absolute Risk or Benefit

30% OFF!

Offer only good until 3/30/19
• Observational study
• 28% increased risk in those reporting low fat/high carb diet (RR=1.28)

Smoking and Small Cell Lung Cancer: 21.7 (2007%)
### Key: Scoring

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
<th>RR Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>weak</td>
<td>0.7-&lt;0.9</td>
</tr>
<tr>
<td>2</td>
<td>mod</td>
<td>0.4-&lt;0.7</td>
</tr>
<tr>
<td>3</td>
<td>strong</td>
<td>0.2-&lt;0.4</td>
</tr>
<tr>
<td>4</td>
<td>v.strong</td>
<td>&lt;0.2</td>
</tr>
</tbody>
</table>

(-) decreas risk  (+) increas risk

Smoking and Small Cell Lung Cancer: 21.7 (2007%)
Study group

Control group
Results:

After 2 cups a day for 8 weeks:

• Control group: 145 mg/dl
• Study group: 139 mg/dl
• This was a statistically significant change
• Is this change meaningful?
### How much chocolate you need to eat to get a "heart healthy" dose of flavanols

<table>
<thead>
<tr>
<th>Chocolate Type</th>
<th>Amount</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark chocolate</td>
<td>4 3/4 oz.</td>
<td>750</td>
</tr>
<tr>
<td>Chocolate syrup</td>
<td>26 oz.</td>
<td>3,170</td>
</tr>
<tr>
<td>Milk chocolate</td>
<td>40 oz.</td>
<td>5,850</td>
</tr>
</tbody>
</table>

*600-750 mg/day is the typical dose of cocoa flavanols given out in studies on the health impact of cocoa*

Source: Center for Science in the Public Interest J. Agric. Food Chem. 57:9169, 2099 and ConsumerLab.com
## Outcome Measures that Matter

<table>
<thead>
<tr>
<th>Disease</th>
<th>Intermediate Measure</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>Blood Lipids, Plaque Formation, Inflammation</td>
<td>Heart Attack, Mortality</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Bone Density, Bone Markers</td>
<td>Fracture</td>
</tr>
<tr>
<td>Obesity</td>
<td>Hunger, Hormones, Behaviors, Food Intake</td>
<td>Weight Gain or Loss, Morbidity, Mortality</td>
</tr>
<tr>
<td>Cancer</td>
<td>Blood Markers, Cell/Tissue Changes</td>
<td>Disease Occurrence, Mortality</td>
</tr>
</tbody>
</table>
PUBLIC RELEASE: 12-JUL-2016

Why artificial sweeteners can increase appetite
UNIVERSITY OF SYDNEY

Published online 2010 Jun.

Gain weight by “going diet?” Artificial sweeteners and the neurobiology of sugar cravings
Neuroscience 2010

Qing Yang
The Effects of Water and Non-Nutritive Sweetened Beverages on Weight Loss During a 12-week Weight Loss Treatment Program

John C. Peters¹, Holly R. Wyatt¹, Gary D. Foster², Zhaxing Pan¹, Alexis C. Wojtanowski², Stephanie S. Vander Veur², Sharon J. Herring², Carrie Brìll¹ and James O. Hill¹

Objective: To compare the efficacy of non-nutritive sweetened beverages (NNS) or water for weight loss during a 12-week behavioral weight loss treatment program.

Methods: An equivalence trial design with water or NNS beverages as the main factor in a prospective randomized trial among 303 men and women was employed. All participants participated in a behavioral weight loss treatment program. The results of the weight loss phase (12 weeks) of an ongoing trial (1 year) that is also evaluating the effects of these two treatments on weight loss maintenance were reported.

Results: The two treatments were not equivalent with the NNS beverage treatment group losing significantly more weight compared to the water group (5.95 kg versus 4.09 kg; P < 0.0001) after 12 weeks. Participants in the NNS beverage group reported significantly greater reductions in subjective feelings of hunger than those in the water group during 12 weeks.

Conclusion: These results show that water is not superior to NNS beverages for weight loss during a comprehensive behavioral weight loss program.

Talking to the Media
Expertise?

“I know nothing about the subject, but I’m happy to give you my expert opinion.”

