

**Editorial****Global Health Problems of Obesity****PM Basak¹**

The Global Burden of Disease (GBD) study that is now reported in the Journal offers a discouraging reminder that the global obesity epidemic is worsening in most parts of the world and that its implications regarding both physical health and economic health remain ominous.¹ The study, in which researchers assembled data from 195 countries to model trends in overweight and obesity and related morbidity and mortality, showed that the prevalence of obesity has more than doubled since 1980 and is now 5% in children and 12% in adults — findings that mirror similar global trends in type 2 diabetes. Apart from a possible recent plateau in the prevalence of obesity in high-income countries, the prevalence has increased in all other sociodemographic strata. On the encouraging side, despite this increase in prevalence, the effect of high body-mass index (BMI) on population-level age-adjusted rates of death and disability has not grown, which suggests that obese persons are healthier and live longer now than in previous decades because of better care and risk-factor management. Unfortunately, even this success brings a new burden, since the mix of increased prevalence and decreased mortality leads to more years spent with obesity and more time for the damaging coexisting illnesses, such as type 2 diabetes and chronic kidney disease, to develop. The most worrisome finding is the approximate tripling of obesity seen in youth and young adults of developing, middle-income countries such as China, Brazil, and Indonesia. An early onset of obesity is likely to translate into a high cumulative incidence of type 2 diabetes, hypertension, and chronic kidney

disease. These findings come on the heels of reports from the United States that the incidence of type 2 diabetes in youth has increased substantially in minority populations, and when type 2 diabetes occurs in youth, it brings a much higher prevalence of complications than does type 1 diabetes.^{2,3} Since reductions in diabetes complications have been dominated by improvements among older adults, an increased incidence of diabetes among children may shift a proportionately greater load of morbidity into middle age⁴ and spread the burden of chronic disease more fully across the entire age distribution, even as populations continue to age. The findings of the GBD investigators are an impressive and essential effort to provide policymakers with both global and country-specific estimates that most countries alone lack. However, some of the modeling assumptions in the current report might obscure important variation in both the threats and the successes underlying the obesity epidemic. First, the assumption that the risk of outcomes at any given level of obesity is uniform across populations could skew morbidity estimates. For example, at any given level of BMI, Asians have been shown to have a higher absolute risk of diabetes and hypertension and African Americans to have a lower risk of cardiovascular disease than other groups.⁵ Once chronic conditions such as diabetes and cardiovascular disease develop, the associated relative risk of death may vary according to location — as was recently seen in Mexico, where the relative risk of death associated with diabetes far exceeds that in the United States.

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Disproportionately drives the development of type 2 diabetes and other coexisting illnesses⁶ Finally, global findings only hint at some of the actual successes in prevention that may finally be under way. In the United States, the past decade has brought an apparent peak and plateau in the prevalence of obesity and diagnosed diabetes, decreases in the intake of overall calories and of sugared beverages, and increasing levels of physical activity.⁷⁻⁹ Similarly, more communities in the United States now report reductions in the incidence of childhood obesity and adult type 2 diabetes. Although obesity and diabetes have become a shared global burden requiring a strong response from governments, their determinants and effects — and particularly their solutions — also depend on the specific environment in which people live.

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