

VOL 1 NO. 1 • 2023

# **NUTRITION & YOUR CHILD**

# PARENTAL STRUGGLES SURROUNDING CARE OF CHILDREN WITH OBESITY

Visiting the doctor should not be stressful, but for many parents, facing their child's doctors causes excessive stress and anxiety. Parents of children with early onset obesity (having a BMI >120% of the 95th percentile before the age of 5) are often stigmatized during appointments with their doctors and leave feeling discouraged and isolated and ultimately with the impression that they received poor medical care for their child. Researchers at the <u>USDA/ARS Children's</u> <u>Nutrition Research Center</u> at <u>Baylor College of Medicine</u> and <u>Texas Children's Hospital</u> uncovered why parents of children with obesity feel neglected by the medical community. Their findings were published in <u>Childhood</u> <u>Obesity</u>.

The study focused on the experiences of parents of children diagnosed with severe obesity. The children in the study could be any age, but they had to receive a diagnosis of severe obesity before the age of 5. To understand the impact of early onset obesity on the family, researchers conducted telephone interviews with 19 mothers.

"This study came about because I see a lot of these kids in my clinic, and many parents are tearing up or crying about the stress of trying to manage their child's obesity," said <u>Dr. Stephanie Sisley</u>, assistant professor of pediatrics – nutrition at Baylor and lead author of the paper. "We didn't feel that there had been a good study on this: asking parents how they handle their child's obesity and how it impacts the parent, child and their other children."

They found that parents feel isolated with a lack of resources from the medical community. They also learned that many of these children are limited from doing typical, normal childhood activities. Some parents noted that they struggle with allowing their children to attend birthday parties because they might overeat unhealthy food. Another family recounted problems at the waterpark after their child was unable to do some rides due to weight limits. Parents felt conflicted and



stressed, deciding if they should limit their children from being involved in certain activities. They want their children to have a normal, happy and healthy childhood, but their body weight limits some of the typical activities of childhood.

Parents also expressed their stress in dealing with the medical community, often feeling dismissed or given standard advice not tailored to their child. They felt that the medical advice was not helpful and that they were judged despite doing everything they could to help their child, which is heartbreaking to hear as a doctor, Sisley said.

"One of the main concerns was the self-esteem of the child. They were very concerned a doctor might talk about weight in a way that may cause their child to feel bad about themselves, or they didn't want to seek help from the medical community because they felt it would disturb their child's self-esteem," she said.

Moving forward, doctors should have an open mind and understand that parents are trying, and they must listen closely to their struggles. They should strive to offer

# ENSURING YOUR CHILD'S PACKED LUNCH IS A BALANCED MEAL

By packing lunches for their children, parents play a key role in influencing lifelong dietary habits. These meals brought from home can save families time and money, but without a solid nutritional foundation, children risk missing out on key nutrients vital for their development. A <u>study</u> conducted by an expert at the USDA/ARS Children's Nutrition Research Center at Baylor College of Medicine and Texas Children's Hospital examines lunches brought from home to determine their health value, how to improve their value and how they compare to the food options available at schools.

"Lunchtime at school is an excellent opportunity for a child to practice making healthy choices independently," said Dr. Jayna Dave, associate professor of pediatrics – nutrition at Baylor and author of the paper. "Teaching children the importance of eating from all of the food groups and encouraging them to eat a rainbow of colors for optimal nutrition is important."

Data was collected from 12 schools (eight elementary and four intermediate schools) in one school district in Houston between October and December 2011. Trained research staff used an observation form to record common lunch food items like sandwiches, fruit, vegetables, drinks, desserts and snack foods. 334 lunches brought from home and consumed were observed. 72% of the observed lunches were from elementary schools and 28% were from intermediate schools. What was brought from home was then compared to the National School Lunch Program's nutritional guidelines and Dietary Reference Intakes (DRIs) established by the Food and Nutrition Board of the National Academies of Sciences, Engineering and Medicine.

Overall, lunches brought from home were not well balanced and did not meet NSLP standards and DRIs.

"The findings showed that the majority of students did not bring fruits, vegetables and whole grain foods and, consequently, they did not meet the micronutrients and fiber requirements," Dave said.

Among elementary school students, only 9% of boys and 14% of girls brought vegetables, but the amount brought and consumed did not meet the standards. Although carbohydrate and protein consumption were considered adequate for boys and girls, the intakes of micronutrients and fiber did not meet the requirements across both genders at both school levels. Almost all lunches brought from home contained grain and meat or meat alternatives, and the amount brought and consumed exceeded the NSLP standards.

"Such dietary patterns can contribute to weight gain and increase the risk of diet-related chronic diseases in children, including elevated blood pressure,



cardiovascular diseases and type 2 diabetes," said Dave. "Packed lunches need the most improvement. Children who purchase lunch at school are potentially receiving better nutrition during that meal when compared to children who bring lunch from home."

Though the results from this study showed flaws in meals brought from home, they also showed areas where families can improve. Dave says creating awareness on how to buy healthful foods so parents can provide more nutritious packed lunches is one possibility for a future intervention. Another possibility is for parents and schools to provide children with feedback and/or encouragement for consuming healthy choices from their packed lunches.

"The role of the parents in providing more nutritious packed lunches is an important issue for future interventions to address," said Dave. "The findings of this study may be an indication of the quality of foods available in the home environment as well as parental attitudes toward nutrition."

