



### HOW DADS INFLUENCE THEIR CHILDREN'S FOOD AND EXERCISE HABITS AT HOME

Fathers are often underrepresented in family health research. Researchers at the [USDA/ARS Children's Nutrition Research Center](#) (CNRC) at Baylor College of Medicine explored fathers' parenting styles in relation to food, eating and physical activity. Their findings were published in [Public Health Nutrition](#).

"The motivation (to studying fathers) is that we need more information to tailor interventions in the future, so interventions are specific enough for fathers," said [Dr. Alex Jimenez Garcia](#), postdoctoral associate in the CNRC at Baylor and lead author of the paper.

The researchers explored fathers' parenting styles and their association with race, ethnicity, socioeconomic status and children's characteristics. The participants were fathers with an average age of 38, and 37.5% self-identified as Hispanic, 17.7% as Black or African American, and the remainder as non-Hispanic white or other / mixed races. They surveyed more than 600 fathers of children ages 5 to 11 and identified distinct parenting styles, such as:

- Engaged supporter fathers: Highly involved in food and physical activities
- Leveled fathers: Let children take a balanced approach
- Autonomy-focused fathers: Encourage children's independence
- Uninvolved fathers: Minimal involvement in food and physical activities
- Control-focused fathers: Exert significant control over their children's choices



After analyzing the data, they found that "engaged supporter fathers" indicated a more collaborative approach in family dynamics than all other profiles. "Uninvolved fathers" displayed little engagement and responsibility, which could affect their children's overall health and home environment.

"One of the strengths of this paper is the relevance that we found in association with race and ethnicity because we have such a varied sample of fathers," he said. "We found that race and ethnicity have a stronger association with parenting style than socioeconomic status. We started contributing evidence to the relevance of culture, race and ethnicity in parenting practices."

The survey included questions about behaviors fathers use to provide an environment for the child, asking about structure, access to fruits and vegetables and co-participation in physical activity. Researchers identified their profiles through data analysis and explored social determinants, child characteristics and family dynamics. They also found that fathers of boys are more engaged than fathers of girls and that fathers seem to be more involved in physical activity than nutrition.

“If we can classify fathers by parenting style before any intervention, we can move toward precision medicine to increase physical activity because we can create profiles and tailor the

intervention based on the specific needs of the father,” Jimenez Garcia said. “Normally nutrition and physical activity interventions provide a one-size-fits all approach, but a differentiated approach would provide more effective results.”

These findings may open doors for researchers to be more precise in how to intervene and focus on specific populations. The team continues to use these instruments for other lines of research, including how fathers’ behaviors affect their children’s behaviors, as well as sleep and screen time.

*By Homa Warren, senior communications associate at Baylor College of Medicine*

## RESEARCHERS ONE STEP CLOSER TO DEVELOPING BETTER TREATMENTS FOR OBESITY, DIABETES



Obesity and type 2 diabetes are two of the most common and serious health problems in the U.S. They often go together and can lead to other diseases, like heart problems and cancer. Scientists have long known that the brain plays a key role in managing body weight and blood sugar, but exactly how it does this is still not completely understood.

[Dr. Makoto Fukuda](#) at the Children’s Nutrition Research Center and the Department of Pediatrics at Baylor College of Medicine and his colleagues compared how the brain regulates weight and blood sugar in healthy lean mice and obese mice.

The researchers focused on POMC neurons. These brain cells help the body regulate hunger, blood sugar, and how it uses energy. They respond to a hormone called leptin, which is produced by fat cells and tells the brain how much energy the body has stored.

In healthy people and mice, leptin helps reduce appetite and increase energy use. But in people and mice with obesity, although leptin levels are high, the brain is resistant to its effects. This resistance makes it harder to lose weight and control blood sugar.

“We found that a molecule called Rap1 acts like a brake, preventing the brain from responding to leptin,” Fukuda said. “Removing this brake in POMC cells using ‘genetic scissors’ not only prevented healthy mice from getting obese but also made obese mice lose weight. Interestingly, blood sugar levels rapidly dropped after removing Rap1 in these neurons, and this happened even without significant weight loss. Removing Rap1 in POMC neurons nearly corrected the diabetic condition in mice, and this positive effect lasted for the duration of the experiment.”

These findings are important because they suggest a new way for treating obesity and type 2 diabetes. Future studies will explore how Rap1 works in other parts of the brain and whether similar effects can occur in humans. If scientists can find a way to safely block Rap1 in specific brain cells in humans, it might help restore leptin sensitivity and improve glucose metabolism without requiring major weight loss.

*By Ana María Rodríguez, Ph.D., senior communications associate at Baylor College of Medicine*



# CNRC WELCOMES NEW DIRECTOR DR. DAVID B. ALLISON



[Dr. David B. Allison](#) has been named the new director of the Houston USDA/ARS Children's Nutrition Research Center at Baylor College of Medicine. He succeeds [Dr. Dennis M. Bier](#), who led the CNRC for more than 30 years.

