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 CENTER FOR SCIENCE IN THE PUBLIC INTEREST

FOOLED FOOD

by

How to trick yourself
into eating less

“We live with an embarrassment of food,” says Brian Wansink, professor of consumer behavior at Cornell University. “We’re always yards away from either a refrigerator or a restaurant or a vending machine. That wasn’t the case a few decades ago.”

And that means we’re constantly being tempted. “Every time we see food, we have to decide, ‘Do I want to eat that or not?’ We can say ‘No’ to the candy dish 27 times, but if it’s visible, by the 28th or 29th time, we’re saying ‘Maybe.’ And by the 30th time, we’re saying ‘What the heck...I deserve it.’”

Here’s how to recognize what’s making us overeat...and how to make it easier to eat less.

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MEMO FROM MFJ

From My Bookshelf



I don't know about you, but I feel I have so little time to read. But from time to time I find time... and a gem. Here are a few that I've enjoyed recently.

■ Hot off the press is Michael Moss's *Salt, Sugar, Fat* (Random House). Moss, a Pulitzer

Prize-winning writer for *The New York Times*, put his superlative reporting skills to good use in this splendid new book. It is based on interviews with former executives of Campbell, Frito-Lay, Coca-Cola, and other companies, as well as confidential and publicly available documents.

The executives describe how the companies add sugar, fat, and/or salt to make their products "blissful." Moss profiles officials unconcerned about health, as well as executives with a conscience.

One example: Jeffrey Dunn, a former president of Coca-Cola's Western Hemisphere division, "felt his stomach sink" when he saw his company targeting children in poor neighborhoods in Brazil with its sugar drinks. After leaving Coke, he became the CEO of one of America's biggest carrot growers, where he has applied his marketing acumen on behalf of baby carrots instead of bubbly beverages.

(Full disclosure: I talked with Moss while he was researching his book and may be biased because of his generous comments about CSPI.)

■ In *Blue Zones: 9 Lessons for Living Longer from the People Who've Lived the Longest* (National Geographic Society, 2009), National Geographic writer Dan Buettner traveled to Costa Rica, Sardinia, Okinawa, the Aegean island of Ikaria, and Loma Linda, California (home

to many Seventh-day Adventists)—all hot spots of longevity—to interview people who had lived to be about 100. They typically ate diets rich in fruits and vegetables and modest amounts of meat, milk, and cheese; they walked a lot; and they had many friends.

Though those centenarians are dying, they are leaving behind lessons about living longer, richer lives. See bluezones.com to learn more.

■ *Behind the Kitchen Door* (Cornell University Press, 2013) does for restaurant workers what *Fast Food Nation* did for slaughterhouse and food processing plant workers. Author Saru

Jayaraman writes about tips stolen by management, lousy wages, no sick days (so ill workers get sicker while they contaminate the food we eat), and the racism that keeps people of color in the lowest-paid jobs.

She reminds us that "sustainable food" should also be sustainable for the 10 million restaurant workers. Learn more at www.rocunited.org.

■ Not hot off the press is Dean Ornish's *Love and Survival* (HarperCollins, 1998). Ornish is famous for advocating diets to reverse heart disease, but in *Love and Survival* he highlights scientific research on the impact of friendships,

stress, and other social and psychological factors that affect our health.

For instance, a study of older Dutch people found that "those with the highest self-reported feelings of loneliness had nearly double the death rates of those who said they felt emotionally connected to others." There's more to a good life than spinach salads.



Why do we overeat? The food industry knows the dirty little secret. Now you will too.

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FOOLED COVER STORY by FOOD

How to trick yourself into eating less



Brian Wansink is the John S. Dyson Professor of Marketing in the Applied Economics and Management Department at Cornell University in Ithaca, New York, where

he directs the Food and Brand Lab. He was the executive director of the U.S. Department of Agriculture's Center for Nutrition Policy and Promotion from 2007 to 2009, and is the author of *Mindless Eating—Why We Eat More Than We Think* (Bantam-Dell, 2006) and the forthcoming *Slim by Design: Mindless Eating Solutions for Everyday Life* (William-Morrow, 2013). Wansink spoke to *Nutrition Action's* Bonnie Liebman by phone from Ithaca.

Q: Why do people overeat?

A: We believe that people overeat because food tastes really good or because we're really hungry. In reality, those are two of the last things that influence how much people eat. We're a nation of mindless eaters. If there's nothing to stop us from grabbing something to eat, we keep doing it until something tells us to stop.

Q: How do serving or package sizes affect how much we eat?

A: If you want to be skinny, you have to think skinny, not wide. We're not used to looking at width the same way we're used to looking at height. We pay more attention to height. So you're in greater danger of overeating from a wide bowl than from a taller, skinnier bowl or glass.

Q: Why?

A: In nature, something that's tall is more of a threat than something that's wide. Most animals look at height as an indication of how threatening a predator is. We don't see wide things as a threat.

Q: So we don't notice that something that's twice as wide holds twice as much?

A: Right. If you let children choose something in a tall and skinny container versus a wide and fat container—even if the wide container holds a lot more candy or potato chips—they always go for the tall, skinny container because they think it's got more.

Even professional bartenders in Philadelphia poured 31 percent more alcohol into short, wide glasses than into tall, skinny glasses. We see the distance from bottom to top, not side to side.

Q: So companies shrink width, not height, when they make packages smaller?

A: Yes. If they're going to shrink the size of a package, the best thing to do is to leave the height alone and shrink the width or diameter, because people pay more attention to height.

Q: Are we especially bad at detecting an increase in three dimensions?

A: Yes. People underestimate how much

more a package holds when all three of its dimensions—its height, width, and depth—increase. It would be much more obvious if a package only increased in one dimension, but that rarely happens.

If a large popcorn were, say, twice as tall as a small, we'd see it. But if it's a little bigger top to bottom, side to side, and front to back, you may not see that it holds twice as much.

Q: Do we eat more when we use larger bowls and spoons?

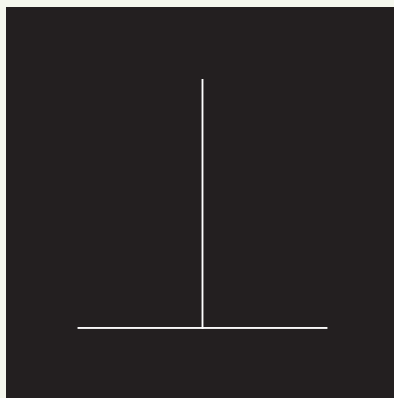
A: Yes. Kids as young as four, if you give them a larger bowl, they serve themselves about 28 percent more of, say, breakfast cereal.

Even experts are fooled. We had an ice cream social and invited professors of nutrition science. We gave them larger bowls and changed the size of the scoop from 2 to 3 ounces. When people had the larger bowl and scoop, they ate 53 percent more ice cream.

These are people who should know better, but it makes the point: these cues fool us all, so it's much easier to get them working for us—using smaller bowls, plates, and spoons—than thinking we can resist them with our willpower.

>>>>

Wow, that's Tall!



To most people, the vertical white line looks longer than the horizontal white line. In fact, both are the same length.



Likewise, the St. Louis Gateway Arch is as wide as it is tall, though few people see it that way. That's because we notice height more clearly than width.

I'll take a Medium...



People tend to pick a “medium” size. Since the smallest Starbucks cup (an 8 oz. *short*) isn't on the menu board, the (16 oz.) *grande* is the medium. If Starbucks put the short back on the menu and took the (20 oz.) *venti* off, the (12 oz.) *tall* would be the new medium.

Q: Does the size of serving bowls also trick us?

A: Yes. We found that adults served themselves about 50 percent more snack mix—nuts, pretzels, and chips—from big bowls than from small bowls.

