

PERSONAL HEALTH; 'Diabesity,' a Crisis in an Expanding Country

by JANE E. BRODY

I can't understand why we still don't have a national initiative to control what is fast emerging as the most serious and costly health problem in America: excess weight. Are our schools, our parents, our national leaders blind to what is happening - a health crisis that looms even larger than our former and current smoking habits?

Just look at the numbers, so graphically described in an eye-opening new book, "Diabesity: The Obesity-Diabetes Epidemic That Threatens America – and What We Must Do to Stop It" (Bantam), by Dr. Francine R. Kaufman, a pediatric endocrinologist, the director of the diabetes clinic at Children's Hospital Los Angeles and a past president of the American Diabetes Association.

In just over a decade, she noted, the prevalence of diabetes nearly doubled in the American adult population: to 8.7 percent in 2002, from 4.9 percent in 1990. Furthermore, an estimated one-third of Americans with Type 2 diabetes don't even know they have it because the disease is hard to spot until it causes a medical crisis.

An estimated 18.2 million Americans now have diabetes, 90 percent of them the environmentally influenced type that used to be called adult-onset diabetes. But adults are no longer the only victims - a trend that prompted an official change in name in 1997 to Type 2 diabetes.

More and more children are developing this health-robbing disease or its precursor, prediabetes. Counting children and adults together, some 41 million Americans have a higher-than-normal blood sugar level that typically precedes the development of full-blown diabetes.

'Then Everything Changed'

And what is the reason for this runaway epidemic? Being overweight or obese, especially with the accumulation of large amounts of body fat around the abdomen. In Dr. Kaufman's first 15 years as a pediatric endocrinologist, 1978 to 1993, she wrote, "I never saw a young patient with Type 2 diabetes. But then everything changed."

Teenagers now come into her clinic weighing 200, 300, even nearly 400 pounds with blood sugar levels that are off the charts. But, she adds, we cannot simply blame this problem on gluttony and laziness and "assume that the sole solution is individual change."

The major causes, Dr. Kaufman says, are "an economic structure that makes it cheaper to eat fries than fruit" and a food industry and mass media that lure children to eat the wrong

foods and too much of them. "We have defined progress in terms of the quantity rather than the quality of our food," she wrote.

Her views are supported by a 15-year study published in January in *The Lancet*. A team headed by Dr. Mark A. Pereira of the University of Minnesota analyzed the eating habits of 3,031 young adults and found that weight gain and the development of prediabetes were directly related to unhealthful fast food.

Taking other factors into consideration, consuming fast food two or more times a week resulted, on average, in an extra weight gain of 10 pounds and doubled the risk of prediabetes over the 15-year period.

Other important factors in the diabetes epidemic, Dr. Kaufman explained, are the failure of schools to set good examples by providing only healthful fare, a loss of required physical activity in schools and the inability of many children these days to walk or bike safely to school or to play outside later.

Genes play a role as well. Some people are more prone to developing Type 2 diabetes than others. The risk is 1.6 times as great for blacks as for whites of similar age. It is 1.5 times as great for Hispanic-Americans, and 2 times as great for Mexican-Americans and Native Americans.

Unless we change our eating and exercise habits and pay greater attention to this disease, more than one-third of whites, two-fifths of blacks and half of Hispanic people in this country will develop diabetes.

It is also obvious from the disastrous patient histories recounted in Dr. Kaufman's book that the nation's medical structure is a factor as well. Many people do not have readily accessible medical care, and still many others have no coverage for preventive medicine. As a result, millions fall between the cracks until they are felled by heart attacks or strokes.

A Devastating Disease

There is a tendency in some older people to think of diabetes as "just a little sugar," a common family problem. They fail to take it seriously and make the connection between it and the costly, crippling and often fatal diseases that can ensue.

Diabetes, with its consequences of heart attack, stroke, kidney failure, amputations and blindness, among others, already ranks No. 1 in direct health care costs, consuming \$1 of every \$7 spent on health care.

Nor is this epidemic confined to American borders. Internationally, "we are witnessing an epidemic that is the scourge of the 21st century," Dr. Kaufman wrote.

Unlike some other killer diseases, Type 2 diabetes issues an easily detected wake-up call:

the accumulation of excess weight, especially around the abdomen. When the average fasting level of blood sugar (glucose) rises above 100 milligrams per deciliter, diabetes is looming.

Abdominal fat is highly active. The chemical output of its cells increases blood levels of hormones like estrogen, providing the link between obesity and breast cancer, and decreases androgens, which can cause a decline in libido. As the cells in abdominal fat expand, they also release chemicals that increase fat accumulation, ensuring their own existence.

The result is an increasing cellular resistance to the effects of the hormone insulin, which enables cells to burn blood sugar for energy. As blood sugar rises with increasing insulin resistance, the pancreas puts out more and more insulin (promoting further fat storage) until this gland is exhausted. Then when your fasting blood sugar level reaches 126 milligrams, you have diabetes.

Two recent clinical trials showed that Type 2 diabetes could be prevented by changes in diet and exercise. The Diabetes Prevention Program Research Group involving 3,234 overweight adults showed that "intensive lifestyle intervention" was more effective than a drug that increases insulin sensitivity in preventing diabetes over three years.

The intervention, lasting 24 weeks, trains people to choose low-calorie, low-fat diets; increase activity; and change their habits. Likewise, the randomized, controlled Finnish Diabetes Prevention Study of 522 obese patients showed that introducing a moderate exercise program of at least 150 minutes a week and weight loss of at least 5 percent reduced the incidence of diabetes by 58 percent.

Many changes are needed to combat this epidemic, starting with schools and parents. Perhaps the quickest changes can be made in the workplace, where people can be encouraged to use stairs instead of elevators; vending machines can be removed or dispense only healthful snacks; and cafeterias can offer attractive healthful fare. Lunchrooms equipped with refrigerators and microwaves will allow workers to bring healthful meals to work.

Dr. Kaufman tells of a challenge to get fit and lose weight by Caesars Entertainment in which 4,600 workers who completed the program lost a total of 45,000 pounds in 90 days. Others could follow this example.