VITALITY Detox Drops

Forget Cookies: Why Diabetics Should Avoid Industrial Waste Dumps this Holiday Season

For diabetics or anyone concerned about diabetes, the holidays can be a nightmare. Sweet confections abound and it may seem rude to turn down those homemade sugar cookies your neighbor dropped off or the chocolate rum balls your colleague brought to the office. But although sugar is beyond doubt a key contributor to the disease, it is not the only one. Growing evidence exists for a connection between environmental toxins and diabetes.

According to the Center for Disease Control (CDC), 34.2 million people in the United States have diabetes, or more than one out of every ten, 7.3 of them undiagnosed. Worldwide, 422 million people have the disease, which causes 1.5 million deaths every year directly, and even more indirectly. Historically, scientists have pointed to poor eating habits, genetic propensity and a sedentary lifestyle as key factors but in the past 20 years, that has started to change.

A 2019 article cites research presented at the annual meeting of the European Association for the Study of Diabetes. A meta-analysis of 21 earlier studies that involved more than 66,000 people found that exposure to any kind of pesticide was associated with a 61% increase in the risk of type 2 diabetes. Another study of 639 pregnant women in Greece reported that those who had elevated blood levels of polychlorinated biphenyls (PCBs) during their first trimester were more than four times as likely to develop gestational diabetes.

Back in 2006, a study found that American adults who had high exposure to Persistent Organic Pollutants (POPs) such as dioxins, DDE and other pesticides had 37.7% more risk of developing diabetes than people with the lowest levels of exposure. In the same year, an article published in Diabetes Care stated that obesity - commonly touted as a key driver of diabetes - did not increase the risk for people with very low levels of POPs in their bodies. As one Spanish doctor wrote in an editorial published in *The Lancet*, “This finding would imply that virtually all the risk of diabetes conferred by obesity is attributable to persistent organic pollutants and that obesity is only a vehicle for such chemicals. This possibility is shocking.”

Obesity on its own, then, is not a dominant factor in diabetes. But obesity itself is often the result of toxic exposure. In 2006, scientists at the Harvard School of Public Health found that the rates of obesity in infants had risen 73% since 1980, a fact that can't be attributed to junk food or lack of exercise. The cause, they speculated, could be the load of environmental toxins within their bodies. On average, newborns have 287 chemicals in their umbilical cord blood, including 217 known neurotoxins.

The link between diabetes and environmental toxins has become sufficiently common that some scientists now label them as 'diabetogens' or substances known to cause or produce diabetes. They include pesticides, some heavy metals, particularly arsenic and cadmium, PCBs, phthalates, and Bisphenol a (BPA). Many of them are endocrine disruptors and disrupt blood sugar control by decreasing insulin production and impairing insulin sensitivity.

Arsenic, for example, damages pancreatic cells, with the result that they produce less oxygen. BPA blocks insulin receptor sites, which creates insulin resistance and increases the incidence of obesity. PCBs and other endocrine-disrupting chemicals reduce insulin levels, worsen glucose intolerance and raise serum glucose levels that set off hyperinsulinemia, or heightened levels of insulin in the blood. They can even alter the expression of genes. Cadmium increases blood glucose levels, potentially damaging B-cells and leading to reduced insulin production or insulin resistance. "Stated simply, toxins are an invisible, unappreciated cause of obesity and diabetes," says Dr. Mark Hyman, author of "Environmental Toxins, Obesity and Diabetes: An Emerging Risk Factor."

Dr. Lisa Staimez, an assistant professor at Emory Global Diabetes Research Center at Emory University in Atlanta, calls for new studies to build on these findings. "When considering the reality that diabetes is rising in every country worldwide, and that environmental pollutants are abundant, there is a real urgency for prospective, high-quality research, " says Staimez. "That research should, in turn, inform policies aimed at reducing the burden from diabetes."

Hyman agrees. “This suggests a new model of potential treatment for diabetes and obesity,” he says. “A comprehensive detoxification program for petrochemical and heavy metal toxins may be an effective addition to the treatment of diabesity.”

If you’re concerned about diabetes, none of this means you should go wild on the rum balls this holiday season, but it does indicate that other methods of approaching the problem - including detoxification - may be just as important as minimizing your sugar intake.

Sources:

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