Letter to the Editor: Incidence of childhood obesity in the United States

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Incidence of Childhood Obesity in the United States

TO THE EDITOR: Cunningham et al. (Jan. 30 issue) do not provide important information about weight change from kindergarten through eighth grade. It is obvious that children who have the highest body-mass index in kindergarten or at birth would be at highest risk for the subsequent development of obesity by eighth grade. They would have to gain the same or even less weight between kindergarten and eighth grade to cross the arbitrary threshold for obesity. Thus, if every child gained the same amount of weight from kindergarten onward or, for that matter, from birth onward, those who had the highest weights at birth or in kindergarten would ultimately have the highest risk of being overweight or obese. Over time, however, if children who were not overweight in kindergarten gained more weight per year, they would catch up and would have a similar or higher prevalence of obesity.

Studies of obesity in children must include measures of velocity of weight change over time. It is likely that the velocity of weight change may be a more important determinant of health than body-mass index at earlier ages.

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TO THE EDITOR: We would like to ensure that some key points in the article by Cunningham et al. are not overlooked. Cunningham et al. do not discuss the results across different socioeconomic groups, and the corresponding editorial by Gortmaker and Taveras stresses that there is no variation in the risk of obesity according to socioeconomic status. However, the article actually provides strong evidence of an increased risk among more disadvantaged children — this is a critical issue for health policies related to obesity.

In the analyses involving all nonobese children and those involving normal-weight children at baseline, children in the three lowest socioeconomic quintiles were significantly more likely to become obese by eighth grade than their...

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counterparts in the highest quintile. This indicates an increased risk of weight gain associated with disadvantage.

The lower socioeconomic groups not only had a higher prevalence of overweight and obesity at baseline, but these differences persisted and appear to have widened over the 9 years of follow-up. By eighth grade, the prevalence of obesity among children in each of the three quintiles of the most disadvantaged children was more than double that of their most advantaged counterparts.

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THE AUTHORS REPLY: Childhood obesity is complex, and multiple approaches are needed to identify vulnerable children. Although we agree with Kuller that quantifying growth trajectories may be informative, doing so is less practical as a screening tool for assessing the future risk of obesity than determining weight status at the age of 5 years because trajectories require multiple points of measurement. Our principal finding was that new cases of obesity are most frequent at the youngest ages. This finding, which offers new insight into windows for prevention, complements the off-reported data on cross-sectional prevalence.

Boelsen-Robinson and colleagues emphasize another complexity of childhood obesity — important differences in the prevalence of obesity across socioeconomic groups. We would like to highlight three patterns that emerge from studying incidence.

First, to understand patterns of obesity related to socioeconomic status, a comparison of the wealthiest families with the poorest families is not sufficient, since a child's weight in kindergarten matters across the socioeconomic spectrum. We did not find a linear socioeconomic gradient in the incidence of obesity (Fig. 1). In the entire cohort, the incidence of obesity from 5 through 14 years of age was significantly lower among children from the wealthiest 20% of families than among all other children. The risks of obesity were relatively flat among children in the poorer socioeconomic quintiles; the greatest risk of becoming obese was among children from middle-income families, and there was some attenuation in the incidence of obesity only among children in the second wealthiest quintile.

Second, the risk of obesity was higher from 5 through 14 years of age across socioeconomic quintiles among children who had been overweight as kindergartners than among those who had a normal weight in kindergarten. Indeed, the risk of obesity among children from the poorer 60% of families was double the risk among children from the wealthiest 20%. Still, even among children from the wealthiest quintile, the risk of becoming obese was 5 times higher among children who had been overweight in kindergarten than among children who had had a normal weight in kindergarten. Indeed, the risk of obesity among children from the poorer 60% of families was double the risk among children from the wealthiest 20%. Still, even among children from the wealthiest quintile, the risk of becoming obese was 5 times higher among children who had been overweight in kindergarten than among children who had had a normal weight in kindergarten; among children from the poorest quintile, the risk of obesity was approximately 3.4 times higher among those who had been overweight in kindergarten than among those who had had a normal weight in kindergarten.
Third, socioeconomic status is a stronger predictor of obesity among normal-weight children than among overweight children. The relative risk of becoming obese among children with lower socioeconomic status as compared with children with higher socioeconomic status was greater for normal-weight kindergartners than for overweight kindergartners.

The patterns of the incidence of obesity during childhood indicate the complexities of the socioeconomic context of this health problem and the reach of the risk of obesity across the socioeconomic spectrum in the United States.

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A Trial of Mass Isoniazid Preventive Therapy for Tuberculosis Control

TO THE EDITOR: In reporting the results of the Thibela TB study, Churchyard and colleagues (Jan. 23 issue) suggest that continuous isoniazid preventive therapy should be considered for persons at highest risk for tuberculosis (e.g., people with human immunodeficiency virus [HIV] infection), even though several studies in sub-Saharan Africa (including theirs) have shown that the protective effect of isoniazid preventive therapy has limited durability among HIV-infected adults. What their study implies, instead, is a need to discourage the use of isoniazid preventive therapy in areas where there is a high incidence of transmission of tuberculosis and HIV infection and to urgently reassess the data regarding the use of isoniazid preventive therapy in these areas, since isoniazid preventive therapy is increasingly recommended in regions of Africa where there is a high burden of tuberculosis and HIV infection.2

In high-incidence areas, 4% of asymptomatic patients who have HIV infection and smear-negative tuberculosis with normal findings on chest radiography have positive sputum cultures for Mycobacterium tuberculosis,3 and up to 30% of persons with HIV-associated tuberculosis discontinue treatment for tuberculosis, in part because of gaps in the health systems in low-income and middle-income countries.4,5 Therefore, continuous isoniazid preventive therapy in areas with a high prevalence of tuberculosis and HIV infection may cause drug pressure, the spread of drug-resistant tuberculosis, or both, especially since there are limited methods of diagnosis and treatment for people who have latent infection with drug-resistant strains of M. tuberculosis.

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TO THE EDITOR: We question the reported benefit of isoniazid in the post hoc analysis in the Thibela TB study, since patients with tuberculosis who were receiving treatment for tuberculosis or isoniazid preventive therapy at the time of the baseline survey were excluded from the interven-