Eating Beyond the Headlines: Sorting Evidence from Emotion

Neva Cochran, MS, RDN, LD, FAND
Texas A&M AgriLife Extension
Master Wellness Volunteer Conference
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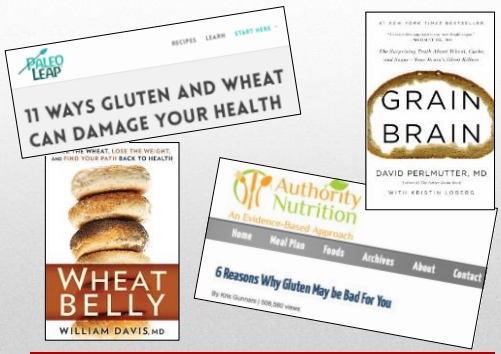


What about Wheat?

- Only 1% of the population has celiac disease and up to 6% may be gluten-sensitive
- 20-30% of US consumers say they're avoiding gluten.

Wheat Benefits

- Wheat provides significant fiber, trace minerals, B vitamins, antioxidants, phytonutrients and prebiotics
- Resistant starches and gluten benefit GI health, blood pressure control and immune function
- Wheat foods supply most of the folic acid in the U.S. diet
- By eating fortified grain products, 77% of low-income women could consume adequate folic acid, which is often not taken as a supplement due to cost

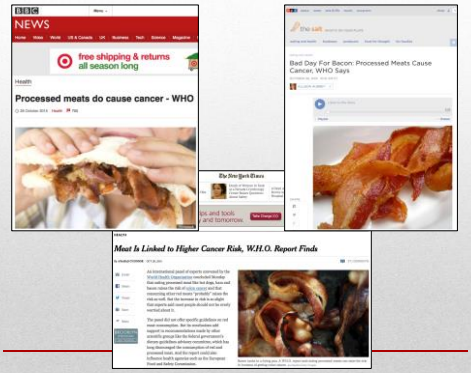
Gluten Challenge Study

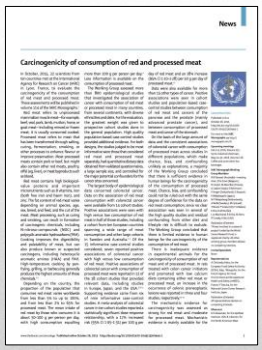
- Double-blind, crossover study (*Gastroenterology*, August 2014)
- 37 self-identified gluten-sensitive individuals consumed one of 3 diets for one week each, with 2-week washout between each:
  - high-gluten (16 g gluten/day)
  - low-gluten (2 g gluten/day)
  - no-gluten
- Results: all 3 diets caused pain, bloating, nausea and gas to a similar degree. It didn't matter if the diet contained gluten.
- If self-diagnosing, could be ignoring other reasons for symptoms like IBS, Crohn's Disease, cancer or other conditions that could be treated or could worsen over time.

Gluten Sensitivity Study

- 2-year study of 392 patients complaining of gluten-related symptoms (*Digestion* 2015)
- Results:
  - Non-celiac gluten sensitivity was diagnosed if symptoms disappeared within 6 months of a gluten-free diet and then returned when gluten was back in the diet for 1 month
  - 26 (6.6%) had celiac disease, 2 (0.5%) had wheat allergy and 27 (6.9%) had non-celiac gluten sensitivity
  - Remaining 337 patients (85.96%) did not have any change in symptoms with a gluten-free diet
- Conclusions: Self-perceived gluten-related symptoms are rarely indicative of the presence of non-celiac gluten sensitivity.

The Skinny on Beef





Lancet Oncology 2015

Methods

- 22 scientists from ten countries evaluated the cancer causing potential of consuming red and processed meat
- Assessed over 800 epidemiological studies that investigated the association of cancer with consumption of red or processed meat in many countries

Conclusions

- Classified consumption of processed meat as "carcinogenic to humans" (Group 1) on the basis of sufficient evidence for *colorectal* cancer
- Additionally, a positive association with the consumption of processed meat was found for *stomach cancer*
- Classified consumption of red meat as "*probably* carcinogenic to humans" (Group 2A)
- Consumption of red meat was also positively associated with *pancreatic* and *prostate* cancer