"This is a once-in-a-lifetime opportunity to walk in Dr. Bier's

footsteps, and it is a great honor," Allison said. "I'm looking forward to learning from my colleagues, having conversations about their research, helping them promote it and even participating and collaborating with them on it."

As director, Allison plans to build on the core areas of research at the Center and introduce new efforts to advance nutrition science, agriculture and the health of American families.

"There is a clear sense of family here. I am hoping to advance the knowledge of nutrition through science," he said.

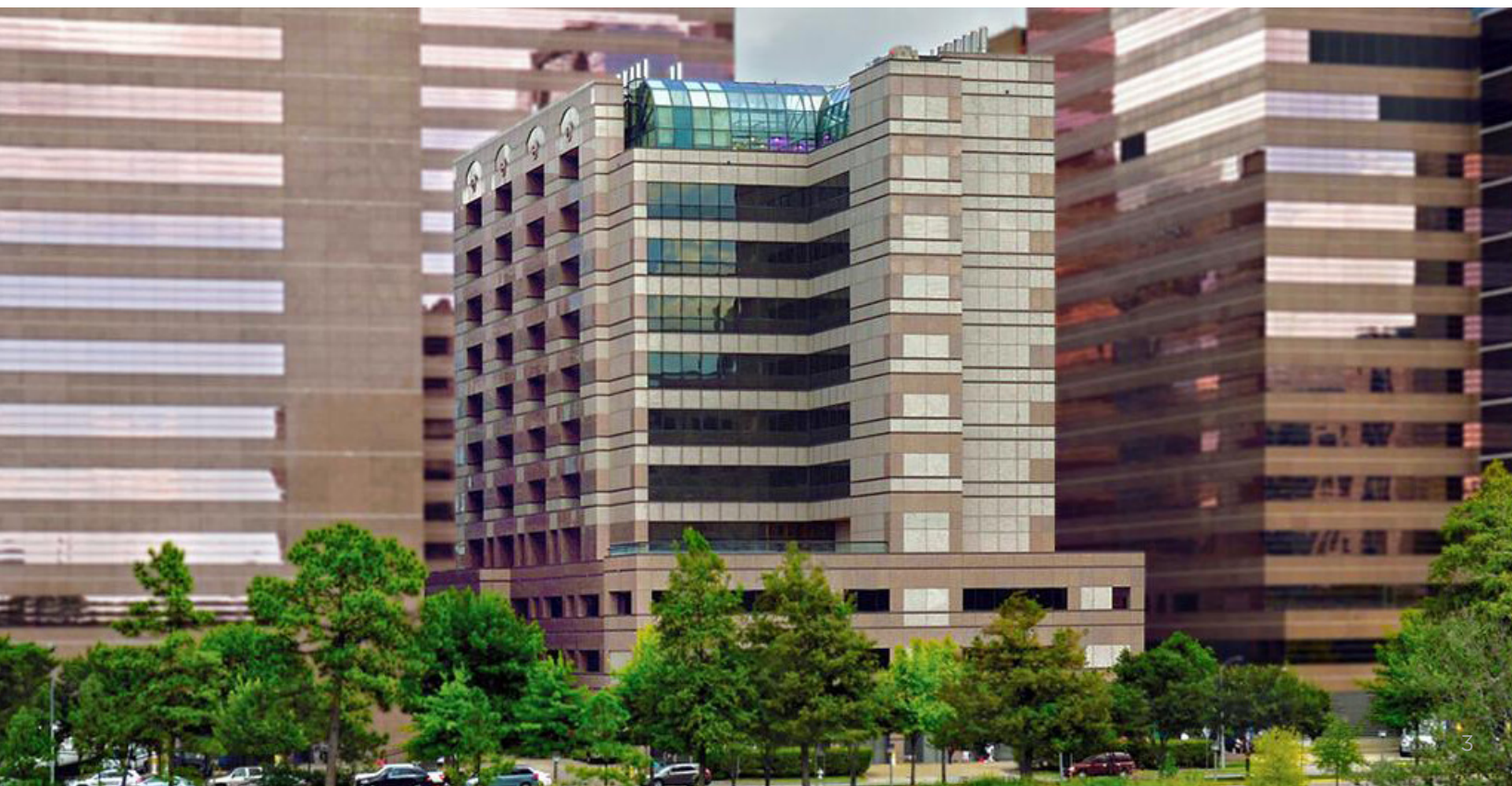
*"This is a once-in-a-lifetime opportunity to walk in Dr. Bier's footsteps, and it is a great honor."*

To support this vision, he plans to retain and recruit talented faculty and staff who are passionate about improving children's and families' nutrition and physical activity.

