

# Address the Stress Underlying Risky Behaviors

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LOS ANGELES — Many behaviors that raise the risk of diabetes also act as stress relievers in patients demoralized by lifelong hardship, Dr. Ann K. Bullock said at the annual meeting of the American Association of Diabetes Educators.

Overeating, alcohol and drug use, cigarette smoking—even the numbing effect of watching TV rather than exercising—all can be seen as adaptive responses to profound stress.

“The problem isn’t that we do dumb things to help calm stress. The problem is that we have so much stress,” said Dr. Bullock, medical director of the Eastern Band of Cherokee Indians in Cherokee, N.C.

Evidence is mounting that even early childhood stressors impact adult coping behaviors that undermine health, she said. Nicotine, for example, “perks you up but calms you down.”

Dr. Bullock noted that researchers from Kaiser Permanente and the Centers for Disease Control and Prevention showed in the late 1990s a strong dose-dependent relationship between “adverse childhood experiences,” such as physical or emotional abuse, and smoking in adulthood (JAMA 1999;282:1652).

Carbohydrates help to modulate brain serotonin level, and high-fat, high-calorie “comfort foods” appear to help turn off the hypothalamic-pituitary-adrenal axis (Proc. Natl. Acad. Sci. USA 2003; 100:11696-701).

“There’s a little mini Prozac in that mac and cheese,” she quipped. Standing “in our nice white coats” lecturing people to give up cigarettes and comfort foods just won’t work, according to Dr. Bullock.

“You want me to give up the stuff that helps me get through the day so I don’t get a bad disease or a complication that might take me out of this painful life a little sooner? Hmmm,” she said.

The key to reducing diabetes risk may lie in the amygdala, not the pancreas.

That primitive brain center is where stress takes root early in life, establishing autonomic nervous system hyperreactivity and potentially setting off a cortisol-and-epinephrine-driven cascade that increases hepatic glucose level, blood pressure, and heart rate while elevating insulin resistance in adipose tissue.

“We’re running away from lions all the time,” she said, which primes the body to ignite an exaggerated physiologic response to family conflict, job insecurity, and the “hugely traumatizing” lifelong effects of poverty and racism.

The pattern becomes magnified with each generation of children raised by traumatized parents, who not only pass on genetic stress responses but create stressful home environments as well.

Meaningful interventions address the stress, not the unhealthy behaviors, she said. For individual patients, progressive muscle relaxation, breathing exercises, biofeedback, guided imagery, and practices such as qi gong can relay to the amygdala the message that “in the present moment, I am okay.”

Group medical visits, 12-step programs, and support groups can foster emotional healing through shared experiences.

Spirituality and a connection to one’s ethnic identity can provide deep comfort to some. Dr. Bullock recounted an early study performed on the Pima Indians in which those randomized to a control group that spent time learning the history and culture of their tribe outperformed those involved in an active weight-management program on nearly every biologic

parameter (Diabet. Med. 1998;15:66-72).

Health professionals can help by advocating in the community for programs that improve the conditions of early life for disadvantaged patients, from prenatal support to parenting classes, excellent day care, and strong schools, she said.

On a personal basis, “we can be a wonderful support for our patients,” she said. “Understand that there is lot going on that is bigger than their diabetes.”

As many diabetes researchers have

learned, there may be no point in discussing a patient’s body mass index, hemoglobin A<sub>1c</sub>, or neuropathy before sitting down to hear about their alcoholic spouse or troubled kids.

“If nothing else—and this is profound—have a sense of compassion for your patients,” said Dr. Bullock. “For some patients, we are the one place in their lives where they get nonjudgmental attention and listening. Can you imagine that?” ■

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