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Perils of portion distortion Food serving size and people are bigger and bigger

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It's dinner time. Do you know how much food you're eating?

Probably not.

That's because we are a nation of portion distortion. For the last 30 years, the amount of food designed to be eaten at one sitting has ballooned to such an extent that most diners no longer have any idea what constitutes a reasonable amount of food.

A single 20-ounce bottle of soda is actually 2 1/2 servings. Muffins are the size of small cakes. A large order of french fries? That's a third of the calories you should eat in a day.

Most Americans wouldn't know a sensible portion of pie if it hit them in the face.

As a result, a cadre of the nation's top doctors and nutrition researchers agree that ground zero of the obesity crisis is this: America has no idea how to eat normally.

"Super-sizing is a public health issue of the highest priority," said Harvard University's Dr. George Blackburn, a professor of nutrition and surgery, in testimony at a recent hearing of the Food and Drug Administration's obesity working group, whose recommendations are due out this month.

Super-sizing has become so controversial that McDonald's, the corporation that popularized the concept, last week announced it was discontinuing its 42-ounce super-size soda and its 7-ounce super-size order of fries at its 13,000 U.S. stores as part of a "healthy lifestyle initiative."

Of course, customers can still get a large order of fries, which is 6.2 ounces -- still well above the original 2.4-ounce order of fries that McDonald's began serving in the 1950s.

Portion creep really took hold in the 1970s, when McDonald's introduced a large

order of fries and packaged-food manufacturers became enamored with the profits to be made from jumbo portions. Since then, foods like hamburgers and bagels have increased in size by 2 to 5 times.

Even the 1997 revision of the "Joy of Cooking" kicked up portion sizes, lowering the number of servings per recipe but keeping the amount of food the same.

As a result, women are eating 300 more calories a day and men 168 more than they did 20 years ago, according to a new study by the Centers for Disease Control and Prevention. And as any nutritionist will tell you, all it takes is 100 extra calories a day to gain 10 pounds a year. To work off those 100 calories, you'd have to walk 25 minutes each day.

Physicians like Blackburn propose a simple fix: Begin a public health campaign to reduce by 10 percent the amount we eat every day. That's the least we can do in a country where two-thirds of adults are overweight.

But to other health experts, getting the country to push away from the table will not be a simple matter of willpower; it will be an exercise in mass re-education.

FDA-mandated serving sizes on packaged food and the U.S. Department of Agriculture's Food Guide Pyramid guidelines have so confused consumers that people simply don't know how to eat realistically, they say.

Furthermore, Americans are programmed to eat more than they should and can't stop eating even when they are full or the food doesn't taste good.

"Part of the way our brain gets the message we're full is satiety, but we're not getting it," said Dr. David Spiegel, associate chair of psychiatry and behavioral sciences at Stanford University.

We overeat, he says, because much of the food that makes up the American diet is inexpensive, dense with calories and highly processed. But it isn't satisfying, so we eat more to try to feel full.

In food-centric European countries, he said, people aren't as obese because the quality of food is healthier and better tasting; people are satisfied with less.

Certainly, the portions are smaller -- even of junk food. A New York University study examining fast food in Europe in 1998-99 showed the largest order of fries in the United States contained 610 calories. The largest in the United Kingdom was 446.

That's one reason why obesity rates can be high among the children of new immigrants, said Nancy Lee Hsieh, who coordinates the nutritional needs for critical care patients at Stanford Hospital and Clinics.

Hsieh herself experienced a sort of dietary whiplash when she arrived from Taiwan in 1972.

"The dessert is what shocks you," she said. "You're just not used to so many high-calorie products and sweets. There is just so much of it everywhere."

Abundance is an American cultural norm. Immigrants always have come on the promise of a land of plenty. Thanksgiving, which celebrates the first European immigrants, is based on eating until we're just about sick. The all-you-can-eat restaurant sprung up as early as the 1800s, when Chinese immigrants in San Francisco were looking for a way to attract hungry gold miners.

It's no wonder we can't put down the fork, said Brian Wansink, a professor who founded the Food & Brand Lab at the University of Illinois at Urbana-Champaign. His team recently conducted a series of creative studies examining how certain cues and packaging sizes can make people eat more.

In one experiment, students were invited to the lab for tomato soup. Some were given ample portions in a standard bowl. Others ate from a bowl with a hidden pump that kept them from getting to the bottom.

The students with the trick bowl ended up eating a third more soup.

In another, Wansink and his team took to a Chicago-area theater and handed 161 moviegoers coupons for free popcorn and a drink. One group was given fresh, hot popcorn in medium and large sizes. The other group received 14-day-old popcorn, also in medium and large buckets.

People who received the larger buckets, whether stale or fresh, ate up to 61 percent more popcorn than those who got the smaller buckets. Those with the large containers of fresh popcorn still overate, but they stopped a little sooner than those with the stale popcorn.