"We want to make research easier. We're going to brainstorm. We're going to bring in outside people as consultants, speakers and advisers and have grant-writers help promote new, innovative ideas, as well as nurture and support the activity and ideas that are already happening here," he said.

Allison earned his undergraduate degree at Vassar College and a master's and doctoral degrees from Hofstra University. He completed fellowships at Johns Hopkins University School of Medicine and Columbia University College of Physicians and Surgeons. Prior to joining the CNRC, Allison served as the dean of the School of Public Health at Indiana University in Bloomington.

*By Taylor Barnes, senior communication associate at Baylor College of Medicine*



## NUTRITION & YOUR CHILD

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## JOIN A CNRC NUTRITION STUDY!

Houston-area residents are invited to participate in the nutrition research projects designed to help CNRC scientists learn more about the nutritional needs of children. Parking is free and financial compensation is provided for most studies.

**For questions on becoming a CNRC research volunteer, call Noemi Islam at 713.798.7002 or email [nislam@bcm.edu](mailto:nislam@bcm.edu)**

**Technology Effects on Child Health (TECH) Study H-52282** Help us understand how screen time may affect your 3-4-year old's sleep, growth and development. Join the 12-month TECH study! You will receive \$410, a report of your child's screen use, & informational videos at the end of the study. Read about the study here: <https://redcap.link/techstudy>.

**Energy and Screens Study H-56253** We are inviting families to measure how screen vs. non-screen activities may impact energy use and sleep in 3-5 y/o kids. Includes 1 home & 1 center visit. Compensation provided. For more information [energyscreens@bcm.edu](mailto:energyscreens@bcm.edu) or text **346-626-4466**.

**Teen Talk Study H-46202** Researchers at the Children's Nutrition Research Center, Baylor College of Medicine are recruiting 14-17-year-old teens and their parents living in rural communities to participate in a panel to help us develop a digital obesity prevention program. Compensation provided. For more information, parents please contact Chishinga Callender at 713-798-0506 or Noemi Islam at **713-798-7002**.

**Baylor Infant and Toddler Biomarker of Nutrition Study (BITBONS) H-52929** <https://www.bcm.edu/healthcare/clinical-trials/h-52929> We are enrolling infants (4-24 months) to complete 6 visits that

include growth measurements, skin scans, small blood/milk sample, and a vision test. Receive up to \$600, free parking, and refreshments. To learn more, complete the eligibility screener, contact us at **713-798-0517** or [BITBONStudy@bcm.edu](mailto:BITBONStudy@bcm.edu)

**PATHS-UP H-55556** Is your child, aged 13-17, considered Hispanic or Latino? Are they struggling with body weight? Do they have an iPhone and agree to record their diet and body weight for 30 days? If yes, contact us at **713-798-7092** or visit <https://redcap.link/PATHS-UP> to help develop a health app for Hispanic teens! You could earn up to \$95 as compensation.

**SCREENS Study H-53533** Join our study! 8-11 Year Old Participants Needed. Help us learn about screen media exposure and sleep health among school-aged children. Up to \$500 compensation for participation. To learn more: <https://redcap.link/SCREENS> Screens\_Study@BCM.edu **713-798-0555** Your child does not need to use electronic screen regularly to be part of this study.

**Goodnight Screen Media Study H-52269** Help us learn about the effects of screen media use on children's sleep, memory and attention Parents and children age 4 are encouraged to learn more about an exciting new study at the Children's Nutrition Research Center in Houston, TX. Participants may

be compensated up to \$510 for participation. Free Parking. To learn more please visit <https://redcap.link/goodnight> You can also contact us at: **713-798-0557** or [GoodNightScreenMedia@bcm.edu](mailto:GoodNightScreenMedia@bcm.edu)

**Melatonin Sensor Study H-54855** Help us develop a new sensor that detects melatonin in sweat. This innovative technology may help to improve how we monitor sleep health. Seeking adults and children. Who qualifies adults 18-64 years old and children 4-9 years old. \$100 compensation will be provided for participation. To learn more/enroll, for adult: <https://redcap.link/MelatoninSensorStudyAdult> or for child: <https://redcap.link/MelatoninSensorStudyChild> or contact us at **713-798-0555**; email: [dadabhoy@bcm.edu](mailto:dadabhoy@bcm.edu)

**PASS Study: Physical Activity and Stopping evening Snacking H-56321** If your child is between 12-18 years old and has been told they may have prediabetes, they could join our 8-week PASS research study from home with some visits to the Children's Nutrition Research Center in the Texas Medical Center. Our study looks at how physical activity and stopping evening snacking can improve metabolic health. Compensation provided. Free parking. Contact us **713-798-7182** or email [rana.razook@bcm.edu](mailto:rana.razook@bcm.edu) today to learn more and see if they qualify!



Please scan the QR code provided and join the legions of families helping the CNRC advance science through research. Our researchers are interested in studying children of all ages on diverse topics.