Limitations of Report

- The IARC program evaluates **cancer hazards but not the risks associated with exposure.**
  - *Hazard* is capable of causing cancer under some circumstances.
  - *Risk* measures the probability that cancer will occur, taking into account the level of exposure to the agent
  - Therefore, IARC may identify cancer hazards even when risks are very low with known patterns of use or exposure
- IARC does not specialize in food evaluation: the few foods they have evaluated include coffee, pickled vegetables and salted fish

WHO Clarification: Processed Meat

- The review does not ask people to stop eating processed meats but indicates that reducing consumption of these products can reduce the risk of colorectal cancer.
- Processed meat has been classified in the same category as causes of cancer such as tobacco smoking and asbestos but this does NOT mean that they are all equally dangerous. The IARC classifications describe the strength of the scientific evidence about an agent being a cause of cancer, rather than assessing the level of risk.

Clarification: Red Meat

- For red meat, the classification is based on *limited evidence* from epidemiological studies showing positive associations between eating red meat and developing colorectal cancer as well as strong mechanistic evidence.
- *Limited evidence* means that a positive association has been observed between exposure to the agent and cancer but that other explanations for the observations (chance, bias or confounding) could not be ruled out.

Other Considerations

- Cancer is a complex disease and single foods, including beef, have not been shown to cause any type of cancer.
- Cancer risk isn't about diet alone.
- Aging, smoking and being overweight and physically inactive are known risk factors.
- To improve all aspects of health, eat a nutrient-rich, balanced diet, including lean meat, maintain a healthy weight, be physically active and don't smoke or drink too much alcohol.

More Balanced Articles


HEALTHY EATING WITH CAROLYN O'NEIL

Moderation still on the menu for red

By Carolyn O'Neil - For the AJC

Some food news takes a little longer to digest. Last week's release of a report from the World Health Organization's International Agency for Research on Cancer (IARC) linking processed and red meats to cancer risk sounded the alarm for


Longview News-Journal

Cochran: Cancer report creates unnecessary fear

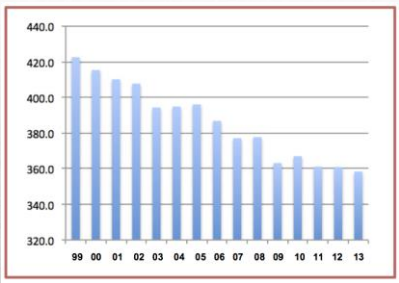
Beef and Nutrition

- 37 cuts of beef meet government guidelines for “lean”
- Compared to non-beef eaters, those who eat lean beef consume significantly more vitamins B6 and B12, iron, zinc, and potassium
- For children and teens, beef is also a major source of protein, vitamins B6 and B12, zinc, iron, niacin, phosphorus and potassium.
- With twice the iron as chicken and 10 times the iron as fish, lean beef helps increase nutrient of concern for pre-menopausal women and young children.

The Scoop on Sugar

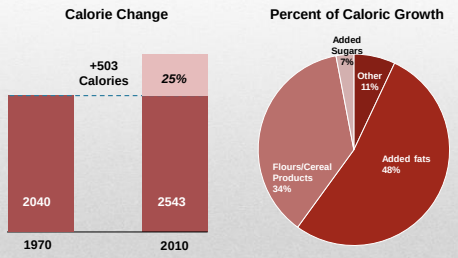
Sugar in the News

Sugar Calorie Intake 1999 - 2013



USDA Daily per capita intake

Calorie Intake 1970 - 2010



Source of Additional 503 Calories

Added sugars	34 calories/day
Cereals/Grains	173 calories/day
Fats and oils	243 calories/day
All other foods	53 calories/day

NHANES Added Sugar Data

- Added sugar intake in the U.S. is declining
  - 100 grams (400 kcal) in 1999-2000
  - 77 grams (308 kcal) in 2007-2008
  - 72 grams (287 kcal) in 2005-2010
- Calories from added sugars declined from 18.1% to 14.6% to 12.9%

Is sugar addictive?

- Addictions are defined by 11 distinct criteria and craving is only one of them.
- Those in need of a "sugar fix" do not dive into the sugar bowl or binge on bananas, which contain the same sugars as ice cream and cola.
- Instead, they seek "forbidden" foods with sugar and fat (cookies, cakes, candy and ice cream) that are highly palatable.
- They are not craving a certain food component (sugar), but particular foods that appeal to the palate.

