

Childhood Obesity: Weighing in on the Causes of an Epidemic

When it comes to the "epidemic" of obesity, the most recent thinking points to environmental factors as the leading culprit. Childhood obesity in particular has increased rapidly over the past two decades, and concerns over the epidemic have spurred both public and policy debate, leading, ultimately, to calls for congressional legislation to address the issue. But what do we actually know about the environmental factors linked to childhood obesity? A growing body of recent RAND research provides some clues.

Broad Perspective; Thin Data

The rapid increase in childhood obesity over the past few decades has been blamed on a slew of environmental factors, everything from reduced physical education at school to increased homework loads, campus vending machines, television, larger portion sizes, fast-food restaurants, and video games. Understanding whether these factors really have an impact requires looking at data trends over the time frame in question, something that a new RAND study has done.

The study finds that we have very little reliable trend data, which severely constrains what can actually be said. But some trends do pop out and are suggestive. For example, children have less free time than previously because they spend more

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time away from home in structured settings, primarily school, day care, and after-school programs. As time in those settings away from home increases, so does the importance of physical activity in those settings. However, there is no evidence that physical activity during school hours has increased, and there is no national data about physical activity in after-school or child care programs.

Beyond a lack of physical activity, there has been a shift toward snacking. The trend in snacking is toward foods high in calories: refined carbohydrates (especially chips, crackers, and pretzels), the intake of which has tripled from the mid-1970s to the mid-1990s, and soft drinks, the intake of which has doubled over the same time period.

We Are What We Eat

This shift has been encouraged by the relative prices of what we eat. From a baseline of 100 during 1982–1984, the price index for fresh fruits and vegetables increased to 258 by 2002 (far exceeding general inflation), while the price index for soft drinks increased only to 126 by 2002 (below general inflation). Does having access to affordable fruits and vegetables make a difference in obesity in children?

A new study looked at this issue, merging data from the Early Childhood Longitudinal Study-Kindergarten Class of 1998–1999—a nationally representative sample of kindergarten children followed for several years—

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INTERVIEW



Combating Obesity: Getting Around the Hard-Wiring

As a Senior Natural Scientist at the RAND Corporation, Dr. Deborah Cohen has focused on how structural factors (physical and social environments) affect health and health behaviors. For example, she has examined the association between the availability of alcohol and other foods on drinking and eating behaviors, as well as the association between neighborhood characteristics, social cohesion, and obesity in adolescents. She is the co-author of the book, Prescription for a Healthy Nation: A New Approach to Improving Our Lives By Fixing Our Everyday World (in paperback in May 2006).

Can you elaborate a little on how the environment affects what we eat?

People respond to their environments—the sights, sounds, people, the design of communities and buildings, and the availability of foods and beverages around them. In the past two decades, the availability and convenience of foods has increased dramatically, which makes it very easy for us to eat too much.

Why are we drawn to such foods?

We are "hard-wired" to eat food that is available. In fact, it is much more difficult for us to refuse food than to eat it. Studies have shown that decision-making capacities and self-control are limited resources, and that when a person chooses to refuse food that is otherwise tempting, the person uses up some of this capacity. Compared to those who are not tempted with food, people who are asked to refuse food perform worse on subsequent tasks that require analytical skills. Eating is an automatic behavior, which frees us to concentrate on other issues.

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Combating Obesity *continued*

How can we deal with such challenges?

Because of the hard-wiring, it is very difficult to shield ourselves from the environment, which currently has far more non-nutritious than nutritious foods available. Our ultimate goal should be to change the environment, so healthy eating would occur without anyone having to think about it.

Can you give an example of changing the environment?

Sugar-sweetened beverages are everywhere. They are marketed as if they are a critical part of our diet—they even take up entire aisles in supermarkets. But they have no nutritional value. Removing such drinks from vending machines and other convenient areas might help. Some studies have already shown that restricting their use helps children and adults control their weight.

Are such interventions occurring today?

Schools all over the country are getting rid of sugar-sweetened beverages from vending machines. But such interventions should extend into other areas, such as worksites, neighborhoods, and health care settings. Take hospitals, for example. Given that the average person is already overweight, it makes sense that health-care settings should be setting a good example by eliminating non-nutritious food and beverages from their dining areas—in much the same way that tobacco products were removed over the past two decades.

How could such interventions be applied more broadly?

Since people have a hard time choosing healthy foods, efforts to maximize exposure to healthy foods should be done in places where people spend the most time. Schools are already on board, trying to change their menus, sell healthy items, and reduce the à la carte “junk” foods. Work sites could follow suit and provide pre-measured meals with appropriate portions and combinations of healthy foods for their employees. Food companies that are concerned about consumer health could package their foods in appropriate individual portion sizes; and instead of “super-sizing” foods, restaurants could normalize food portions, so people get just what they need—no more, no less. ■

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Promising Practices Network

on Children, Families and Communities

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with metropolitan data on food prices and data on the per-capita number of restaurants, grocery stores, and convenience stores in the child’s home and school zip code.

The study found that lower local real prices for fruits and vegetables did predict a lower gain in body mass index (or BMI, a ratio of weight to height) between kindergarten and third grade. And while the sample sizes were too small to show statistically significant differences across subgroups, the estimated effects were meaningfully larger for children in poverty, children already at risk for overweight or overweight in kindergarten, and Asian and Hispanic children.

Neighborhood Watch: Not Just for Stopping Crime

While it is easier and cheaper for children to consume excessive calories and less likely that they will expend them in routine physical activity, it is also true that low-income groups and ethnic and racial minorities are more affected by the obesity epidemic than is the general population. This health disparity points to the potential importance of social factors. RAND research examined whether the types of neighborhoods our children live in affect their weight.

Using data from the Los Angeles Family and Neighborhood Survey, a new study examined information from 807 adolescents who live in 65 neighborhoods across Los Angeles to determine whether close-knit neighborhoods affect weight. Close-knit neighborhoods were defined as those with a number of factors, including having people who are willing to help their neighbors, having adults whom children look up to and who watch out to see that children are safe, and having neighbors who share the same values.

Such neighborhoods have been shown to play a role in health problems related to adult obesity—such as cardiovascular disease—and the new research shows they also have an effect on childhood obesity. Measured again by BMI, children living in close-knit neighborhoods tend to have *lower* BMI-for-age than those living in neighborhoods that are less close-knit. ■