Q: Do we eat less when foods are labeled as small?

A: In fact, it's the opposite. Let's say you have two packages of cookies that are each, say, 20 ounces. One is labeled “small” and the other “medium.”

The person who gets the bag labeled “small” will say, “Gee, it's such a small amount, I can eat a lot. The bag says small so I'm not overindulging.” But if the same bag is called “medium” or “large,” people eat less.

My colleague David Just and I call this right-sizing. We've gone into cafeterias and said, “Here's a great way for you to save money on food costs and get people to eat less.” We recommend that they change the name of a “regular” portion to a “large.” It makes people more likely to take less and eat less, because they think eating a large portion is overindulging.

Q: Don't people prefer large sizes?

A: No. Most people choose medium sizes. We call it the Golden Mean. If McDonald's wanted people to buy more 12 oz. soft drinks, for example, calling it a “small” wouldn't help. Introducing an 8 oz. “small” would be the way to go. People would drift down to smaller sizes because they tend to shy away from extreme sizes on either end.

Q: Don't people prefer a larger size for value?

A: No. Not everyone wants a 32 oz. drink. We found that even when all sizes of a drink cost the same, a little over 60 percent got either a “medium” or “small,” and most get a “medium.” We expect people to take everything they can get for free, but they don't. They know how much they want.

Q: Can we apply those results at home?

A: Yes. At my home and in our lab, we have 6 oz. juice glasses. Nobody uses them, except my youngest daughter sometimes. But even if you never use the 6 oz. glasses, all of a sudden the normal 8 oz. glass seems like the right size, and the 16 or 20 oz. glasses don't seem appropriate. We even bought some small antique wine glasses.

Q: Can pictures on boxes influence what people eat?

A: Yes. We showed college students a 3-D mockup of packages with pictures of either just a few crackers or many crackers on the front. Then we gave them small bags, each with 30 crackers inside, and told them they could eat some while they filled out a survey.

The students who saw the boxes with more crackers on the front ate more. And when we asked how many crackers are in one serving, they guessed a higher number.

Q: What else tricks people?

A: We gave people ordinary foods that were either labeled “organic” or not. When they thought the foods were organic, they rated the calories about 20 percent lower.

It's a health halo, and it also follows foods that say “pesticide free” or “locally grown.” Almost any food with a healthful identifier makes people think the calories are lower, even if the claim has nothing to do with calories.

Q: Do people underestimate the calories in restaurant meals?

A: Yes. When we ask, “How many calories do you think you're having in that meal?” they usually under-guess by about 25 percent. But if you break things down by asking about each item in the meal—how many calories are in that sandwich?

See More, Eat More



People ate more crackers after seeing a mockup of a box showing more crackers than after seeing a mockup of the same box showing fewer crackers.

Nobody uses them, but they make the medium size glasses look hugely generous.

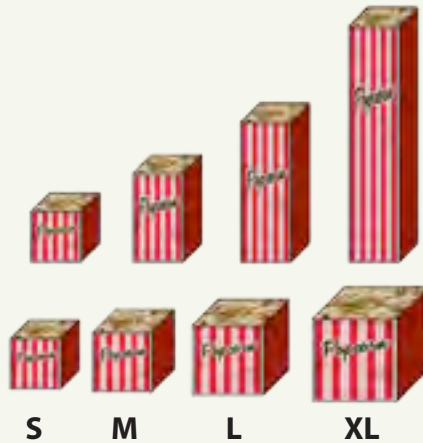
Q: Do people get clues about how much to eat from others?

A: Yes. Nobody knows the right amount to serve themselves, so we look for bench-

marks or norms around us. One such norm could be how much the person next to you serves herself.

We brought young men and women into buffet lines and tracked how much they took of different foods compared to what the people in front of them took. When the woman in front took, say, one cup more food than average, the woman behind would behave similarly. This is strongest for women, but has no impact on guys. We guys basically seem to eat like pigs.

3-D Masks the Increase



Each box is about 50 percent bigger than the box to its left. That's easier to see in the top row, because each box increases in only one dimension (height). It's harder to see in the bottom row, because each box increases in three dimensions (height, width, and depth).

Source: Chandon and Ordabayeva, *J. Market. Res.* 46: 739, 2009.

How many in those fries? How many in that drink?—people are much more accurate.

So if you're trying to eyeball foods and have no calorie guide with you, don't glance at your meal and guess. Look at the individual items and say, "Okay, this piece of bread has about 80 calories, this chicken probably has 350," and so on. You'll be much closer if you look at individual items and total them up.

Q: Why is that more accurate?

A: The higher the calories, the more you underestimate. For example, overweight people tend to grossly underestimate the calories in their meals. As a result, physicians and dietitians would tell them, "You're either lying or you're clueless. Look how far off you are."

But my colleague Pierre Chandon and I found that it's not body size that determines bias. It's meal size. Whether you're the skinniest or heaviest person on the planet, the bigger the meal, the more you underestimate how much you eat.

When meals are big, everyone—regardless of body size—underestimates by about 50 percent how much they eat. It's just that overweight people eat more big meals. This insight has changed the way many doctors and dietitians now advise heavier patients about weight loss. It's made them less accusatory.

Q: How does price influence how much people buy?

A: It's partly based on how much money you have. For instance, if you're below the poverty line, you have to buy the smaller items because you're watching your budget.

But if you're above the poverty line, you can afford larger items. That's where you get the Costco or Sam's Club effect. You buy large quantities because you're saving money.

As I mentioned in my book *Mindless Eating*, our studies show that when items like

juice boxes or granola bars or small bags of chips are individually packed, you end up eating them more frequently—seven times a week instead of four, on average. But if you buy a larger package of cereal or ground beef or pasta or pretzels, you eat more every time you open it.

Q: So should we avoid big packages?

A: No. Just divide the big packages into smaller bags and put them somewhere you don't see them all the time. If they're in smaller bags to begin with, put them

out of the way, like in a lower cupboard or the basement.

The mistake that most people make is that they leave them somewhere visible. So every time they see the chips, they think, "Do I want some chips? Sure!"

Q: Should we also make healthy foods more visible?

A: Yes. We found that when people put cut-up fruit or vegetables in a big bowl in the center shelf of their fridge, they ate 29 percent more.

Q: What else can help people eat healthier snacks?

A: We gave 200 third- to sixth-graders all they could eat of chips or a combination of cut-up vegetables and round Babybel cheeses while they watched TV.

Kids given chips ate 620 calories' worth, but kids given cheese and vegetables ate only 170 calories' worth. The difference was even more pronounced with overweight kids, because they ate more chips than the others.

Part of what's going on is that the cheese and vegetables take longer to chew. And the combination was more satisfying because it's fun to eat and there's more variety in the creamy cheese and the crunchy vegetables.

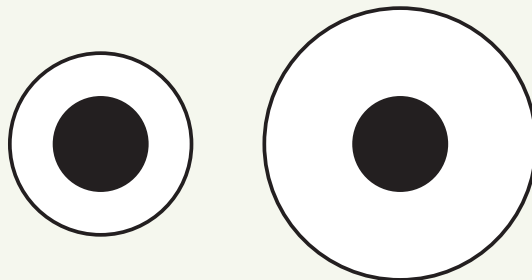
Q: Does that also work with adults?

A: With women, it's similar. They eat about half the calories that they would have otherwise eaten of chips. And they feel equally satisfied afterwards. We have them watch TV for an hour and a half after they eat. And when they're done, they feel full, happy, and not guilty. We've not tested men, but my guess is that it would be similar.

Q: What else can prompt us to eat healthier foods?

A: We did a study on what we called trigger foods. We found that the first food that people saw at a buffet influenced what they took even if they didn't take that food.