Food Addiction vs. Eating Addiction

- Apart from a single case study, addiction-related behaviors in sugar consumption (such as tolerance and a withdrawal syndrome) have not been observed in humans.
- Concluded that "food addiction" is an inaccurate term to use
- Instead propose the term "eating addiction" to underscore the behavioral addiction to eating

"Eating addiction," rather than "food addiction," better captures addictive-like eating behavior" Neurosci Biobehav Rev. 2014

Choose your sugars by the company they keep

Nonfat Flavored Yogurt

Nutrition Facts

Serving Size 1 CONTAINER (170g)
Servings per Container 1

Amount per Serving	
Calories 130	Calories from Fat 0
	% Daily Value*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 105mg	**4%**
Potassium 360mg	**10%**
Total Carbohydrate 25g	**8%**
Dietary Fiber 0g	**0%**
Sugars 25g	
Protein 7g	**14%**
Vitamin A 0% • Vitamin C 0%	
Calcium 25% • Iron 0%	

12 grams added sugar

Fat-Free Chocolate Milk

Nutrition Facts

Serving Size 1 cup (240 ml)
Servings Per Container

Amount Per Serving	
Calories 130	Calories from Fat 0
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Polyunsaturated Fat 0g	
Monounsaturated Fat 0g	
Cholesterol 5mg	2%
Sodium 200mg	8%
Potassium 440mg	12%
Total Carbohydrate 24g	8%
Dietary Fiber 0g	0%
Sugars 23g	
Protein 8g	16%
Vitamin A 10% • Vitamin C 2%	
Calcium 30% • Iron 2%	
Vitamin D 25% • Riboflavin 20%	
Folate 2% • Vitamin B12 15%	
Phosphorus 25%	

* Percent Daily Values are based on a 2000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

10 grams added sugar

Oatmeal Raisin Cookie

Nutrition Facts
Serving Size 2 Cookies (28g)

Amount Per Serving	
Calories 130	Calories from Fat 50
	% Daily Value*
Total Fat 6g	**9%**
Saturated Fat 2g	**10%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 100mg	**4%**
Total Carbohydrate 19g	**6%**
Dietary Fiber 1g	**4%**
Sugars 8g	
Protein 2g	

Vitamin A 0% • Vitamin C 0%
Calcium 0% • Iron 2%

6 grams added sugar

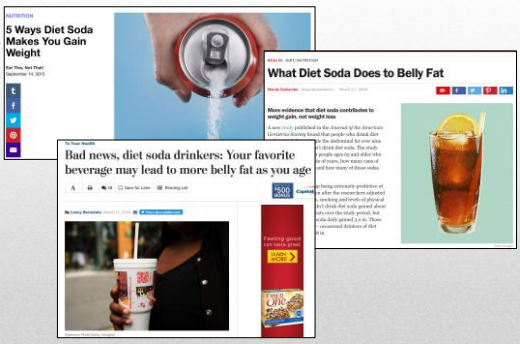
FiberPlus Antioxidant Cereal

Nutrition Facts
Serving Size ¾ Cup (30g/1.1 oz.)

Amount Per Serving	Cereal	Cereal with ½ Cup Vitamin A&D Fat Free Milk
Calories	110	150
Calories from Fat	10	10
		% Daily Value**
Total Fat 1.5g*	2%	2%
Saturated Fat 0g	0%	0%
Trans Fat 0g		
Cholesterol 0mg	0%	0%
Sodium 140mg	6%	8%
Potassium 45mg	1%	7%
Total Carbohydrate 26g	9%	11%
Dietary Fiber 9g	35%	35%
Soluble Fiber 5g		
Insoluble Fiber 4g		
Sugars 7g		
Other Carbohydrate 10g		
Protein 3g		
Vitamin A	25%	30%
Vitamin C	25%	25%
Calcium	0%	15%
Iron	45%	45%
Vitamin D	10%	25%
Vitamin E	100%	100%
Thiamin	35%	40%
Riboflavin	35%	45%
Niacin	35%	35%
Vitamin B_6	35%	35%
Folic Acid	35%	35%
Vitamin B_{12}	35%	45%
Zinc	10%	15%

