

Behavioral nutrition is one weapon in obesity fight

August 20 2009, By Don Sapatkin

Want your children to eat less? Let them serve themselves. They probably won't dole out a supersize portion on their own.

Or pour drinks into tall, narrow glasses rather than short, wide ones; they'll think they are getting more (so will you).

With Americans spending billions of dollars a year on fat-loss techniques ranging from celebrity diets to stomach-stapling surgery, the relatively new field of behavioral nutrition examines more down-to-earth questions.

Can you reduce the attraction of sweets? Can you supersize fruits and [vegetables](#)? (Yes in both cases, although it depends on the child.)

"It's a matter of asking: What are children experiencing and how are those experiences shaping their eating?" said behavioral nutritionist Jennifer Orlet Fisher, an associate professor in Temple University's Department of Public Health.

Among the huge army of scientists attacking the [obesity epidemic](#), Fisher occupies a narrow field: how children's eating behaviors are influenced by their early family environment and, for her current research, portion sizes.

If that sounds mundane, consider this: Obesity is among the most serious threats to Americans' health, with rates of obese and [overweight children](#)

tripling since the 1960s. The cause is mostly too many calories going in and too few going out. The solution is largely getting people to eat less and exercise more.

Almost nothing has worked.

"Portion control," said Hollie Raynor, an associate professor of nutrition at the University of Tennessee, "is considered to be one of the large contributing factors to overeating."

Fisher, who is trained in nutrition with an appreciation for [developmental psychology](#), often gets ideas for research in her own kitchen while trying to satisfy 5-year-old twins Theo ("the adventurous eater") and Ian ("the cautious eater").

She gathers hard data in her Family Eating Laboratory at Temple, where eating can be measured, videotaped and manipulated under tightly controlled conditions.

On a recent evening, three children sat in little plastic chairs at a table in a room with lions and giraffes painted on the walls. When an assistant said "go," they served themselves pizza -- their choice of zero, one or two 3.5-by-4.5-inch pieces weighing a total of 7.94 ounces.

Fisher watched through a one-way mirror as 6-year-old Sydney Trusty took both pieces. Sydney munched slowly -- 18 minutes, 28 seconds on the first piece, and just enough time for two bites of the second piece before the session ended. A hidden scale measured weight changes on her plate by the second.

On other evenings, the children were offered other shapes and sizes -- cut in four, six or eight pieces -- but always weighing the same total of 7.94 ounces.

To simulate a family meal, they also got unchanging amounts of corn, applesauce, milk and cookies. Since the point of this study is to determine how a portion's shape and size influence how much a child eats, the laboratory staff later use videos of each session to match bites with weight measurements, and then exclude everything other than the pizza.

As data on 41 children in 64 sessions over eight weeks are still to be crunched, Fisher doesn't have results. Her early impression, however, is that children have been eating less of the same 7.94 ounces when the pizza is cut into a smaller number of larger pieces than a larger number of smaller pieces.

If borne out by analysis, this would be a surprise, because adults tend to be "unit-eaters," judging portions more by the number of units than by their size.

It also would be easy to translate into tips for parents, joining others discovered by the two or three dozen researchers who focus on environmental factors that shape how children eat without their knowing it.

"I've always been surprised at the amount to which our eating behaviors are learned," said Fisher, whose postdoctoral research at Pennsylvania State University reported that children, left to their own devices, tend not to serve themselves huge portions.

Scientists say basic behaviors that underlie future eating patterns develop in the first several years of life, and are strongly influenced by family practices and beliefs.

Indeed, research by Birch, Fisher and others suggests that breast-feeding helps infants prepare for solid food (by introducing a variety of flavors

from the mother's diet) and learn how to control how much they eat (by requiring an active role in getting the milk) in ways that bottle feeding does not.

How parents eat, what they keep in the pantry and whether healthy foods are fun or forced all teach ways to behave with food.

And behavior and environment turn out to play major roles in what we consume.

"We find, in a family dining situation, the person who serves themselves immediately before you (is responsible for) between 25 and 30 percent of how much you eat," said Brian Wansink, director of Cornell University's Food and Brand Lab.

At home in Jenkintown, Pa., Fisher, 39, involves her twins in meal preparation to make food less threatening. "When they were toddlers, they used to help me push the button to the microwave," she said.

She gives them choices -- broccoli or peas? -- and grants their 5-year-old-boy wishes, such as dipping broccoli in ketchup.

"I always ask them to try one thing, and I always ask them what they think of it," she said. "They may say, 'That's gross,' and that's OK."

Wansink, the author of "Mindless Eating: Why We Eat More Than We Think," describes Fisher as "a real researcher who studies real problems and comes up with real solutions."

"When it comes to childhood obesity or obesity in general, people love to point fingers at the fast-food industry or the food industry or government," he said, adding that Fisher's work "shows how a parent or other gatekeepers in a household can make a difference in childhood

[obesity](#), tonight."

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