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Maternal Stress and Child Obesity

URBANA, IL – Cumulative stress experienced by the mother is an important factor in the obesity of a child in low-income families, according to a journal article co-authored by a member of the University of Illinois Department of Agricultural and Consumer Economics faculty.

"Younger children in food-secure households who are experiencing higher levels of maternal stressors have a greater probability of being overweight than children in low-income, food insecure households," said Craig Gundersen.

"Our findings show that when it comes to overweight and obesity, low-income children are indeed influenced by stress emanating from their mother. Cumulative stress experienced by the child's mother is an important determinant of child overweight."

Gundersen, along with Brenda J. Lohman, Steven Garasky, and Susan Stewart of Iowa State University, and Joey Eisenmann of Michigan State University, conducted the study, "Food Security, Maternal Stressors, and Overweight Among Low-Income U.S. Children: Results from the National Health and Nutrition Examination Survey (1999-2002)," which appears in this month's issue of *Pediatrics*. This research was funded through a grant from the National Research Initiative program of the Cooperative State Research, Education, and Extension Service (CSREES) of the USDA.

Obesity and overweight are growing problems among U.S. children, with approximately 17.1 percent between the ages of two and 19 obese and another 16.5 percent overweight.

"This prevalence has increased threefold for children since 1970," Gundersen noted. "Childhood obesity is a critical public health issue today."

The study assessed maternal, mental, physical, financial, and family-structure stressors, all of which have been linked to increased physical and emotional health outcomes for children in low-income families.

Subjects for the study came from the 1999-2002 National Health and Nutrition Examination Survey which was conducted by the National Center for Health Statistics and the Centers for Disease Control.

"The impact of stress on childhood overweight only occurs for children in food-secure households," said Gundersen.

"Although children in both types of households may want to eat in response to maternal stress, only children in food-secure households may be able to do so. In addition, children in food-

secure households may have greater opportunity to consume more 'comfort foods,' which are often unhealthy, as a response to the stress."

Finally, he added, higher stress levels coupled with sufficient or excess energy intake may produce metabolic disturbances that lead to obesity.

Gundersen and his colleagues indicated the study has important implications for policy makers.

"A number of recommendations have been made to address the problem of child overweight, but our research demonstrates that another set of policies and programs may also help reduce the problem," said Gundersen.

"These policies would involve reducing maternal stressors. By providing these women with relevant medical care and counseling, these symptoms may be alleviated with the further indirect benefit of reducing childhood overweight. Similarly, other efforts to reduce other maternal stressors for low-income families may further benefit the health of the children in these households by reducing the number of stressors to which these children are exposed."

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