It's an Illusion



The dark circle on the right appears smaller, even though both dark circles are the same diameter. This optical illusion helps explain why people may eat more from large plates. They may think they're getting less food.

If they saw a bowl of fruit first, they were more likely to take more fruit than eggs and bacon. If they saw eggs and bacon first, they took more of that than the fruit.

You can do the same at home. Make sure that the first food you see and serve is the healthiest food on the table. Serve the vegetables first, not with or after the pasta.

Q: What else makes people happy with fewer calories?

A: We wondered how much of a snack it would take for people to feel satisfied. Would 90 percent of that brownie or candy bar be enough? How about 80 percent?

So we gave people either a large or small portion of chips, apple pie, and chocolate. The small portions averaged only 20 percent of the food in the large portions. People ate about 135 calories of the small portions and about 235 calories of the large portions, but 15 minutes later, they rated themselves as equally satisfied.

Q: Why?

A: We think that once you've swallowed something, there's not much memory of how much you ate. The residual taste in your mouth lasts for a while. So 15 minutes later, you remember that the food tasted good. But you don't remember how many bites you had.

Some people say that it helps them a great deal with afternoon cravings, as long as they wait about 10 minutes after they eat. We suggest that people have just a bite and then go do a quick errand or walk to the restroom. Do something that distracts you for 10 minutes, and you'll be fine. If you're really, really hungry, it doesn't work, but most of us don't snack because we're really, really hungry.

Q: Any tips for eating in restaurants?

A: A good friend, Koert van Ittersum, and I did this experiment in a Hardee's that was changing to a Carl's Jr. restaurant in Champaign, Illinois. We built a separate section, and we made it darker with

offset lighting and quieter by piping in Miles Davis music. "Kind of Blue" was playing.

People who came into the restaurant ordered their meal at the counter, and

use candlelight instead of fluorescent light. The more relaxed the environment, the more relaxed you are. You eat more slowly, you like the food more, and you end up eating less.

How Much Smaller?



The Edy's carton (1.5 quarts) looks larger—but not 1½ times larger—than the Häagen-Dazs carton (1 quart). That's because both cartons are about the same height.

then we randomly put them in either the soft light, soft music room or the normal place with rock music, bright lights, and hard surfaces.

They all ate the same food, because they ordered ahead of time. But people who ate in the soft light ate 18 percent fewer calories, and they rated the food and the restaurant as more appealing.

Q: Why?

A: They spent about nine minutes longer in the restaurant. They were more relaxed and ate more slowly. So two things may have happened. Their satiety cues caught up, and they may have said, "I guess I'm full." The second thing is that french fries taste great when they're hot, but not so great when they're cold. As the food cooled off, people may have said, "I've had enough."

Q: Would that work at home?

A: Yes. At home, you can turn on some quiet music and turn the TV down and

Q: So should you try to sit in dark corners at restaurants?

A: Only in fast-food restaurants. In sit-down restaurants, it's the reverse because you spend so long there. I have a lot of neat diagrams in my new book, *Slim by Design*, that show where the fat seats are in different restaurants, movie theatres, and such.

In sit-down restaurants, thinner people sit near windows and in lighter, well-traveled parts of the restaurant, while heavier people sit near the TV, near the bar, and in darker corners. They spend more time there, which may explain why they're more likely to end up overeating.

Q: Do people eat worse when they're under stress?

A: That's what we found with college students. It doesn't matter if it's spring or fall semester. People start out with great eating

habits at the beginning of the school year and after January 1. And slowly, the healthy stuff they buy starts dropping and the unhealthy food goes up. And by the end of the semester, it's a complete reversal.

Q: Is that because of final exams?

A: We excluded midterms and finals and test periods. But even when we exclude those stressful days, there's only so much the students can take. They're getting overloaded with projects and papers, and they say, "What the heck. I can't eat salad with dressing on the side any longer. Bring on the Cheetos."

So we started working with dining services at Cornell. As the semester goes on, they start making a higher percentage of healthy foods, and they put them in more obvious places—more front-and-center.

Q: Is that just true for students?

A: No. We usually assume that people gain weight over the holidays because

there's so much food available, so many parties, so much variety, and all your favorite foods are out. But I'm increasingly convinced that some of the weight gain is due to the stress of having family visit, having to buy presents, having to finish up projects.

So we should all be aware that we may be coming under the influence of stress eating, not just having a jolly old holiday time.

Q: Should people keep food off their desk at work?

A: Yes. We found that if people have a bowl of chocolate sitting on their desk, they eat about 125 more calories a day than if the chocolate is just six feet away.

Q: Have you studied what influences people at the grocery store?

A: It's often said that you'll buy more if

stir-frying vegetables with a chicken breast is going to take too long.

So they buy more breakfast cereals, frozen food, Hamburger Helper, candy, and crackers, and less fruit, vegetables, and healthy dairy.

Q: What's your new book about?

A: It's called *Slim by Design: Mindless Eating Solutions for Everyday Life*, and the idea is that about 80 percent of the food we purchase or eat is within an average of three miles from where we live. That's your food radius.

You can look at the five places in your food radius that cause you to overeat—your home, where you work, the grocery store where you shop at most often, your two favorite restaurants, and where your kids go to school. Small changes in each of those places can help you become slim by design.

We've also just started the Slim by Design Global Registry, which registers people from around the world who have been slim all their lives. The URL is SlimByDesign.org.

By studying the habits, patterns, tips, and attitudes of these

people, our goal is to help others learn some of the secrets and insights they have used to stay slim.

We're still working on the Web site, but it has already generated a ton of interest from people who want to get or stay slim. 🍌

Smaller and Slimmer



How much less Coke is in the new mini-can (right)? The can holds about 60 percent of what's in the standard 12 oz. can (left). The mini-can would look smaller if it weren't as tall.

you go shopping when you're hungry. We had people go shopping after an 18-hour fast, and we also had people go shopping before or after lunch.

We found that people don't buy more or spend more if they're hungry, but they buy fewer healthy foods and more convenient, highly processed food that they can eat in a second. Cutting up and

Fool Me Once...

Here's a quick summary of some of Brian Wansink's findings from earlier studies:

- **Big servings.** People who were given a big bucket of (stale) popcorn ate 34 percent more than people who got a smaller bucket.
- **Fancy names.** Cafeteria sales jumped by 27 percent when foods were given descriptive names like "Succulent Italian Seafood Filet" (instead of "Seafood Filet") or "Belgian Black Forest Cake" (instead of "Chocolate Cake").
- **More variety, more calories.** People ate about 40 percent more if they had a choice of candy that came in six different colors than if the candy came in four colors.
- **Plateware matters.** When people were served a brownie on a Wedgwood china plate, they rated its taste higher than when the brownie was served on a paper plate or napkin.
- **Food on the table.** Men ate about 29 percent more—and women about 10 percent more—if the serving dish was left on the table (rather than the counter).
- **Who sets the pace?** People ate more when they sat at a table with someone who ate quickly than with someone who ate slowly.
- **How much did I eat?** People ate fewer chicken wings if they could see the bones of the wings they'd already eaten than if the bones were whisked away.
- **Healthy restaurant?** People who believed that Subway meals were healthy underestimated the calories in Subway meals more than they underestimated the calories in McDonald's meals.
- **Health halo.** If a bag of M&M's or trail mix was labeled "low-fat," people ate more than if the label didn't say "low-fat."
- **Exercise rewards.** People ate more at dinner—and especially more dessert—after they went on a "scenic walk" than after they went on an (identical) "exercise" walk.
- **Cover up.** Covering the clear window of an ice cream freezer with butcher paper led people to take 30 percent less ice cream from it.



Calcium Confusion

Three new studies have fueled the confusion over calcium and heart disease.

