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Pediatric Diabetes Prevention Needs Muscle

BY JOYCE FRIEDEN

WASHINGTON — Pediatric diabetes remains a thorny problem, with many environmental and behavioral challenges impeding progress in preventing the disease, according to Dr. Francine Kaufman.

"One in three children born in the year 2000 will develop diabetes," Dr. Kaufman said at a diabetes meeting sponsored by Avalere Health. And when it comes to type 2 diabetes in U.S. children, minorities are the hardest hit.

However, it's not just the existing diabetes cases that concern Dr. Kaufman, a pediatric endocrinologist and Distinguished Professor of Pediatrics at the University of Southern California, in Los Angeles. It's also the prediabetes. "As many as 40% of minority teens have impaired fasting glucose," a high risk factor for type 2 diabetes, she noted.

Dr. Kaufman is chairing a study to see if interventions to improve physical activity levels and nutrition quality will



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improve diabetes risk factors among teens. The study, which is known as HEALTHY, follows more than 6,000 middle school students at seven sites nationwide from sixth through eighth grades. The middle schools chosen for the study have a student body that is at least 50% minority (defined as African American, Hispanic/Latino, or Native American) and/or have greater than 50% of the students eligible for free or reduced lunch.

Students are randomized to either their usual activities or to nutrition, physical education, and behavior intervention. Primary outcomes include body mass index, fasting glucose, and fasting insulin. Although the study will not be completed until June, preliminary results showed that at baseline, 16% of sixth graders and 39% of eighth graders had fasting blood glucose levels of 100-125 mg/dL, a range considered by many to fall into the "prediabetes" category (Diabetes Care 2006;29:212-7).

Dr. Kaufman said the environmental barriers that are preventing minority students and their families from exercising and eating right include limited access to safe parks and supermarkets.

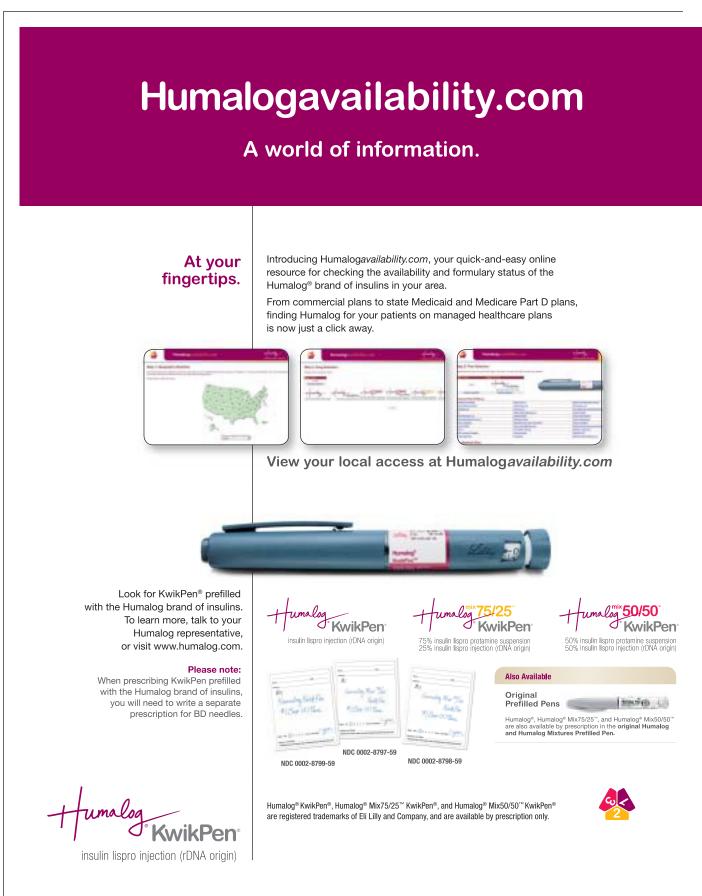
Legislative efforts to solve the problem have met with varying degrees of success. Obesity task forces, for instance, have not achieved much. "California has had a lot of obesity task forces; I've led most of them," said Dr. Kaufman. "We do a lot of great talking to each other ... and not much else happens."

Attempts to modify school nutrition, on the other hand, have been more suc-

cessful. "In 2003, we banned sodas in the Los Angeles Unified School District, the second largest school district in the country," an action she called "the ban heard 'round the world." There are now bans on soda in schools throughout California, as well as bans on junk food, Dr. Kaufman added.

Efforts also are being made to bring more fruits and vegetables into impoverished communities via farmers' markets, and to give convenience stores a rebate if they purchase a refrigerator for the purpose of vending fresh fruits and vegetables. Giving participants in the Women, Infants, and Children Program vouchers redeemable at farmers' markets and supermarkets for fresh produce increased their fruit and vegetable intake (Am. J. Public Health 2008;98:98-105)

Given all these challenges, "you tell me how I get [my newly diagnosed patients] on a journey that will last their lifetime, in which they now have to balance something every minute of the day when for the most part they live in an environment in which all that I ask them to do is the hardest choice that they have to make," said Dr. Kaufman, who noted in May she would leave USC to become chief medical officer and vice president of global medical affairs for Medtronic Diabetes, in Northridge, Calif.



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