

The Obesity Fight: Obesity Puts Children at Risk  
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THE DIAGNOSES: Type 2 diabetes, gallstones, liver failure ...  
THE PATIENTS: Children at risk.

Ten years ago, doctors saw these diseases in adults. Now, as the number of overweight kids rises, so does the danger.

The nation's childhood obesity problem is hitting pediatricians' offices as children, aging before their time, show up with conditions more common in middle-aged adults.

In Atlanta, as across the country, doctors are seeing young patients with Type 2 diabetes, gallstones, and even nonalcoholic cirrhosis that can require a liver transplant.

Although the overall numbers of cases are small, the nation's physicians are expressing concern that rising obesity in children has grave implications for the future. As children put on additional pounds, their rates of diseases are likely to increase, shortening lives and expanding demand for health care.

"Childhood obesity is not just a cosmetic problem," said Dr. William Cochran, who specializes in treating overweight children and adolescents at the Geisinger Clinic in Danville, Pa. "It's a serious health problem facing our entire society."

The occurrence of adult diseases in obese children has been the subject of much discussion in the medical community lately. It was discussed at an American Academy of Pediatrics meeting in Atlanta this month and has been the topic of articles in recent medical journals.

Fatty liver disease, a key cause of cirrhosis, was not even recognized in children until the mid-1990s, said Dr. Miriam Vos, a pediatric hepatologist at Emory University School of Medicine. Now, she said, it's the most common liver disease in children.

Such diseases are just the latest result of a steep rise of obesity among children over the last two decades.

According to the National Center for Health Statistics, about 34 percent of U.S. children ages 6-19 are overweight.

About half of those — or 17 percent — are considered obese, up from 11 percent in 1994. Meanwhile, an estimated 66 percent of American adults are obese or overweight, compared to 56 percent a dozen years ago. Health statisticians base the ratings on the body mass index, or weight-to-height ratio, adjusted for gender.

Rates are highest among African-American and Hispanic adolescents. Statistics from 2002 showed that almost 24 percent of black girls 12-19 and almost 19 percent of black boys in the same age group were obese. Likewise, almost 20 percent of Mexican-American teenage girls and 15 percent of boys were obese.

Poverty is a key factor, experts say. About 20 percent of children and adolescents below the poverty level were considered obese.

Research shows — and doctors are seeing — that overweight children, like overweight adults, have more hypertension, breathing disorders, sleep problems and bone-and-joint complications than their thinner counterparts. Long term, they are at greater risk of developing heart disease and some forms of cancer.

But researchers are only beginning to realize the full effects of severe obesity in children. Often conditions intertwine and overlap. Uncontrolled diabetes, for instance, is linked to fatty liver disease.

Type 2 diabetes, formerly referred to as adult-onset, now represents up to 45 percent of new diagnoses of diabetes in children and adolescents, according to surveys reported in pediatric journals. Unlike so-called juvenile diabetes, or Type 1, it is linked to weight.

"This has been developing insidiously," said Alice Smith, who manages a diabetes prevention program as part of her duties at Children's Healthcare of Atlanta. "It tracks along with the increase in prevalence of obesity over the last 15 to 20 years."

Uncontrolled diabetes can result in amputation of limbs, blindness and kidney disease. It is aggravated by heavy consumption of fats and sugars, which can also tax the liver and cause damage, eventually possibly leading to cirrhosis.

In a study published this month, researchers at the University of California, San Diego, found that 38 percent of obese children among a group of 742 accident victims had fatty livers, a problem that for many would have developed into a serious health threat.

Five percent to 10 percent of adults with fatty livers eventually develop cirrhosis and may need transplants, said Vos, who specializes in fatty liver disease in children at Children's Healthcare of Atlanta.

Although cirrhosis is still uncommon in children, some teenagers have already had transplants as a result of obesity-related cirrhosis; others are awaiting transplants, Vos said.

"If you say a third of obese children have liver disease, and 10 percent of them will end up with cirrhosis, that is a very frightening number," she said.

Dr. Mark Wulkan, a pediatric surgeon at Emory Medical School and Children's Healthcare, sees the consequence of obesity in children's gallbladders, the pear-shaped organs that store bile.

Surgeons, he said, used to talk about the "three F's of gallbladder disease — fat, forty and fertile," meaning most patients were middle-aged women.

Now, Wulkan said, it's showing up in adolescents, and "occasionally even in younger kids."

Eight years ago when Wulkan started work at Egleston, the seven pediatric surgeons removed a child's gallbladder because of gallstones every couple of months. Now, he said, the rate is more like every couple of weeks.

Gallstones — deposits of cholesterol or calcium salts in the gallbladder or nearby bile ducts — are often symptomless. If they cause pain, or if the gallbladder becomes swollen or infected, it should be removed, said Wulkan.

Some children get gallstones as a result of other medical conditions, such as sickle-cell anemia. But Wulkan said pediatric gastroenterologists are seeing more gallstones. "It's clearly related to weight," he said.

One of the few recent studies that attempt to quantify the increase of gallbladder disease in children came from Germany this year. Scientists at the University of Ulm looked at 493 obese children and adolescents 8-19 years old. They found gallstones in 10 — or about 2 percent — all of whom had been through puberty. Eight were girls.

Physicians dealing with obese children who have these formerly adult conditions say the complications are likely to become even more common if the country doesn't do better by its children's nutrition.

"It has to be a multifaceted approach," said Cochran of the Geisinger Clinic, who spoke at the American Academy of Pediatrics in Atlanta earlier this month. "Children, families, schools, communities, health care providers, insurance companies, the government. . . . No one institution can solve this problem."

## THE FACTS, FIGURES

- 17: Percentage of American children who are obese
- 19: Percentage of poor children who are obese
- 34: Percentage of children who are overweight or obese
- 25 million: Number of U.S. children and adolescents who are overweight
- 8: Percentage of elementary schools with physical education
- 20: Percentage of children who consume more than four sodas a day
- 50: Percentage of children 12-21 who regularly participate in rigorous physical activity

## PERCENTAGE OF CHILDREN IN U.S. WHO ARE OBESE

Jemal R. Brinson, Staff

- 1971-74

All children: 5%

Low-income children: Approx. 6%

African-American children: Approx. 6%

- 1976-80

All children: More than 5%

Low-income children: Approx. 7%

African-American children: Approx. 8%

- 1988-94

All children: Almost 10%

Low-income children: Approx. 14%

African-American children: Approx. 13%

- 1999-2000

All children: 15%

Low-income children: More than 17%

African-American children: Approx. 19%

Sources: *The Future of Children* and National Health and Nutrition Examination Surveys.