- Swedish researchers who tracked more than 61,000 women for 19 years found that calcium-supplement takers who got at least 1,400 milligrams of calcium a day (from food *and* calcium supplements) were 2½ times more likely to die than calcium-supplement takers who got 600 to 1,000 mg a day.

- German researchers who followed nearly 24,000 men and women for 11 years found that those who took calcium supplements had roughly double the risk of a heart attack of those who didn't take calcium supplements. (However, less than 4 percent of the participants reported taking calcium, and the study didn't report how much they took.)

Shoot for the recommended calcium intake...but no more.

■ In the NIH-AARP Study, which tracked more than 388,000 Americans for 12 years, men who took at least 1,000 mg of calcium a day from calcium supplements or multivitamins had about a 20 percent higher risk of dying of heart disease than men who took no calcium, though there were hints that the risk was only higher among those who smoked. Women who took calcium supplements or multivitamins had no higher risk.

What to do: Shoot for the Recommended Dietary Allowance for calcium, but no more. (The RDA is 1,000 mg a day for women up to age 50 and men up to age 70, and 1,200 mg for anyone older than that.) But don't forget: the RDA includes the calcium you get from foods. Cheese, yogurt, and milk each has about 300 mg per serving, and a typical diet gets around 300 mg from other foods. So you could hit 900 mg if you eat, say, two dairy foods a day.

Why stop at the RDA? Though the evidence is far from conclusive, it's possible that taking high daily doses of calcium supplements (1,000 mg or more) may harm the heart. And there's no evidence that more is better.

BMJ 2013. doi:10.1136/bmj.f228. *Heart* 98: 920, 2012. *JAMA Intern. Med.* doi:10.1001/jamainternmed.2013.3283.

Folic Acid & Autism

Prenatal folic acid supplements help prevent neural tube birth defects like spina bifida. A new study suggests that the B vitamin may also lower the risk of autism.

Researchers tracked more than 85,000 children in the Norwegian Mother and Child Cohort Study. After six years, the risk of an autistic disorder was 40 percent lower in the children of women who took folic acid around the time they became pregnant (from four weeks before to eight weeks after their last menstrual period began) than in the children of those who did not.

Women who took folic acid were more health conscious, had higher incomes, and

were better educated. However, that didn't seem to explain their children's lower risk, since the same women were also more likely to take fish oil, which wasn't linked to a lower risk of autism. What's more, women who started to take folic acid mid-pregnancy were also more health conscious, but their children had no lower risk of autism.

What to do: If you could become pregnant, follow the Centers for Disease Control and Prevention's advice to take 400 micrograms of folic acid every day to reduce the risk of neural tube defects. If the vitamin turns out to lower the risk of autism, that's an extra benefit.

JAMA 309: 570, 611, 2013.

Diet Soda & Sweets

Do diet sodas foster a sweet tooth?

To find out, scientists examined the diets of roughly 200 overweight or obese men and women who were asked to replace two daily servings of sugar-sweetened beverages with either diet drinks or water for six months. (All the participants were consuming at least 280 calories—two cans of soda—a day before the study began.)

The results: the diet-drink group cut back on desserts *more* than the water group. (And both groups were twice as likely to lose at least 5 percent of their body weight as a control group that wasn't instructed to switch to calorie-free beverages.)

What to do: If you drink sugar-sweetened beverages, switch to water or diet drinks. Water is your best bet because most diet drinks are made with aspartame or acesulfame potassium, which have been poorly tested for safety. However, if water doesn't work for you, diet drinks beat sugar drinks.

Am. J. Clin. Nutr. 2013. doi:10.3945/ajcn.112.048405.

Eat Early?

"Dieters who ate lunch earlier lost more weight," announced *USA Today* in January. That's what many people believe, and it may be true. However, the study that triggered the headlines didn't prove it.

Researchers tracked 420 Spanish dieters who took part in a 20-week weight-loss program. Those who chose to eat lunch after 3 p.m. lost less weight (17 pounds) than those who ate lunch earlier (22 pounds). Lunch accounts for roughly 40 percent of the calories consumed by the average Spaniard, because it's the main meal in Spain. The late eaters also went to sleep later and skipped breakfast more often than the early eaters.

What to do: Avoid eating late in the day if you find that it leads to overeating. But don't assume that your body handles the food you eat at night differently than the food you eat during the day.

To answer that question, scientists would have to randomly assign people to eat early or late. Without that kind of study, they couldn't rule out the possibility that something else about the late eaters may explain why they lost less weight. 🍷

Int. J. Obesity 2013. doi:10.1038/ijo.2012.229.

PONDERING PALEO

Channeling your inner cavewoman



Marlene Zuk is professor of ecology, evolution, and behavior at the University of Minnesota and author of the new

book *Paleofantasy: What Evolution Really Tells Us about Sex, Diet, and How We Live* (W. W. Norton & Company). Zuk spoke to *Nutrition Action's* David Schardt by phone from St. Paul.

Q: Is the Paleo diet our natural diet?

A: Some people claim that the cause of our so-called “diseases of civilization” that are diet related, such as diabetes or high blood pressure, is that our diets have changed radically since the time that human beings evolved hundreds of thousands of years ago. If we could go back to the way we were eating before, then we would be much healthier, they say.

It sounds pretty reasonable that if human beings evolved living a certain way and eating certain foods, and if we suddenly and rapidly change from those circumstances, there's a risk of eating foods that are not necessarily the healthiest for us.

This idea is supported by looking at modern foraging peoples, who don't eat Western diets and who certainly don't seem to suffer as much from conditions like diabetes or hypertension. So, superficially, a Paleo diet makes a lot of sense.

Q: But not when you look deeper?

A: Right. The problem is that it's really a fantasy to try to construct what early humans were eating.

First of all, what do you mean by early humans? The word “Paleo” doesn't mean much from a scientific perspective.

Are you talking about the ancestors of the genus *Homo*, such as *Australopithecus*? Are you talking about other members of the genus *Homo*, like *Homo erectus*? Or do you mean humans in Africa before they migrated out of that continent? Or is it after they left Africa? Or are we talking about people who were living the way that contemporary hunter-gatherers

The Paleo Solution. Everyday Practical Paleo. Paleo Comfort Foods. Paleo Slow Cooking. The Paleo Diet for Athletes. Paleo Desserts.

Dozens of books tout the wonders of the “original human diet.” But how certain are we that there was an original diet? And if there was, exactly what did it include? More importantly: Did cavewomen and cavemen really eat dessert?

do—people who forage and hunt but don't use agriculture?

Q: What difference would that make?

A: Because so far as we can understand, the diets of all these different early humans were really different. What people were eating 10,000 years ago at the dawn of agriculture, for instance, was doubtless not what people were eating 100,000 years before that.

Q: Didn't their diets also depend on where they were living?

A: Yes. Picking a specific place or time to say, “Oh yes, we should be eating like those people,” doesn't make sense. Is seafood okay on a Paleo diet? I suppose it depends on whether you think Paleo people were living on the northwest coast of North America, or whether you think they were in central Africa, in which case

I don't think there were a lot of shrimp available there.

Take the ancestors of the Inuit First Americans living in the Arctic. They get a lot of attention from Paleo enthusiasts because they relied on meat and seafood for food since so few edible plants grow up there. But the fact that nothing grows there just means that people can adapt to living without a lot of plant food. It doesn't mean that they *should* live that way if they have a choice.

Q: The Paleo diet seems to assume that we've stopped evolving. Have we?

A: No. It's clear that we are not the same as our Paleo ancestors. We've changed radically in some ways, like our resistance to diseases such as malaria, and not so radically in others, like the structure of our spines.