7 grams added sugar

Diet Soda Science



CLINICAL INVESTIGATIONS

Diet Soda Intake Is Associated with Long-Term Increases in Waist Circumference in a Biethnic Cohort of Older Adults: The San Antonio Longitudinal Study of Aging

Sharon P.G. Fowler, MPH, Ken Williams, MS,*† and Helen P. Hazuda, PhD**

J Am Geriatr Soc 2015

- Study reflects correlations but recommendations and media headlines suggest cause and effect
- Used self-reported intake data that was more than 10 years old
- Did not adjust for calorie intake
- Only 50% of the subjects completed the study

Sucrose compared with artificial sweeteners: a clinical intervention study of effects on energy intake, appetite, and energy expenditure after 10 wk of supplementation in overweight subjects[1–3]

Am J Clin Nutr 2014

- 24 healthy, overweight subjects in 10 week interventional trial
- Consumed either sucrose-sweetened beverages and foods or similar amounts of artificially sweetened as part of a free-choice diet
- Sucrose group gained 3 lbs. and NNS group lost 2.6 lbs.
- Average intake of sucrose group vs. sweetener group: 3480 vs. 2700 calories
- Sucrose group felt less full and had higher ratings of prospective food consumption than did the sweetener group at end of study

Replacing caloric beverages with water or diet beverages for weight loss in adults: main results of the Choose Healthy Options Consciously Everyday (CHOICE) randomized clinical trial[1–4]

Am J Clin Nutr 2012

- 318 overweight and obese adults in a 6-month clinical trial.
- 3 groups
  - Diet Beverage: substituted non-caloric for caloric beverages (200 kcal/d)
  - Water: substituted water for caloric beverages (200 kcal/d)
  - All Choice: made dietary changes of their choosing (control)
- Weight loss: DB: 2.5% weight loss; water: 2%; AC: 1.8%

Original Article
CLINICAL TRIALS AND INVESTIGATIONS

Obesity

The Effects of Water and Non-Nutritive Sweetened Beverages on Weight Loss and Weight Maintenance: A Randomized Clinical Trial

Obesity epub Dec 2015

- 1-year study of 308 subjects for a 12-week weight loss phase followed by a 9-month weight maintenance phase
- Calorie level to achieve 1 – 2 lb/week weight loss
- Half consumed at least 24 ounces of non-nutritive sweetened (NNS) beverage/day and water as desired
- Half consumed at least 24 ounces of water per/day and no NNS beverages.

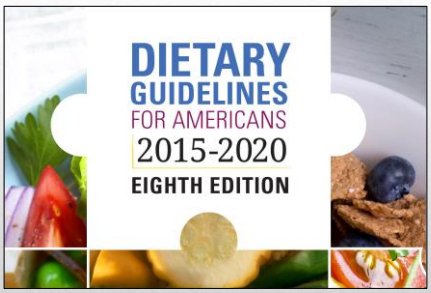
Results

- 12-week weight loss intervention:
  - NNS beverage group:13 lbs.
  - Water group: 9 lbs.
- 1-year weight loss for those study completers:
  - NNS group: 18.5 lbs.
  - Water group: 7.5 lbs.
- NNS beverage group reported significantly greater reductions in subjective feelings of hunger than those in the water group

Evidence on Eggs

Eggs and Cholesterol

- Numerous studies show that the majority of people can eat an egg a day without raising blood cholesterol levels.
- In 2000, the American Heart Association removed the specific limit on eggs in their dietary guidelines for heart health.
- One Grade A large egg contains 185 mg of cholesterol, 12% lower than the 212 mg previously reported in 2002

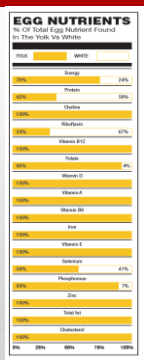


Dietary Guidelines 2015 - 2020

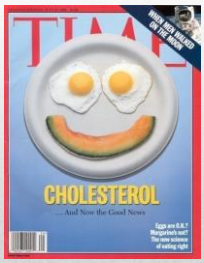
- Removed the 300 mg. daily cholesterol limit
- Current average U.S. intake of dietary cholesterol is ~270 mg per day
- "A few foods, notably egg yolks and some shellfish, are higher in dietary cholesterol but not saturated fats. Eggs and shellfish can be consumed along with a variety of other choices within and across the subgroup recommendations of the protein foods group."
- "A healthy eating pattern includes a variety of protein foods, including seafood, lean meats and poultry, eggs, legumes, nuts, seeds & soy products."
- Eggs provide the most choline of all the protein-rich foods