The researchers concluded that given better-tasting food, people will still eat more if given more, but they'll slow down sooner because they feel satisfied sooner.

That's not to say exercise doesn't matter, the researchers said.

"Most people think that portion sizes and 'evil companies' are responsible for us being overweight, and I think they are no more responsible than those things that keep us from being less active, such as garage door openers, elevators, PlayStation and the Internet," Wansink said.

Peter Meehan, head of Newman's Own Organics, based in Aptos (Santa Cruz

County), said food manufacturers walk a fine line when it comes to making snacks that satisfy, yet keep people coming back for more. He said it's common practice for food manufacturers to pull back a little on flavorings in some foods so consumers will not be completely satisfied with a small amount.

"If you put too much coating or flavor on a chip, you say, 'Hey - that's good. I'm done. I'm satisfied.' And so you don't reach back into the bag for more."

Food manufacturers have also been on a portion binge. It costs just pennies to increase the size of the package, but consumers are willing to pay much more to buy it. In fact, the bigger sizes often seem like a bargain -- after all, who can resist getting two fast-food pies for \$1 for a 32-ounce Big Gulp that is half the price, per ounce, than its more reasonably sized 16-ounce cousin?

For consumers, navigating the labels of food packaging can range from challenging to laughable.

What's on food labels is governed by the FDA. The U.S. Department of Agriculture determines a different set of serving sizes on its food pyramid, based on general consumption amounts and health studies.

Under USDA guidelines, one slice of bread, for example, is one serving, even though people usually eat two slices in a meal. FDA labeling rules are as vexing. For example, one frozen pot pie is listed as providing two servings, which allows the manufacturer to list 590 calories per serving even though most consumers eat the whole thing for a total of 1,140 calories, half of the calories most men need in a day.

The FDA is under pressure from the Federal Trade Commission, consumer groups such as Center for Science in the Public Interest and professional health groups such as the American Dietetic Association to make serving sizes on packages less confusing. Although the FDA's obesity working group is studying nutrition labels, no formal proposal about serving size is under consideration.

The USDA, on the other hand, is revamping the food pyramid and its related government recommendations next year.

Restaurants are feeling similar pressure to reconsider portion sizes, although a study last year in the Journal of American Medical Association showed that although portions of salty snacks, fast-food hamburgers, fruit drinks and other products have increased significantly since 1977, restaurant portions were smaller.

Serving sizes are a particular peeve of Emily Luchetti, pastry chef at Farallon restaurant in San Francisco, who has not changed the size of her desserts for years. She simply serves what she thinks is the best size for the dessert. But it's

a balance.

"So diners aren't disappointed when they first look and think it is too small before they get into it, I make it appear bigger with sauces and garnishes," she said. "Some people equate value in terms of money and serving size. They are getting a better value if they can get two meals out of a dish. Problem is most of the times they don't take it home and save it for another meal; they eat twice the amount in one serving."

At the Grand Cafe in San Francisco, chef Paul Arenstam constantly dances between perceived value and serving size. Six ounces of protein is his guide -- double what the USDA says is a serving of meat -- even though he says diners are becoming less demanding about having a lot of starch on the plate, or having so much they can take some home in a doggie bag.

"But people want to get their money's worth. You cut portion size to your own detriment sometimes," he said, adding that smaller portions and variety are starting to outstrip quantity. "They want to taste a little bit of everything, not just a big piece of New York steak."

That's especially true if other people are around, said Jeffrey Sobal, a nutrition sociologist at Cornell University.

"We don't want to eat a lot in public because people have gotten the health message that it's bad to be a glutton or to overeat," he said. "In private, it's another world."

Clark Wolf, a restaurant consultant who divides his time between New York and the Bay Area, says buffets and elaborate tasting menus at upscale restaurants are passé.

"In the old days, the buffet was a mark of plenty. Today, 'plenty' has become lower class. Now it means you're poor and you eat bad things and you're out of shape," he said.

That's why restaurants serving small plates are popular. "You have more control over your food, but you still have the ability to cover the table and get the feeling of plenty without feeling overstuffed," he said.

And, of course, there is the notion that we simply need to be responsible for ourselves, not counting on the government or chefs or food manufacturers to help us eat less.

That's the position of Bonnie Modugno, chief nutritionist for McDonald's who also works in private practice in Southern California. She has helped the company develop a new, healthier menu line featuring wheat buns and yogurt.

People need to simply get in tune with their bodies and pay attention to when they feel almost full, then stop eating, she said. And, like many spokespeople for the food industry, she hammers home the idea that lack of exercise is at the heart of the obesity crisis.

"My position is that people have to be responsible for themselves," she said. "Would you go into an electronic store and buy everything the salesman suggested? How absurd is that? There's nobody at McDonald's shoving fries in your mouth."