We didn't evolve, evolve, evolve to a certain point and then go, “Phew! Done with that! We're now perfectly adapted to our environment, and we can eat the same diet from now on. Then dang! Somebody developed agriculture, which was a mistake, and now we're in trouble.”

There just wasn't an ideal time and ideal diet from which we are now deviating.

Q: What's an example of how humans continue to change?

A: People say that humans are the only mammals that continue to drink milk past weaning, which is absolutely true. Some of them then conclude that it's unnatural for mammals to do this, and that it's therefore much healthier for us to not consume dairy foods.

Well, the fact is that a great number



With little or no evidence, the book promises to help people with Alzheimer's, Parkinson's, cancer, multiple sclerosis, chronic fatigue, autoimmune conditions, and more.

Paleo in Comparison

"If it wasn't on a caveman's menu, it shouldn't be on yours." That's the basic premise of a Paleo diet.

Translation: plenty of meat, poultry, eggs, seafood, vegetables, fruit, honey, and nuts, but no grains (breads, cereals, pasta, rice, oatmeal, cookies, pastries, cakes, muffins, etc.), beans, dairy foods, refined sugars, caffeine, or alcohol.

What does a Paleo diet look like? Most books give no specifics (like "eat 20 ounces of meat, poultry, or seafood and 12 cups of vegetables and fruit a day"). But we did find this sample day's worth of food (2,200 calories) for a young woman in *The Paleo Solution*, by Robb Wolf (Victory Bell Publishing, 2010), one of the best-selling Paleo books on amazon.com:

Breakfast

Broiled salmon (12 oz.)
Cantaloupe (1¾ cups)

Lunch

Broiled lean pork loin (3 oz.)
Salad—lettuce (1½ cups), carrots (½ cup), cucumbers (¾ cup), tomatoes (1½ cups), walnuts (5 halves), lemon juice (2 Tbs.)

Dinner

Lean sirloin tip roast (8 oz.)
Steamed broccoli (3 cups)
Salad—mixed greens (3 cups), tomato (¾ cup), avocado (½ cup), almonds (35), onions (¼ cup), lemon juice (2 Tbs.)
Strawberries (1 cup) for dessert

Snacks

Orange (½)
Carrots (¾ cup)
Celery (1 cup)

How healthy is the Paleo diet (assuming this sample is typical)? On the plus side, it's rich in fruits, vegetables, fiber, vitamins, potassium, and magnesium. It also has no refined sugar or white flour and it's low in sodium (unless you pour on the sea salt).

But the diet has some drawbacks. Red meat—and especially processed meats (like sausage, ham, and bacon)—may raise the risk of colorectal cancer. The red meat (and the coconut oil and butter in some books) could be high in saturated fat. (Paleo books recommend lean meats, but the meats in their recipes often aren't.) The diet is also high in cholesterol and low in calcium and vitamin D.

A safer bet: the diets used in the OmniHeart study, which lower blood pressure, LDL ("bad") cholesterol, and triglycerides. They're similar to the Paleo diet in that they have far more fruits and vegetables and far fewer grains and sweets than the average American diet. But the OmniHeart diets limit red meats, saturated fat, and cholesterol. (See *Nutrition Action*, Oct. 2009, cover story.)

NUMBER OF DAILY SERVINGS*

Food (serving size)	Paleo Diet	OmniHeart
Meat, poultry, fish (¼ lb.)	8	4
Vegetables, fruit (½ cup)	27	9
Nuts (¼ cup)	1½	1
Grains (½ cup or 1 slice bread)	0	4
Low-fat dairy (1 cup milk)	0	2
Oil, mayo (1 Tbs.)	0	4
Sweets (1 small cookie)	0	2

* We converted Paleo servings into OmniHeart servings for comparison.

Source: *JAMA* 294: 2455, 2005.

of human beings have evolved an ability to keep digesting the lactose in milk throughout their lifetimes. That change happened just over the last 5,000 to 7,000 years, which is really quick from the standpoint of evolutionary change.

So saying that we should eat only what our ancestors ate before this genetic change happened makes as much sense as saying that we should eat only what our mammalian ancestors ate before they came down from the trees and started living on the ground.

That's not to say that there aren't some people who have trouble digesting milk, but that's different from saying that all people, all the time, would be better off without it.

Q: The Paleo diet shuns grains. Did early humans ever eat them?

A: The absence of starchy foods on a Paleo diet is really interesting because it's based on a fantasy of what our ancestors ate. Over the last 10 years, after

Paleo diets started to become popular, scientists have discovered traces of seeds and grains on the teeth of fossilized early humans. They've also found remnants of grains on stone cooking tools.



Our ancestors may have eaten lean meat, but the recipes in many Paleo books call for ground beef and pork, lamb, sausage, bacon, and other fatty meats.

It's looking like some early humans not only ate grain, but they also were grinding it into a crude flour and cooking that into a primitive form of pita bread.

There's also good evidence now for a continued evolution in amylase genes. Amylase is an enzyme in our saliva and our small intestine that breaks down starches so we can absorb them. If you look at populations today that eat a lot of starch, they've evolved more copies of amylase genes than populations that don't eat much starch. Extra copies make the digestion of starchy foods even easier.

The moral is that you're really on shaky ground every time you try to set up a "this is how it was and that's how we should be" standard. We're always revising our ideas of what early humans were like, and that is a worthwhile endeavor. But we shouldn't do it to find what we're supposed to emulate.

Q: We're now learning that our microbiome can affect our health.

Shed Pounds on Paleo? No Evidence

Has our microbiome changed?

A: We are quite different from our ancestors in our microbiome, the billions of microorganisms that reside on and in us that we didn't know existed 25 years ago when the Paleo movement began.

Think of yourself as a coat hanger of humanity on which are draped this huge number of microbial cells. The microbiome is a part of who we are and it's essential for our normal functioning. But it differs from person to person, from place to place, and probably over time.

We don't know how much or in what ways our microbiome has changed from that of our ancestors, although we do have a hint that there have been enormous changes. Some of this probably has to do with changes in the atmosphere or diet, not evolution. It's more evidence that we are not who our ancestors were.

Q: Does Paleo food exist today?

A: Not really. Even if you wanted to try to eat what people were eating a long time ago, the majority of those foods are simply not available. Early humans were not eating plants or animals that resembled very closely the plants or animals that we eat today.

Human beings have been influencing the foods they eat ever since there were people. For example, the ancestors of apples were nasty, horrible, little tiny bitter things that, really, why would one eat them?

The ancestor of corn that was used by peoples in the Americas for quite a long time was called teosinte. It looked like the head of a grass seed, which it basically was, and nothing like what people eat now.

The meat in the supermarket, even grass-fed beef, has also been modified from its ancestors by breeding. People un-

Earlier this year, *US News & World Report* asked a panel of 22 diet experts to rank 28 popular diets. The criteria: Were they effective for short-term or long-term weight reduction? Were they easy to follow? Were they safe and nutritionally balanced?

Topping the list was the DASH diet. (A variation of DASH called OmniHeart is the diet recommended by most health experts. See *Nutrition Action*, Oct. 2009, cover story.)

Dead last? The Paleo diet, which the panel noted was supported by studies that were "few, small, and short."

Loren Cordain, an exercise physiologist at Colorado State University and author of *The Paleo Answer: 7 Days to Lose Weight, Feel Great, Stay Young*, disputed the panel's conclusions.

"Five studies, including four since 2007, have tested ancestral—or Paleo—diets and have found them superior to Mediterranean diets, diabetic diets and typical Western diets in regards to weight loss, cardiovascular disease risk factors, and risk factors for type 2 diabetes," he wrote to the magazine.