Eggs and Nutrition

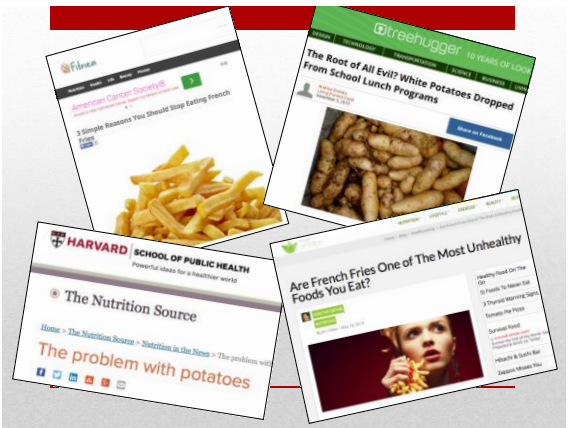
- Eggs provide high quality protein and over a dozen vitamins and minerals, most in the yolk: 100% of vitamins A, D, E, B12 and B6, iron, zinc and choline, over 90% of the folic acid and phosphorus and about half the selenium and protein.
- Eggs are one of the few natural sources of vitamin D, identified as a "nutrient of concern" in the 2015 Dietary Guidelines for Americans
- Egg yolk is a more bioavailable source of lutein and zeaxanthin, antioxidants that help prevent age-related macular degeneration and resulting blindness



The TIMES, They Are a-Changin'



Power of Potatoes



Potatoes and Nutrition

2012 Purdue University Roundtable:
"White Vegetables: A Forgotten Source of Nutrients"

- White vegetables, like potatoes, can increase shortfall nutrients particularly fiber, potassium and magnesium as well as increase overall vegetable consumption.
- NHANES 2009–2010 data confirmed white potatoes provide only 4% and French-fries just 2% of total calories, but significantly increase total vegetable and potassium intakes.
- Among 14–18 year olds who eat them, white potatoes provide 23% of dietary fiber and 20% of potassium but only 11% of total calories in the diet.

The Facts on Fries

- NHANES survey data: only 1 in 8 males and 1 in 10 females consumes French fries on a given day.
- Americans average 1.5% of daily calories from French fried potatoes or 31 calories for a typical 2,080 calories/day intake
- Even for those with the highest French fry intake (90th percentile of consumption or >), men ate ~134 calories and women 118 calories/day, the equivalent of half a small serving of fast-food fries.

Original Research

Potatoes, Glycemic Index, and Weight Loss in Free-Living Individuals: Practical Implications

Jody M. Randolph, BA, Indika Edirisinghe, PhD, Amber M. Masoni, BS, Tissa Kappagoda, MD, PhD, Britt Burton-Freeman, PhD, MS

J Am Coll Nutr 2014

- 73 overweight men and women assigned to one of 3 groups for 12-weeks:
  - 500 kcal reduced intake with low-GI foods
  - 500 kcal reduced intake with high-GI foods
  - control group: no dietary advice
- All groups were instructed to consume 5–7 servings of potatoes per week

Results

- Weight Loss:
  - Low GI: 3.3 lbs.
  - High GI: 5 lbs.
  - Control: 4.6 lbs.
- All subjects consumed at least 80% of the recommended 5–7 servings of potatoes each week
- No significant differences in glycemic index among or within treatments
- Potato intake did not cause weight gain following either a high- or low-GI

Summary

- Never take a headline at face value; find out the facts before commenting or posting
- Consult experts in the field to determine the correct information about the study
- Help dispel misinformation and sensational science by explaining the facts

No amount of experimentation can ever prove me right; a single experiment can prove me wrong.

Albert Einstein

FACTS:
Food Advocates Communicating Through Science

- FACTS is a global, interactive network of scientists, healthcare experts and food advocates
- Provides scientific conclusions and compelling insight from experts, correcting common misperceptions about modern food production, food safety, nutrition, health and wellness.
- Aims to combat the growing tide of deceptive advice, misleading statistics and alarmist tactics that define much of today's food and nutrition dialogue.

Join FACTS: www.foodinsight.org

Thank you!

Questions?