

Earlier intervention leads to better weight recovery in children with multiple risk factors for weight faltering

December 11 2015

Young children who are underweight experienced greater weight recovery the earlier an intervention was started, and the recovery was more significant in children with multiple household risk factors, according to a study published this week in *The Journal of Pediatrics*.

Children who fail to gain sufficient weight before the age of two are more likely to develop long-term health and developmental problems. When referred to specialists, [children](#) with weight faltering often recover but until now, little was known about how their recovery relates to household risk factors such as crowding, single parenthood, and/or poverty. The study, led by Maureen Black, PhD, Professor of Pediatrics at the University of Maryland School of Medicine (UM SOM), Director of the Division of Growth and Nutrition in the Department of Pediatrics, and Director of the interdisciplinary Growth and Nutrition Practice at the University of Maryland Children's Hospital, examined whether children with multiple household risk factors were differentially responsive to treatment. The authors found that children with multiple household risk factors recovered better than children with only a few household risk factors.

"Household risk factors are often associated with mealtime stress and disrupted family routines as families struggle to help their child eat and grow," said Dr. Black, who is also the John A. Scholl, MD, and Mary Louise Scholl, MD, Professorship in Pediatrics. "The more mealtime

stress a family had the more assistance we could provide, which might explain why these children did better."

The study enrolled 286 children aged six to 36 months who fell below the fifth percentile for their weight/age. A skill-building mealtime behavior intervention developed by the Growth and Nutrition Practice was provided to families as part of routine care. The intervention includes access to healthy food, nutritional counseling, coaching to establish [healthy eating habits](#) and routines, and a video-recorded mealtime assessment.

The Division of Growth and Nutrition includes an interdisciplinary clinic for [young children](#) with growth and/or feeding problems. The Division conducts NIH-funded obesity prevention trials among toddlers and adolescents, follow-up of children prenatally exposed to illegal drugs, an intervention trial of micronutrients and early learning opportunities in India, and monitors the growth and development of young children as a Children's HealthWatch site. The current studies being conducted in the Growth and Nutrition Division include: Challenge! in Middle Schools; Children's HealthWatch; Ecological Momentary Assessment; Maryland Wellness Policies and Practices Project; Maryland's Building Blocks for Healthy Children; Prenatal Drug Exposure and Adolescent Drug Use: The Role of HPA Axis Regulation; and Project Grow Smart.

Data were collected for nine household risk factors as well as seven child risk factors such as prematurity and feeding disorders. Children with four or more household risk factors were placed in the top quartile and compared to children in the bottom three quartiles. Children in the top quartile for household risk factors experienced significant improvement in weight/age z-scores over a six month period. Children in the top quartile for child risk factors also experienced greater weight gain than children with fewer child risk factors. Children under age 24 months experienced significantly greater weight gain than older children,

regardless of [risk factors](#).

The Growth and Nutrition Practice pioneered the diagnostic and therapeutic use of video recordings. Videos are used by staff to observe and analyze a parent and child eating a meal. Videos are then shown back to parents so mealtime behaviors can be recognized and adjusted.

"The video is a key element of our intervention," said Dr. Black. "It allows parents to see how their child looks to them for support and approval and how their behavior may be contributing to their child's poor eating habits. A lot of what we do is helping parents reorganize their daily routines. A child who has routines and habits feels more secure and is more likely to eat well and grow at a healthy rate."

"When a child has eating problems or fails to grow, it often disrupts the entire family," added Dr. Black. "Instead of focusing only on the medical or nutritional issues that may be at play, we believe—and this study reinforces—the importance of incorporating the entire family into treatment. Making even small changes in a child's proximal environment like eating together at a table as opposed to the couch in front of the television can have significant benefits."

In the future, Dr. Black and her colleagues Susan Feigelman, MD, a professor of Pediatrics, and Pamela Cureton, RD, LDN, a pediatric dietitian, intend to examine whether obese children would benefit from a similar intervention. Environmental factors cause some children to lose weight while others gain weight. They believe the same kind of intervention that helps children with weight faltering recover could also be used to keep children from becoming obese.

"Dr. Black is internationally recognized for her contributions to child health and development," said UM SOM Dean E. Albert Reece, MD, PhD, MBA, who is also Vice President of Medical Affairs at the

University of Maryland and the John Z. and Akiko Bowers Distinguished Professor at UM SOM. "This research adds to the growing body of evidence Dr. Black has accumulated over the years that will surely influence the way children with growth issues are treated."

More information: *The Journal of Pediatrics*,
[dx.doi.org/10.1016/j.jpeds.2015.11.007](https://doi.org/10.1016/j.jpeds.2015.11.007)

Provided by University of Maryland

Citation: Earlier intervention leads to better weight recovery in children with multiple risk factors for weight faltering (2015, December 11) retrieved 12 May 2024 from
<https://medicalxpress.com/news/2015-12-earlier-intervention-weight-recovery-children.html>

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