But all five studies cited by Cordain were just as *US News* said: small and short term. Three of the five didn't compare people who were randomly assigned to either the Paleo diet or another diet.¹⁻³ Without that "control group" following another diet, researchers couldn't tell if people lost weight because they were on a particular diet or simply because they were participating in a study.

In one of the two studies that did compare Paleo with other diets, Swedish researchers randomly assigned 29 middle-aged or older men with heart disease and pre-diabetes or type 2 diabetes to an "Old Stone Age" diet (lean meat, fish, fruits, vegetables, root vegetables, eggs, nuts) or to a "Mediterranean" diet (whole grains, low-fat dairy foods, vegetables, fruits, fish, oils, margarine).⁴

After 12 weeks, the Paleo eaters had lost no more weight than those on the Mediterranean diet. However, the Paleo group did have lower blood sugar levels after a glucose tolerance test, which measures how well insulin controls blood sugar.

Two years later, the same researchers looked at 13 men and women in their 60s with type 2 diabetes. The volunteers were told to eat a Paleo diet for three months and then a standard diet for people with diabetes for three months, or vice versa. The Paleo diet had more fruits, vegetables, lean meat, fish, nuts, and eggs, and no grains, dairy, beans, refined fats, sugar, candy, soft drinks, or beer.⁵

They ended up eating 300 fewer calories a day on the Paleo diet, which may explain why they lost seven more pounds during those three months. And their triglycerides were lower. But there were no differences in blood sugar levels after a glucose tolerance test.

The bigger question: What happens over the long run? At least three trials have compared diets that were either high or low in protein, carbohydrates, or fat—such as Atkins, Ornish, Weight Watchers, and The Zone—on a total of more than 1,200 people.⁶⁻⁸

After one or two years, none of the diets outshined the others. What mattered most was whether people stuck to them. (The more extreme diets—like the high-protein Atkins and the low-fat Ornish—were the hardest to stay on.)

The bottom line: There's no good evidence that the Paleo diet will make those extra pounds vanish.

¹ *Diabetes* 33: 596, 1984.

² *Eur. J. Clin. Nutr.* 62: 682, 2008.

³ *Eur. J. Clin. Nutr.* 63: 947, 2009.

⁴ *Diabetologia* 50: 1795, 2007.

⁵ *Cardiovasc. Diabetol.* 8: 35, 2009.

⁶ *JAMA* 293: 43, 2005.

⁷ *N. Engl. J. Med.* 360: 859, 2009.

⁸ *Ann. Intern. Med.* 153: 147, 2010.

derestimate the degree to which human beings have affected everything in their environment.

Q: Don't some people say that they feel healthier eating a Paleo diet?

A: I'm not arguing with people who say, "I started eating this way and I feel great." More power to you. But it's also perfectly possible that people who eat in a variety of other ways, as long as they're not subsisting on Coke and Cheetos, would be healthy as well.

The way to find that out is not to look more closely at what early people were supposedly eating. It's to gather evidence about who we are now.

Q: S. Boyd Eaton, the Emory University professor who co-wrote *The Paleolithic Prescription in 1988*, which helped start the Paleo movement, says that he eats a "soft version" of the Paleolithic diet, which includes whole grains, low-fat dairy foods, and wine. Those are foods that are usually forbidden on a strict Paleo diet.

A: That's exactly the point. You can call the diet Paleo, but let's take as an inspiration what we think was a healthy way to live and then figure out which aspects of the diet make the most sense, relying on science, not on an idealized version of our earlier selves, for the answers. 🍷



SAUCY BITS

BY KATE SHERWOOD

Master these three sauces—which evoke the cuisines of China (ginger-scallion), Thailand (peanut), and Spain (roasted red pepper)—and you will have added a score of new recipes to your repertoire. That’s because each sauce can transform sautéed, grilled, or steamed seafood, chicken, tofu, or vegetables into a distinctive...and delicious...dish. Bon Voyage! 🍴

Got a question or suggestion? Write to Kate at healthycook@cspinet.org.



Ginger-Scallion Sauce

Yield: ¾ cup (12 Tbs.) | Total Time: 15 minutes 

- ¼ cup minced ginger
- 3 scallions, white and pale-green parts only, minced
- 3 Tbs. canola oil
- 1 cup cilantro
- 1 Tbs. lime juice
- ¼ cup mint, optional
- ¼ cup water
- ½ tsp. kosher salt

A little of this pungent sauce (think Asian pesto) goes a long way. Try it on chicken, seafood, or tofu, or mixed into brown rice or another whole grain. We spread some over sautéed tofu cubes on lettuce leaves topped with carrot and cucumber.

Put the ginger and scallions in a heatproof bowl. • In a small pan, heat the oil until very hot. Pour over the ginger and scallions, then allow to cool. • Purée the ginger, scallions, oil, and all the other ingredients except the salt in a blender or food processor until smooth. • Season with up to ½ tsp. of salt.

Per tablespoon: Calories: 35 | Sodium: 80 mg | Total Fat: 3.5 g
Sat Fat: 0 g | Carbs: 1 g | Protein: 0 g | Fiber: 0 g



Peanut Sauce

Yield: 1 cup (16 Tbs.) | Total Time: 15 minutes 

- ½ cup thinly sliced red onion
- 2 cloves garlic, sliced
- 1 Tbs. canola oil
- 1 Tbs. grated fresh ginger
- 1 tsp. chili powder or ground cumin
- 2 Tbs. reduced-sodium soy sauce
- ⅓ cup roasted unsalted peanuts
- 1 Tbs. brown sugar
- ¼ cup water

This rich, flavorful sauce is typically served with grilled kebabs. We spooned some over grilled chicken on lettuce leaves topped with red cabbage and cucumber. You can use cashews instead of peanuts.

In a small pan over medium-low heat, sauté the onion and garlic in the oil until browned, about 5 minutes, then allow to cool. • Combine with the other ingredients in a blender or food processor and pulse until well combined into a sauce.

Per tablespoon: Calories: 35 | Sodium: 75 mg | Total Fat: 2.5 g
Sat Fat: 0 g | Carbs: 2 g | Protein: 1 g | Fiber: 0 g



Roasted Red Pepper & Almond Sauce

Yield: 1 cup (16 Tbs.) | Total Time: 15 minutes 

- 2 Tbs. tomato paste
- 3 cloves garlic
- ¼ cup slivered almonds
- 2 Tbs. extra-virgin olive oil
- 2 jarred roasted red peppers
- ½ tsp. kosher salt

This easy, versatile sauce is savory and slightly tart-sweet from the jarred roasted peppers. It’s great with chicken, seafood, grains, or vegetables. We dabbed some on steamed shrimp with grilled onions and asparagus.

In a small pan over medium-low heat, sauté the tomato paste, garlic, and almonds in the oil, stirring often, until the tomato paste starts to darken, about 3 minutes. Remove from the heat and allow to cool. • Purée the sautéed ingredients with the roasted red peppers in a blender or food processor until smooth. • Season with up to ½ tsp. of salt.

Per tablespoon: Calories: 35 | Sodium: 75 mg | Total Fat: 3 g
Sat Fat: 0 g | Carbs: 2 g | Protein: 1 g | Fiber: 1 g

Photos: Jorge Bach/CSPI.

UNMASKED

Foods aren't always what they're cracked up to be

BY BONNIE LIEBMAN & JAYNE HURLEY

Companies are constantly looking for new ways to snag customers. And for some audiences, “healthy” sells. Make that anything that *sounds* healthy. Here's a sampling of (mostly) new foods that don't live up to their carefully crafted images or claims.

The information for this article was compiled by Paige Einstein and Emily Caras.



Not exactly a bowl of lentils.

Plenti Tricky

“The lentil has proven to be one of the best sources of plant-based protein,” says the Enjoy Life Plentils Lentil Chips bag.