• Be honest and accurate in all communications
• Honor publication embargoes
• Respond promptly to media requests and respect media deadlines
• Act promptly to correct the record or erroneous information, when appropriate
• Promote the free flow of scientific and technical information

• Promote plain writing of media documents and releases
• Create greatest transparency possible through distributing information timely and widely
• Disseminate information through internet, social media, email, media wires, and other mechanisms
• Protect confidential, classified, and non-public information
Sugar consumption and attention-deficit/hyperactivity disorder (ADHD): A birth cohort study.

Del-Ponte B1, Anselmi L2, Assunção MCF2, Tovo-Rodrigues L2, Munhoz TN2, Matijasevich A3, Rohde LA4, Santos IS2.

+ Author information

Abstract

BACKGROUND: Attention-deficit/hyperactivity disorder (ADHD) is characterized by persistent symptoms of lack of attention, impulsivity and hyperactivity. The association between nutritional exposures and ADHD has been investigated and some studies have identified adverse effects from higher intake of sugar. The objective of the present study was to evaluate the association between change in sugar consumption between 6 and 11 years of age and incidence of attention-deficit/hyperactivity disorder (ADHD).

METHODS: Pelotas 2004 Birth Cohort Study in Brazil. A food frequency questionnaire (FFQ) was used to estimate sugar consumption and the Development and Well-Being Assessment (DAWBA) was applied to mothers to assess the presence of ADHD.

RESULTS: Only children without ADHD at 6 years and with complete information from FFQ and DAWBA at 6 and 11 years were included in the analyses (n = 2924). Odds ratios with 95% confidence intervals were calculated. Incidence of ADHD between 6 and 11 years was 4.6% (3.6-5.6%) among boys and 1.8% (1.2-2.5%) among girls. Adjusted analyses showed no association between always high sucrose consumption between 6 and 11 years and incidence of ADHD, compared with individuals who always presented low consumption, both among boys (OR = 0.66; 0.21-2.04) and girls (OR = 2.71; 0.24-30.35).

LIMITATIONS: Reflect those that are inherent to use of FFQs, such as memory bias and lack of precision in quantifying the diet.

CONCLUSIONS: The results suggest that there is no association between sucrose consumption between 6 and 11 years of age and incidence of ADHD.
“Everything should be made as simple as possible, but not simpler.”

Albert Einstein
Develop 3 to 4 Key Messages

• How would you write the headline?
• Keep it focused
• Frame the issue for the public
• Each message should have talking points (sub-messages)
• Who is your audience?
Avoid Technical Jargon

- Serum Glucose?
  - “Blood Sugar”!
- LDL?
  - “Bad Cholesterol”!
- Adipocytes?
  - “Fat Cells”!
- Hypertension?
  - “High Blood Pressure”!

It's just a mild hyperinsulism due to islet cell hyperplasia with a touch of hepatic insufficiency and glycogen depletion.
“One hallmark of intellect is the ability to simplify, to make the complex easy to understand. Anyone can be unclear.”

-Paula LaRocque, former writing coach, *Dallas Morning News*
A Great Quote/Sound Bite

• Short
• Plain language
• Distinctive
• Vivid
• Actually says something
• Use numbers vividly
There is no evidence!

No studies have been done!

Lots of studies have been done – here’s what they show . . .
These results are from a rat study – rats are not humans and lots of times human studies don’t show the same results!

These results are from a large population study – while it’s a good study, it really doesn’t tell us that juice causes weight gain!

What can we truthfully say about the evidence?
Describe statistics accurately!

A 26% rise in breast cancer may sound big but it actually means less than one extra case in 1,000 women a year!
You would have to eat 6 cups of broccoli to get the same amount of calcium in 1 cup of milk!
The loaded question: “I heard the milk is really bad for you and causes osteoporosis!”

Actually, nothing could be further from the truth. Osteoporosis is a disease that has many causes. But milk provides lots of bone healthy nutrients like protein and calcium which support bone health.
Personalize It – But Honor Autonomy

It’s only a risk in really high amounts – I certainly will continue drinking a diet coke with lunch!

But, if it still concerns you . . .
Avoid “Be Like Me Medicine”
Curb your Enthusiasm
Not HYPE