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Type II diabetes and the dietary conundrum

For many, the onset of Type II diabetes is so gradual over many years that it is looked upon as a benign disease. However, by the time you start experiencing the classic symptoms of constant hunger, fatigue, dry mouth, blurry vision, frequent urination, etc., and if you happen to be older, overweight, physically inactive and on a fast food/highly processed food diet, diabetes' devastating affect on organs such as the kidneys, eyes, heart, nervous system, foot and dentition have already been years in the making. When someone underrepresents the potential dangers by giving it a diagnosis like "pre-diabetes," one may think it's just a warning shot over the bow; in reality, pre-diabetes puts one on a trajectory that will shorten their lifespan by years. Pre-diabetes signals that continuing on this path could result in progressive renal failure, eventually dialysis, vascular disease, blindness and frequent, long hospital stays with surgeons cutting away at the consequences of diabetes with heart surgery, vascular surgery and amputations.

The death rate from Type II diabetes is devastatingly high among specific ethnic groups but goes frequently unreported because a lot of doctors don't put diabetes on the death certificate. They say kidney disease or heart disease or vascular collapse, and the

ultimate cause, diabetes, goes under the radar.

Death from Type II diabetes is at absolute epidemic proportions, striking people of color, Native Americans, African Americans and Latinos in a disproportionately high fashion. After stating all of that, how can I tell a patient that it didn't have to happen?

According to the National Institute of Diabetes and Digestive and Kidney Diseases in a February 2017 "Type II Diabetes Statistics and Facts" report, the devastating effects of Type II diabetes, in the vast majority of cases, is preventable. Weight loss and increased physical activity can reduce the chance of pre-diabetes turning into Type II diabetes by 58 percent, and 71 percent in people over 60 years old. Glycosylated Hemoglobin (A1C) helps define diabetes. Type II diabetes is an A1C of 6.5 percent or higher; pre-diabetes is an A1C between 5.7 percent and 6.4 percent; and normal is an A1C of less than 5.7 percent. The good news is, according to the Institute of Diabetes and Digestive Disease, for overweight people with pre-diabetes, losing 5 to 7 percent of body weight through exercise and healthy eating could prevent the onset of Type II diabetes completely. Seconding this report, the American Academy of Family Physicians states that obesity is the single greatest risk

factor for Type II diabetes.

The Centers for Disease Control and Prevention (CDC) says that Type II diabetes accounts for about 90 to 95 percent of all diagnosed cases of diabetes in adults. They go on to say that 29.1 million people in the United States have diabetes, of which 8.1 million may be undiagnosed, unaware of their condition. The World Health Organization (WHO) states 400 million people live with Type II diabetes worldwide; however, in developing nations, more than half of the diabetic cases go undiagnosed. In the United States, we diagnose 1.4 million new cases of diabetes every year. Compared to the total population, more than one in 10 adults over the age of 20 have diabetes in the United States, and for adults over 65, in the United States, it is one in four. According to the CDC, diabetes is the 7th leading cause of death in the United States.

Type II diabetes used to be called "adult onset" because until 10 years ago, Type II diabetes affected less than 3 percent of adolescents. Now, it comprises 45 percent of all cases of diabetes in adolescents. Type II diabetes is even more common in non-Caucasian pediatric populations like Native Americans, African Americans, Asian/Pacific Islanders and Hispanics. The symptoms of excessive fatigue, excessive

thirst, frequent urination and increased hunger are not easy to spot in kids, but there should be heightened concerns if the child is obese. In the past 30 years, the CDC states that obesity in children has doubled and obesity in adolescents has quadrupled.

Now for the conundrums. The USDA Food Pyramid, now replaced by MyPlate, and food pyramids from around the globe (China's Food Pagoda to Greece's Food Pyramid) have a consistent pattern of cereals, grains, breads, pasta and other starchy carbohydrates as the base of the diet, recommending six to 11 servings a day and fats near the top of the pyramid in the "use sparingly" category. What is confusing is that dietary fats from healthy sources have been shown to actually increase weight loss, reduce heart risk, lower blood sugars, lower cholesterol and maintain proper brain function. Yet those same studies tell about carbohydrates causing serious issues from weight gain to fuzzy thinking to heart disease. Furthermore, the "high carb, low fat" mantra doesn't address the issue of "good carbs" (whole grains) vs. "bad carbs" (highly processed carbs and sugary drinks); "good fats" (polyunsaturated fats: liquid vegetable oil, nuts, and seeds) vs. "bad fats" (trans fats: margarine, packaged baked goods, fried foods in most fast food restaurants and anything made in partially hydrogenated vegetable oil); and "good protein" vs. "bad protein" (processed meats). It also is amazing that the highly subsidized industries (dairy, corn and wheat) are heavily featured on the pyramids.