Maybe so, but a 1 oz. serving of Plentils (31 chips) has 130 calories, only 3 grams of protein, and a measly 1 gram of fiber. That's

just 1 gram more protein and no more fiber than a serving of potato or tortilla chips.

That's because Plentils are made of lentil powder, potato starch, oil, salt, and turmeric. Not exactly a bowl of lentil soup.

And the “Light Sea Salt” flavor has a not-so-light 420 milligrams of sodium per serving—far more than Lay's Classic Potato Chips (170 mg) or Tostitos Original Tortilla Chips (120 mg). **Simply 7 Sea Salt Lentil Chips** (“Just a Pinch”) aren't much better (350 mg).

Whole Foods 365 Organic Lightly Salted Black Bean Tortilla Chips are lower in sodium (50 mg), but despite their beans, whole-grain white corn, and quinoa, each serving still has just 3 grams of protein. **Beanitos**—a mix of black or pinto beans, brown and/or long grain white rice, and oil—hit 4 grams of protein without breaching 150 mg of sodium.

Both top **Garden of Eatin' Black Bean Corn Tortilla Chips**, which have more corn and oil than black bean flakes.

Do lower-sodium bean chips beat old-fashioned potato or tortilla chips? Yes, but not if you think they're a health food and dive in.

Breakfast Cookies?

“Power Up, People,” says the box of Nabisco's new **belVita Chocolate Breakfast Biscuits**.

Four biscuits contain “19 g whole grain” and “energy-releasing B-vitamins,” and they're “specially baked to release energy regularly and continuously to fuel your body throughout the morning.”

Whoa! Time to toss out the shredded wheat? Not exactly.

Whole grains are good (though we estimate that about 20 percent of belVita's grain is refined). And, calorie for calorie, the biscuits seem to have roughly half the sugar of a typical Oreo or Chips Ahoy! cookie and about as much sugar as a graham cracker.

But Nabisco isn't claiming that belVitas are healthier than cookies. It's promising “a new kind of breakfast.”

Did Nabisco feed people belVitas to see if they could walk on a treadmill, stay alert, or do something else better than when they were fed something else for breakfast? “We consider this information confidential,” Nabisco told us. We'll take that as a “no.”

As for the old “B-vitamins help convert food to energy” claim, it's baloney. B vitamins won't make you feel more energetic. And most Americans get plenty of B vitamins anyway.

What's more, a 230-calorie pack of four biscuits has too little protein (only 3 or 4 grams) and little or none of the fruit that would round out a healthy breakfast.

A picture on the side of the box shows yogurt and an orange, but the Web site says that the biscuits come in “convenient, individual packs to help you grab a breakfast option no matter what the morning brings.”

Our advice: If you want something sweet with your morning coffee, have a belVita biscuit or two. Just don't ditch your breakfast—fruit, Greek yogurt or milk, and whole-grain toast or cereal—for Nabisco's new kind of cookie.



A better cookie...not a better breakfast.





Like eating a sixtieth of a carrot. Some garden!

Veggetini?

“With a Half Serving of Vegetables per 2 oz. Portion,” boast the **Ronzoni Garden Delight** pasta boxes.

Impressed? Don't be. That half serving turns out to be a quarter cup of “vegetable solids” from dried carrot, tomato, and spinach. Each 2 oz. serving of the pasta

(about 1 cup cooked) ends up with just 4 percent of a day's vitamin A—what you'd get in about *one sixtieth* of a carrot or *three* baby spinach leaves.

Mueller's Hidden Veggie pastas are worse. Their leading “hidden veggie” is dried corn, so they've got only 2 percent of a day's vitamin A per (cooked) cup. And their labels cheat when they say “1 Serving of Vegetables per 4 oz. of pasta,” since a serving of pasta is 2 oz.

Barilla Veggie pastas also cheat on serving size, but they're made with vegetable purées, which boosts the vitamin A to 80 percent of a day's worth in the Farfalle and 30 percent in the Penne. (The Rotini has 6 percent.)

Bottom line: Veggie pastas are made from mostly white flour and pale in comparison to eating vegetables. Eating whole-grain pasta with a spinach salad or with stir-fried broccoli, sautéed peppers, or roasted asparagus helps fill you up. Hidden veggies don't.



They're just sugar-laden or fruit juice shakes.

Bolthouse Baloney

“After 95 years of working the land, one lesson rises to the top: the best beverages come from the best ingredients,” say the **Protein Plus Shakes** from **Bolthouse Farms** (now owned by the Campbell Soup Company). “Crisp veggies. Ripe fruit. Delicious dairy...Goodness in, goodness out.”

Yup. There's nothing like a visit to the local farm to watch them harvest the whey protein concentrate and soy protein isolate that give Bolthouse shakes so much protein.

And shoppers may miss the tiny “per bottle” next to the “64G Protein” on the 32 oz. Vanilla or Chocolate flavor and expect 64 grams of protein in each 8 oz. cup.

(Why not say “800 calories per bottle”?)

The Mango Protein Plus bottle goes on: Vitamin A “keeps eyes and skin healthy.” Vitamin C is “essential for the immune system.” B vitamins are “required for metabolism of proteins and fat for energy and lean muscle nourishment.” Potassium is “essential for proper function of all cells.”

Sounds impressive. But there's little or no evidence that those vitamins would relieve the eye, skin, immune system, or metabolic problems that Americans face.

As for the Mango shake's “8 Servings of Fruit & Veggies Per Bottle,” it's mostly nutrient-poor apple juice, followed by carrot juice, orange juice, and (finally) mango purée.

If you're middle-aged or older, shoot for 20 grams of protein per meal. But get it from real foods, not a fruit juice shake.

Pass the Bar



Prevents weight gain? There's no evidence.

helps prevent weight gain,” says the **KIND Plus Pomegranate Blueberry Pistachio + Antioxidants** bar label.

Each small (1.4 oz.) KIND bar has around 200 calories that come mostly from nuts, dried fruit, and sugars. How could such a calorie-dense food help *prevent* weight gain?

The study didn't show that it did. Researchers randomly assigned 94 overweight adults to eat two KIND bars a day (170 calories each) or their usual diet. No one was told to cut calories. After eight weeks, the researchers found no difference in weight.¹ They speculated that the people who got the bars must have eaten less of other foods to compensate.

Bottom line: Unless the study pitted KIND bars against oth-

er solid foods—340 calories' worth of cantaloupe or salmon, say—it couldn't show that the bars did anything special.

Some KIND Plus bars make other exaggerated claims. There's no evidence, for example, that the vitamins A, C, and E in KIND + Antioxidants bars help “maintain the immune system and healthy skin” unless you're malnourished.

KIND + Fiber bars get most of their 5 grams of fiber from chicory root (inulin), which isn't as good as the unprocessed fiber in whole grains. And **KIND + Omega-3** bars get their omega-3s from flax, which isn't as good as the omega-3s in fish.

KIND + Protein bars promise that protein “increases satiety, strengthens bones, muscles and skin.” The evidence is only clear for muscles, but why eat a 200-calorie bar to get 7 to 10 grams of protein when you can get twice that much in a 100-calorie serving of fat-free plain Greek yogurt?

Bars are convenient, but so are apples, oranges, and dozens of other foods that don't come with a marketing plan.

¹ *J. Hum. Nutr. Diet.* 24: 543, 2011.

Scouts' Dishonor

Oh, dear. The Girl Scouts—under fire for selling cookies in the midst of an obesity epidemic—are pushing a faux healthy cookie. Sigh.

According to the Scouts' Web site, **Mango Crèmes with NutriFusion** sandwich cookies are largely made of the same white flour, sugar, and oil as most other cookies (though palm oil gives them twice the saturated fat of Oreos).