Other contributors to this study include <u>Dr. Stephanie</u> <u>Sisley</u>, professor of pediatrics – nutrition at Baylor, and <u>Dr. Sheryl Hughes</u>, professor of pediatrics – nutrition at Baylor.

By Aaron Nieto

# SERENDIPITOUS FINDING MAY GIVE PLANTS AN EDGE AGAINST FLOODING

Experienced gardeners know that too much water can be as detrimental to plants as insufficient water. In the natural environment, being submerged under water limits the plants' access to light and oxygen, which reduces or eliminates their ability to thrive.

"Flooding is one of the biggest problems of present-day agriculture," said <u>Dr. Kendal D.</u> <u>Hirschi</u>, professor of pediatrics – nutrition at Baylor College of Medicine. "All crops have this problem, so if we could give plants the ability to be more flood-tolerant, we would provide an important solution to world agriculture."

Hirschi and his colleagues were not actively searching for this solution. "We were running several experiments in the lab using plants with alterations in CAX1, a gene that transports calcium in plants, when we came across a serendipitous finding," Hirschi said.

# LESS IS MORE

The researchers found that when they removed CAX1 from plants using genetic engineering, the plants were more tolerant to low-oxygen stress and flooding than when the gene was active. The team was excited because this was the first time the loss of this gene had been associated with plant flood tolerance. Still, they found their surprising discovery even more interesting.

"This observation gave us the idea that removing this gene from plants could be a way for them to adapt to flooding," Hirschi said. "We conducted the original studies in the lab in a simple weed called Arabidopsis. We are now exploring the possibility of giving crop plants, such as rice and



tomatoes, an edge under flooding conditions by eliminating the gene."

This approach could be a part of solutions to limited food supplies affecting children and families worldwide living in areas prone to flooding.

The study is published in the journal <u>*Plant</u></u> <u><i>Physiology*</u></u>

Other contributors to this work include <u>Dr. Marta</u> <u>Fiorotto</u> professor of pediatrics – nutrition at Baylor and <u>Dr. Nancy Moran</u> assistant professor of pediatrics – nutrition at Baylor.

By Ana Rodriguez

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appropriate medical advice that is affirming and not potentially damaging.

Sisley aims to focus on individualized care of patients to tailor to their needs. She believes the medical community needs to shift from looking at obesity as the parent or child's fault to understanding that severe obesity is a chronic disease with hormonal, genetic and metabolic causes.

"It's a cultural shift for the medical community, as well as schools and other organizations. We need to move the entire conversation from this blame of the family to finding ways to help," Sisley said.

Other contributors to this work include <u>Dr. Robert</u> <u>Waterland</u>, professor of pediatrics – nutrition at Baylor and <u>Dr. Deborah Thompson</u>, professor of pediatrics – nutrition at Baylor.

By Homa Shalchi



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### **NUTRITION & YOUR CHILD**

is published by Baylor College of Medicine as a research and information update for the general public and Center volunteers and supporters. Send comments or change of address information to

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# JOIN A CNRC NUTRITION STUDY!

Houston-area residents are invited to participate in the following nutrition research projects designed to help CNRC scientists learn more about the nutritional needs of children. Free parking is provided. For most studies, financial compensation is provided. **For questions on becoming a CNRC research volunteer call Noemi Islam at 713.798.7002 or email nislam@bcm.edu** 

### Nutrition during Pregnancy Study H-46721

Women in the first trimester of pregnancy and non-pregnant women are needed for a study of how nutritional needs change throughout pregnancy and may impact mothers and infants. The study involves four visits across pregnancy and one postpartum visit with the option to enroll infants. Visits involve body composition measurements; blood and milk samples; surveys on health and food; optical skin measurements; and vision testing. To be eligible to participate, you must be healthy and meet body mass index criteria. Participants receive free on-site parking, refreshments and up to \$350 in pre-paid credit cards.

## Development and Validation of an Automated Measurement of Child Screen Media use: FLASH H-40556

Attention Houston parents! Children screen time study. How much time do children spend watching TV or using their phones? Looking for parents with two children between the ages of 5 and 12 years old. Must have an Android or Apple device. The study will be conducted over three days in the child's home and includes a follow-up interview. \$75 compensation. To contact us, go to: <u>https://redcap.research.bcm.edu/redcap/surveys/?s=D9LRE4NLKL</u>.

You can also call 713.798.0503 or email <u>flashstudy@bcm.edu</u> gc106186 A new study at Baylor College of Medicine is developing a system to measure screen time. Looking for parents with two children between the ages of 5 and 17 years old. Must have an Android device. \$50 compensation. Free parking. If interested, go to: <u>https://redcap.research.bcm.edu/</u><u>redcap/surveys/?s=D9LRE4NLKL</u>. You can also call us at 713.798.0503 or email us at flashstudy@bcm.edu

# Papás Saludables, Niños Saludables H-50011

Hispanic dads with children ages 5-11 are invited to participate in a test of the Papás Saludables, Niños Saludables program to promote healthy eating and active lifestyles. The program is run by Baylor College of Medicine at a local YMCA. Up to \$180 in compensation. If interested, call 713.798.0503 or email healthydads@bcm.edu; https://redcap.link/PSNS

### The GoodNight Screen Media Study H-52269

Looking for parents and children ages 4 years old to join our study! We are recruiting families who are interested in helping us learn how evening screen media use affects children's sleep, memory and attention. Up to \$510 compensation provided for participation. Free parking. To learn more please visit: <u>https://redcap.link/goodnight</u>. You can also call 713.798.0557 or email <u>GoodNightScreenMedia@bcm.edu</u>.