Editorial

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We're Losing the Battle!

I recently attended the annual meeting of the American Diabetes Association, as I have done now since the late 1970s. And, as usual, I returned from the meeting with a jumble of very mixed emotions concerning where we stand overall with the problem of diabetes.

On the one hand, there was a tremendous amount shared at the meeting that was very encouraging indeed. The meetings grow larger every year, with more and more participants representing a wide variety of medical disciplines, all with shining new work proudly on display. The leaders of the NIH study I have been involved with now for 11 years, the Action to Control Cardiovascular Risk in Diabetes (ACCORD) study, presented data demonstrating that tight control of blood glucose can result in some important microvascular benefits—perhaps taking some of the sting out of our earlier demonstration of increased mortality with efforts at tight control.

Incidentally, a very detailed and cogent statistical analysis of that perverse result, also presented at the meeting, suggested that one very viable explanation for our finding of increased mortality was that it actually represented a type 1 error, meaning that we may have found something that was not real because of the limitations of statistical methodology. If this is true, and unfortunately there is no way to be certain, it would put our results very much in harmony with those of the 2 other contemporary diabetes trials, the VA Diabetes Trial (VADT) and the Action in Diabetes and Vascular Disease: Preterax and Diamicron Modified Release Controlled Evaluation (AVANCE) trial. Both studies showed no benefit to tighter control but also failed to demonstrate any harm.

But those of us representing ACCORD were only 1 of many groups presenting exciting new data on every aspect of diabetes. That included oral presentations and posters—on promising new treatments, on the molecular mechanisms underlying insulin resistance and dyslipidemia, and on the basic mechanisms through which oxidative stress accelerates both microvascular and macrovascular complications of diabetes. Overall, the meeting, as always, was a veritable feast of new approaches and new data concerning diabetes and its panoply of complications.

And yet (and you knew this part of the editorial was coming!), on another level, I was left thoroughly dismayed, frustrated, and disheartened by the overall state of diabetes today as I reflected upon the true meaning of the meeting.

WHAT HAPPENED?

The prevalence of type 2 diabetes in the United States and other Westernized countries has increased manifold in the few short decades since I finished my endocrine training in 1980. By coincidence, 1980 also turns out to be the inflection year when one looks at a graph of the rising prevalence of type 2 diabetes. The prevalence rate had been rising rather slowly before 1980, but since that year it has maintained a skyrocketing trajectory.

What happened then to cause such a huge increase in the prevalence of diabetes? It's not possible to say with certainty, but we do know that a wide variety of major societal changes all hit at about that point in time. Cable television; personal computers; and home videocassette recorders, or VCRs, all became available—modalities that allow people to entertain themselves for hours on end in the most sedentary fashion imaginable.

Schools came under financial pressure and began to dial back their physical educational activities significantly; parents heard horror stories of child abductions reverberating in the media "echo chamber" and decided to drive Johnny to school rather than let him walk. (It seems amazing to me now, but I walked all by myself a full mile each way to kindergarten and back when I was 5 years old in the 1950s.)

Restaurants became far more numerous—perhaps related to the massive entry of women into the workforce. Women were then too exhausted from outside work to prepare meals at home. Because of the competitive imperative to make as much as possible, restaurants began to serve larger portions on larger plates.

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And perhaps the most toxic development from about 1980 was the widespread introduction of high fructose corn syrup into processed foods in place of sugar. High fructose corn syrup allows for the inexpensive production of very calorie-dense foods of low overall nutritional value, the ultimate in empty calories.

WE CAN TACKLE IT

So how do we go about solving the growing epidemic of diabetes? I truly believe that we need to fundamentally change the way we live our daily lives if we are to defeat the scourge of diabetes. Placing a very early emphasis on fitness and exercise, beginning with the youngest children in our schools, is necessary, because we know that obese children become obese adults at high risk for diabetes. Employers may need to base part of employee compensation on fitness targets and the rate of weight loss of their overweight workers. Restaurants may need to collect a heavy tax on all dishes that exceed a certain calorie count, and on the total amount of food ordered per individual at a given sitting. Any number of such measures can be contemplated, some of which are undoubtedly more practical than others. But unless society truly tackles the problem head on, the annual meetings of the American Diabetes Association are likely to get larger and larger, along with our national waistline. I really have mixed emotions about that. ●

Author disclosures

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