And the NutriFusion bit? Less than 2 percent of the cookies are “nutrients from natural whole food concentrate of cranberry, pomegranate, orange, grape, strawberry, shitake mushrooms.” That (and the white flour) supply a smattering of vitamins A, B-1, B-6, C, D, and E. (“A delicious new way to get your vitamins,” crows ABC Bakers, which makes the cookies.)

So instead of selling cookies that everyone knows are junk, the new strategy is to fool some people into thinking that some cookies are as healthy as fruit and shiitakes?

Why can't such a good organization get some good nutrition (or PR) advisors?



Vitamin-fortified junk is still junk.



How much Greek yogurt? Almost nuttin', honey.

Honey Bunches of BS

Greek yogurt has taken the dairy aisle by storm. So why stop there?

Post Honey Bunches of Oats Greek Honey Crunch (“made with real Greek yogurt”) tosses a pinch of yogurt powder into its mix of (mostly) whole-grain wheat, oats, sugar, rice, corn meal, and oil.

But the powder is heat treated (which kills the active yogurt cultures), and the protein (5 grams per 230-calorie serving, 1 gram more than regular Honey Roasted Honey Bunches of Oats) comes from milk protein isolate, whey, and non-fat dry milk solids, not yogurt.

Rickland Orchards Greek Yogurt Bars—with flavors like Cherri Almond, Strawberri, and Blueberry Açai—are made with a “Greek yogurt coating” that has more sugar, palm kernel oil, palm oil, and shea oil than Greek yogurt. Odds are, the 7 grams of protein in each 160-calorie bar come mostly from the isolated soy protein and skim milk powder.

Bottom line: Beware of foods bearing Greek yogurt.

Piece of Work

“Brookside chocolatiers have discovered a range of exotic fruits from around the world to create the ultimate chocolate experience,” croons the bag of **Brookside Dark Chocolate Goji with Raspberry**. “The perfect pairing of Brookside sweetened real fruit juice pieces dipped in luscious dark chocolate.”

In case you're not familiar with Brookside's definition of “real fruit juice pieces,” they're apparently juice concentrate, sugar, corn syrup, maltodextrin, pectin, and other ingredients that make juice masquerade as chunks of the fruits shown on the labels. How exotic.

And the “100 mg of flavanol antioxidants” in all the varieties—there's also a **Dark Chocolate Pomegranate** and a **Dark Chocolate Açai with Blueberry**—come from the chocolate, not the fruit juice. So do most of the 180 calories in each quarter-cup serving.

Some research suggests that high doses of flavanols may help blood vessels relax, lower blood pressure, and make insulin work better. But many studies, which are often industry funded, are low quality and need to be confirmed.¹

One thing is clear: most people try to eat chocolate sparingly because it's a calorie-dense, hard-to-resist candy. But if companies convince you that chocolate is as healthy as fruit, that's good for Brookside, but not your *backside*.

¹ *Am. J. Clin. Nutr.* 95: 740, 2012.



Chocolate-covered fake fruit pieces.



Heavily sweetened whole milk.

Craven

“Made with fresh milk and premium cocoa, it's naturally wholesome and nutrient rich,” says the shelf-stable aluminum bottle of **Crave Chocolate Milk**.

All milk is nutrient rich. But Crave is *too* rich—in calories (340), saturated fat (7 grams), and added sugar (6 teaspoons). That's because each bottle is 12 oz. of heavily sweetened whole milk. With one out of three children overweight or obese, those excess calories and that added sugar are anything but wholesome.

TruMoo makes fat-free and low-fat chocolate milk with 35 percent less sugar and 120 to 140 calories per cup (8 oz.). And you can cut even more sugar by mixing it with plain fat-free or low-fat milk. Or just buy chocolate syrup and add a teaspoon or two to your milk. A little chocolate goes a long way. 🍌

The Center for Science in the Public Interest (CSPI), founded in 1971, is an independent nonprofit consumer health group. CSPI advocates honest food labeling and advertising and safer and more nutritious foods. CSPI's work is supported by *Nutrition Action Healthletter* subscribers and foundation grants. CSPI accepts no government or industry funding. *Nutrition Action Healthletter*, first published in 1974, accepts no advertising.

Nutrition Action Healthletter

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RIGHT STUFF

HIDDEN & HEALTHY



"#DidYouKnow we now offer a **Hidden Menu**? Check out our fresh twist on some of your favorite menu items." With that January 9th tweet, **Panera** (@panerabread)

announced a new secret menu to its Twitter followers.

As of February, the menu was still hidden. The stores offer no clue, but if you ask, they're happy to take your order. Ask.

The Hidden Menu has six "Power" meals. That means they have fewer calories, "limited processed carbs," and are an "excellent source of protein." They're also free of salty, fatty ingredients like cheese, commercial salad dressing, and fried tortilla strips.

For breakfast, try the **Egg White Bowl with Roasted Turkey** (and baby spinach, roasted red bell pepper, and pesto). It's got 190 calories, 25 grams of protein, only 1 gram of saturated fat, and no bread or other refined carbs. Sodium (500 milligrams) is the only downside.

For lunch, choose from the **Chicken Hummus Bowl**, **Mediterranean Chicken Salad**, **Mediterranean Roasted Turkey Salad**, or **Steak Lettuce Wraps**. All have 280 to 360 calories and 22 to 35 grams of protein. The sodium (310 to 590 mg) is surprisingly low for a restaurant lunch. (Exception: the Roasted Turkey has 830 mg, but you can trim it to 380 mg if you skip the olives and pepperoncini.)

The olive oil packet holds a tablespoon—the perfect amount to complement the fresh-squeezed lemon juice that comes on the salads.

Don't eat meat? Panera is often willing to swap ingredients. *Psst*. Pass it on.

Panera: (314) 984-1000

FOOD PORN

TIRAMIS-OOPS



"Ladyfinger cookies soaked in espresso and coffee liqueur layered with Mascarpone, dusted with cocoa powder and served with chocolate shavings." That's how **Maggiano's Little Italy** describes its **Tiramisu**.

And when it arrives at your table, you won't think "big splurge." It's not a towering slice of cheesecake from

The Cheesecake Factory or a pizza-sized cookie from Uno Chicago Grill. Tiramisu looks like, well, a mini-splurge.

Wrong.

That diminutive rectangle holds 830 calories and 28 grams of saturated fat (1½ days' worth) plus 15 teaspoons of sugar. Gulp.

Who would guess that it's about equal to a Pizza Hut Personal Pan Pepperoni Pizza topped with a half cup of Häagen-Dazs Coffee ice cream? Or a dozen Dunkin' Donuts Glazed Munchkins doughnut holes?

And we're guessing you didn't show up at Maggiano's just for dessert. So those 830 calories—okay, 415 if you share your tiramisu with a friend—come *after* you've polished off your entrée (800 to 2,400 calories), which may have come after your appetizer (600 to 1,700 calories). Talk about higher math!

Despite its dainty-ish looks, tiramisu is never a light dessert. Even so, Maggiano's version manages to top the tiramisus at other popular Italian chains like Romano's Macaroni Grill (690 calories) and Olive Garden (510 calories).

It may be Maggiano's Little Italy. But the menu makes for big patrons.

Maggiano's Little Italy: (800) 983-4637

dish OF THE MONTH

Mediterranean Bulgur

Stir ¾ cup of bulgur into 1 cup of boiling water. Cover, turn off the heat, and let stand until the water is absorbed, 10-12 minutes. Meanwhile, chop 1 pint of cherry tomatoes and toss in a large bowl with 1 Tbs. red wine vinegar, 2 Tbs. extra-virgin olive oil, 1 minced garlic clove, ¼ tsp. salt, and freshly ground black pepper. Toss in the warm bulgur.