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Do Obese Kids Become Obese Adults?

By Laura Blue

If you're concerned that your child's baby fat has ballooned into a more serious problem, join the club. About 18% of American children aged 6 to 19 are now overweight, and childhood obesity rates are rising around the world. But what does early overweight mean for youngsters in adulthood: will overweight kids necessarily become overweight — and unhealthy — grown-ups? Epidemiologist **David Freedman** from the Centers for Disease Control and Prevention's division of Nutrition, Physical Activity and Obesity studies that question. Though the science has been less than conclusive about the precise health risk factors obese children will face in the future, Freedman's research shows at least one clear link: obesity persists, from childhood on.

Q: Are overweight and obese children more likely to become obese — and sick — as adults?

A: I'd say the answer [to the first part] is: definitely.

It depends somewhat on the definition of childhood overweight and obesity, and it also depends on the age of the child. For example, an overweight or obese adolescent is much more likely to become an obese adult than is an overweight one-year-old. But even down to the youngest ages that I've worked with, age five, overweight five-year olds maybe have a tenfold increased risk of becoming obese adults compared to relatively thin five-year-olds.

I was lucky enough to be able to work with data from probably the largest study of cardiovascular-disease risk factors done in the U.S.: the Bogalusa Heart Study. Bogalusa is a community about 60 mi (100 km) northeast of New Orleans. This is a small town — maybe the population is about 20,000 — and the study was started in the early 1970s, primarily by Dr. Gerald Berenson. We examined all the children in this town for lipids, blood pressure, weight and height, skin-fold thicknesses, smoking, alcohol consumption — anything we thought might be related to heart disease in adulthood. Of those children, the ones who had a body mass index (or BMI, a ratio of weight to height that's commonly used to define overweight) in the 95th percentile or higher when compared to a CDC reference population — as 18% of American children now have — about two-thirds grew up to be very obese as adults, with a BMI of 35 or higher.

I think there's very suggestive evidence from the Bogalusa Heart Study to show that childhood obesity is related not just to weight, but also to poor health in adulthood. When the first children in the study became older adolescents, particularly when they began driving, there were some deaths, due to suicide, homicide and accidents, so we were able to look at the amount of atherosclerosis in their coronary arteries and aorta. And we published our first paper on this in the mid '80s. It was certainly the first paper to show that high levels of lipids and obesity — were related to the very earliest stages of atherosclerosis.

But in terms of clinical complications of cardiovascular disease the cohort really hasn't aged enough for us to study that. I think the oldest subjects in the study now, who were examined as children, are about 45. Still, there have been probably at least a dozen studies that have been able to do this around the world. Many studies have been conducted in England, but in all honesty the results have been somewhat conflicting. Some studies found a slightly increased risk of cardiovascular disease. Some studies — but not all of them — have found an increased risk of mortality. I think, though, that part of the reason for these discrepancies is that to obtain results from these long-term longitudinal studies, many have to use baseline measurements that were taken in the '50s and '60s. And kids who were examined back then were much, much thinner than kids are now. Even children who would have been considered relatively heavy then are not much heavier than average children now, at least in the U.S. So I think in terms of studying the complications of childhood obesity, those studies have limitations.