Another conundrum is high-fructose corn syrup (HFCS), which is a politically strong, highly protected sweetener

squarely in the middle of the corn subsidy issue that has made its way into almost every processed food and sugar-sweetened drink in large quantities. I normally don't read the Huffington Post; however, a Jan. 23, 2014, article by Mark Hyman, MD, founder of UltraWellness Center, states that the average adult consumes more than 20 teaspoons of HFCS per day, which is approximately 150 pounds a year. The average child consumes 34 teaspoons a day. To put this in perspective, the average 20-ounce soda contains 15 teaspoons of sugar and all of it is HFCS. From his research, he claims that the glucose and fructose which are bound together during the chemical process making HFCS become separated in our bodies and the fructose is postulated to have a direct effect on the liver, turning on fat production. Controversy exists about the manufacturing techniques and metabolism of HFCS. But in the midst of the argument, I did find evidence that too much added sugar of any kind can contribute unwanted calories that are linked to health problems, such as weight gain, metabolic syndromes, high triglyceride levels and Type II diabetes, and all of these increase the risk of heart disease. The American Heart Association recommends that most women should get no more than 100 calories a day of added sugar (about 6 teaspoons) and that most men get no more than 150 calories a day of added sugar (9 teaspoons). The heavily processed and fast food that we are accustomed to eating go way beyond those levels.

There are some lessons we can learn from the aboriginal Vedda people of the jungles of Sri Lanka (India) and

the Marshallese people of the South Pacific Marshall Islands regarding the evolution of diabetes. In both groups, diabetes or obesity were virtually unheard of. As their hunting lands were encroached upon and government handout of the westernized diet became the norm, these people who lived off the land eating seafood, wild life and edible plants started eating Spam, canned corned beef, soda, ramen noodles, Kool-Aid powder and sugary cereals. The Vedda people could still hunt, so their incidence of diabetes rose but not so much. On the other hand, the new diet became the sole diet for the Marshall Islanders. Their rate of Type II diabetes became 28 percent in the Marshallese people, which is among the highest in the world. More than 75 percent of the women and 50 percent of the men became overweight.

In 2005, Canvasback Missions, Inc., a nonprofit Christian organization that specializes in medical missions, in partnership with the Marshall Island Ministry of Health and Loma Linda University, started a Diabetes Wellness Program and lifestyle intervention for the entire island. They used diet and exercise to overcome insulin resistance and restore insulin sensitivity. They went with a 100 percent plant- and seafood-based diet, minimal refined carbohydrates, high fiber, moderate amounts of good fats (no trans fats), high antioxidants and a low glycemic load. Over the two-year program, a huge number of participants transformed their lives and health, lost significant weight, became highly active again and some were declared diabetes free and others at least didn't require significant medications anymore.

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African Americans are dying in large numbers from the consequence of Type II diabetes because of the kind and quality of food that they had to eat. My father, aunt and a cousin suffered from the consequences of poorly controlled Type II diabetes. Two had to have lower extremity amputations, one suffered blindness and all died from the complications of Type II diabetes, but diabetes was never mentioned on their death certificates.

What I have learned in my investigations of this topic is that the treatment of Type II diabetes doesn't fall on the doctors. Patients should see their doctors only as a periodic coach/consultant. Instead, the real responsibility lays squarely on the shoulders of an educated patient and his family. Patients should spend more time with nurse diabetes educators and dieticians who are willing to think outside of the USDA Food Pyramid box and truly learn the life-saving value of a low-glycemic, low-carbohydrate, high fiber and good (no processed/fast food) protein diet and exercise to avoid the horrific consequences of poorly controlled Type II diabetes in its latter stages.

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