

Commentary – Making a Difference in Diabetes Care

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The prevalence of diabetes continues to increase at an alarming rate, with over one in five Americans 60 years of age and older affected.¹ When those with diabetes are added to those with impaired glucose tolerance, the combined prevalence of abnormal glucose metabolism is almost 60% of the population above age 60; the prevalence rate in those 20–39 is 18%, suggesting that even young people are being affected to a significant degree. Of course, with diabetes or pre-diabetes also comes a greatly increased rate of diabetes-specific complications and cardiovascular disease (CVD). What should we be doing about this serious situation?

There are two obvious answers. First, we must do whatever is possible with our patients to reduce the likelihood of developing pre-diabetes and to delay its natural progression. Second, we must treat aggressively those with diabetes to prevent complications from occurring. Although I say that these answers are obvious, it does not seem to have truly hit home to healthcare providers or patients. Despite all that we know, and all the therapies available, the problem continues to increase, and those affected are not meeting well-established goals of therapy.²

To prevent pre-diabetes or diabetes, we must place greater emphasis on weight loss and exercise in those who are overweight or obese. Equally important, we must continually exhort patients of normal weight not to put on pounds. For the former, both drug therapy and lifestyle modification have been shown to be effective in delaying the progression to diabetes, but admittedly both approaches are difficult to maintain and their cost-effectiveness may be challenging.³ Nonetheless, and at the very least, it is incumbent upon all health professionals to address the subject candidly with patients without embarrassment or hesitation, even though it may be a sensitive topic. Being overweight or obesity is a serious disorder, and, like type 2 diabetes itself, involves a genetic component that, along with an unfavorable environment, predisposes one to the disease.

Indeed, it is our “diabetes” environment that is causing us ruin. High-density–high-caloric and very flavorful foods, conveniently packaged, readily accessible at very affordable prices, and expertly advertised and marketed, are our bane. While this is by no means some sinister plot by the food industry, all of us must now confront this major public health problem, and the medical community must rise up in unison and voice concern. In addition, those not yet affected must be cautioned continually to pay close attention to *any* unnecessary weight gain, avoid non-nutritive foods whenever possible, exercise routinely, and to look upon weight gain as they would all serious environmental insults.

For those overweight or obese, it is likely to be insufficient to simply mention the advantages of weight reduction: referral for dietary counseling or community-based weight reduction programs is usually necessary, and even then maintaining weight loss requires long-term behavioral change and social support. Of course, regular physical activity is also important since the essence of weight reduction is to reduce caloric intake relative to caloric expenditure—however that can be accomplished.

The consequences of being overweight or obese are not limited to diabetes: hypertension, dyslipidemia, and even some malignancies are co-morbid conditions.⁴ This implies that all overweight/obese patients should be regularly screened for the well-known cardiovascular risk factors: impaired fasting glucose/diabetes, hypertension, and abnormal lipid values.⁵ Since we know these factors tend to cluster in many individuals, it is imperative to test patients for each, and, when present, to treat each risk factor individually and aggressively. We do not, and should not, need to diagnose the “metabolic syndrome” in order to recommend lifestyle modification for any of these problems, and we should use pharmacologic therapy when appropriate.^{5,6}

Those already affected by diabetes also require routine monitoring for other CVD risk factors. Diabetes by itself is a major CVD risk factor, which, when combined with others, becomes even more serious and portends a much greater likelihood that CVD events will soon occur. Treating elevated blood glucose values alone is insufficient: all such adult patients should be on low dose aspirin if tolerated, and it is equally important to strive for a normotensive blood pressure and LDL cholesterol values below 100 mg/dL.

Assessing “global” CVD risk and deciding how aggressively to treat each abnormality is not intuitively clear. To aid healthcare providers in doing this, the American Diabetes Association has developed a very comprehensive and extensively validated tool that can be of enormous help to providers and patients. We invite you to try this free “calculator” (i.e. Diabetes PHD) by going to the web-site: www.diabetes.org/diabetesphd. There will soon be a much faster version that you will be able to download directly to your personal computer. But, in the meantime, the PHD offers you a unique approach toward understanding the negative impact of all known CVD risk factors at any level at which they are found, and the positive impact of reducing all modifiable risk factors to any level you wish.

As “Putting evidence into practice: Outpatient management of type 2 diabetes mellitus” indicates,⁷ we have all the necessary tools to treat diabetes appropriately. In addition, the American Diabetes Association and the European Association for the Study of Diabetes recently published explicit guidelines and a well-defined algorithm for achieving acceptable blood glucose values with pharmacotherapy.⁸ We recommended that metformin and lifestyle modification be started immediately upon diagnosis. If acceptable hemoglobin A1c (A1C) levels are not achieved after quickly titrating metformin to its highest dose, then insulin, a sulfonylurea, or a thiazolidinedione should be added. The use of three oral drugs, or other classes of drugs, was not felt to be of great value in most patients. Of importance was the recommendation that glycemic targets (A1C <7%) could and should be obtained soon after (within three months of) initiating therapy or after any change in the therapeutic regimen. The paper also presents a detailed algorithm for insulin therapy, since this drug is clearly the most effective for lowering blood glucose values.

The treatment of diabetes need not be complex or particularly difficult. A wide array of drugs and devices is available, and the goals of therapy are supported by a rich evidence base. But, like all chronic diseases, diabetes requires the active involvement of the patient and his or her support system. It requires behavioral changes in patients that can be difficult to maintain. It also requires regular follow-up visits, careful monitoring, and attention to all cardiometabolic risk factors, so that complications do not develop. It is, therefore, a team effort, and your active participation is critical for success.

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