

## Fat of the land

By David L. Katz, M.D., M.P.H.

**T**oday, 65% to 80% of American adults are overweight or obese. Childhood obesity rates in the U.S. have tripled in the past two decades. A disease that was, less than a generation ago, known as “adult-onset” diabetes now routinely strikes children less than 10 years old. At the September 2006 International Congress on Obesity, it was announced that for the first time in history there are more overfed than hungry humans on the planet. Obesity is among the gravest public-health threats we face.

**Dire:** Though dire, this problem is not complicated. Obesity could scarcely be simpler. Too many calories in, too few calories out, is what makes us fat. Period, end of story. There are admittedly dozens if not hundreds of genes that influence appetite, satiety, and energy balance. There is a long and lengthening list of hormones and neurochemicals that trigger these genes, from leptin to ghrelin. But these are not the explanation for epidemic obesity. Nor, as an August 2006 *New York Times Magazine* cover story suggests, is the explanation our intestinal microbiota or exposure to adenoviruses. Human physiology, the human genome, and our relationship with microbes have not changed appreciably in the last 50 years, 500 years, or for that matter 50,000 years. But the environment we live in has changed dramatically.

We get fat today because we can. We have no evidence our ancestors had willpower we lack, but every reason to believe they lacked the tasty food and labor-saving technology we have in abundance. We live in a world that has gone from no cars to rovers on Mars in the span of a single century. No wonder we have been caught unaware.

Our weight problem is the consequence of a perfect storm of obesigenic influences of our own devising, from fast food to suburban sprawl. Long denizens of a world characterized by a relative paucity of calories and unavoidably arduous physical exertion, we are victims of our own success. Our species has no innate defenses against caloric excess or the lure of the couch—because we never needed them before.

**Lure:** So while simple to explain, epidemic obesity will be anything but easy to fix. We must overcome the propensity of our genes, the lure of our culture, and 6 million years of momentum. Stopping the Titanic was a relative piece of cake! But the job can nonetheless be done if we understand the challenge. Imagine you are trying to hold back the floodwaters of a cresting river. Will one sandbag be enough to make a difference? Or perhaps you want to dam a river. Will the first brick, or even the second, be enough to stop the current? Does the first branch a beaver drags into a stream create a pond?

Or imagine you’ve climbed down into a canyon that suddenly fills

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**As of September 2006, for the first time in history, there are now more overfed than hungry humans on the planet.**

up with floodwaters that your one sandbag, brick, or branch could not contain. If you can’t swim and someone comes along with a bucket, will the first gallon bailed out cause you to drown a bit less?

Obviously the case I’m making is that the causes of obesity are like those floodwaters and our efforts to contain them are like that sandbag. And obesity itself, as well as the

chronic diseases it engenders, are like drowning and our responses to them like containing a flood one bucket at a time.

To hold back floodwaters, you need an entire dam. No one sandbag, brick, or branch will make a discernible difference. But every dam begins with a first sandbag, brick, or branch. So while making no difference at all, each small contribution is nonetheless essential and would leave a hole were it not there. What’s the anti-obesity analogue of the Hoover Dam? A comprehensive system of reforms in knowledge, behavior, policies, and the environment.

**Remedy:** We need schools that offer nutrition education, healthy food, and daily physical activity. The remedy for the native rambunctiousness of children is recess, not Ritalin.

We need clinicians trained to provide weight-management counseling that is effective, efficient, and compassionate and an insurance system that reimburses those who counsel artfully. We need physical activity breaks as a standard part of the workday and perhaps financial incentives to pursue health when it is not, alas, its own incentive.

We need food labels for dummies so consumers know at a glance what choices are best—and when to step away from a box or bag so no one gets hurt. Every neighborhood needs recreational facilities and sidewalks, and new neighborhoods should be designed for feet rather than cars. We need social engineering to give us back time to prepare food at home, or ways to eat out that offer good nutrition at low cost. We need new-age tools, such as [www.healthydiningfinder.com](http://www.healthydiningfinder.com), to lead us through the challenges of the modern nutritional landscape.

We need to make stairs rather than elevators the social norm. We need to overhaul the food supply and eliminate the category of “junk” food. We need to subsidize the sale of fresh fruits and vegetables. We need truth in advertising and controls on food marketing to children. We need to educate families about how to practice good nutrition, and good physical activity, together. It should once again be possible for children to walk and bike to school. And while a place in our barricade may be reserved for bariatric surgery and appetite-suppressing medication, it must be a small and isolated corner.

I could go on and on. While this sounds like a tall order, it’s surely no taller than the top of Hoover Dam when one looks up at it from the bottom. And it’s a vital job that simply must be done. But we should not expect obesity to “get better” with each little thing we do. We’ll need to be as busy as beavers for some time to come. ■