Healthy breakfast still the best way to start the day

New research shows that skipping breakfast can cause children and adolescents to fall short of recommended intakes of important nutrients. Dr. Theresa Nicklas, professor of pediatrics at Baylor College of Medicine and a researcher at the USDA/ARS Children’s Nutrition Research Center at BCM, and her colleagues analyzed data from the 1999-2006 National Health and Nutrition Examination Survey to determine whether skipping breakfast and eating certain types of breakfast relate to nutrient intake, nutrient adequacy and weight status in children and adolescents. The report appeared in the Journal of the American Dietetic Association.

The investigators divided children between the ages of 9 and 13 years and adolescents between the ages of 14 and 18 years into three groups: breakfast skippers, ready-to-eat or boxed

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cereal consumers and other breakfast consumers. Among those surveyed, 20 percent of children and 32 percent of adolescents were breakfast skippers, while 36 percent of children and 25 percent of adolescents consumed ready-to-eat cereal for breakfast and 44 percent of children and 43 percent of adolescents consumed other breakfast types.

Over the course of each day, those who consumed ready-to-eat cereal had lower intakes of total fat and cholesterol and higher intakes of total carbohydrate, dietary fiber and micronutrients than those who skipped breakfast or consumed other types of breakfast.

Both children and adolescents who skipped breakfast had higher body mass index scores and higher waist circumference than those who ate ready-to-eat cereal or other types of breakfast. The prevalence of obesity was higher in breakfast skippers and other breakfast consumers than those who ate ready-to-eat cereals.

“This reinforces the importance of eating a healthy breakfast in the morning,” said Nicklas. “It provides nutrients and may contribute to weight management.”

Others who took part in the study included Priya Deshmukh-Taskar of BCM, Dr. Carol O’Neill of the Louisiana State University Agricultural Center, Dr. Debra Keast of Food and Nutrition Database Research Consulting, Dr. John Radcliffe of Texas Women’s University and Dr. Susan Cho of NutraSource Inc.

Funding for the study came from the USDA/Agricultural Research Service and the Kellogg’s Corporate Citizenship Fund.
San Antonio-area schools. The questionnaires assessed the family demographics and language spoken at home to measure acculturation (the level in which these families had adapted to the American lifestyle), food insecurity (limited or uncertain availability of nutritionally adequate foods) and the children’s fruit and vegetable consumption at home.

In general, home fruit and vegetable consumption was low among Hispanic children. The researchers found that children who were less acculturated had a higher rate of fruit and vegetable consumption. An additional finding showed that children who had greater food security consumed higher amounts of fruits and vegetables than those who were food insecure.

“One interesting finding was that fruit and vegetable cost was not found to be an important factor in their consumption level, which is a contrasting result compared to other studies that have found that cost is one of the major issues when it comes to low-income families getting enough fruits and vegetables,” said Dave. “This could be due to the abundant availability of low-price fruits and vegetables in the San Antonio area.”

Dave also found that parents, most of whom worked full time or several part-time jobs, perceived fast food restaurants as beneficial because they provided easy access and large food portions for their cost. This consumption of fast foods negatively impacted the consumption of fruits and vegetables at home, said Dave.

When only the demographic information of the families was considered, the researchers discovered that families with food insecurity had less fruits and vegetables in their homes than their food secure counterparts. However, when they included information on factors such as parental role modeling and practices, they found that food insecurity did not play a significant role in the availability of fruits and vegetables at home. These parental practices and role modeling were the strongest influences on availability and accessibility of fruit and vegetables at home.

Results of this study show that acculturation and food insecurity play a significant role in the consumption of fruits and vegetables among children in low-income Hispanic families. Dave emphasizes that parental involvement and the home food environment play important roles in the development of a child’s eating behavior. Ways to help food insecure and more acculturated low-income Hispanic families follow healthy dietary patterns that lead to consuming more fruits and vegetables need to be established through intervention programs, said Dave.

Others who took part in the study include Dr. Alexandra Evans from the University of Texas School of Public Health, Drs. Ruth Saunders and Ken Watkins from the University of South Carolina and Dr. Karin Pfeiffer from Michigan State University.

Dave and colleagues published the findings of the study in two separate publications, the Journal of the American Dietetic Association and the journal Health Education Research.

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reviewed their hospital records daily and recorded whether they had vomited, whether their bellies were distended (swollen) and whether they had gastric residuals—residuals that remain in the stomach after feedings.

They also conducted more objective, non-invasive tests that measured the rate of stomach emptying, the activity level of the enzyme that helps digest the sugar in formula and breast milk, the integrity of the intestine and the amount of inflammation in the intestinal tract.

“We found that the traditional measurements that neonatologists make on a daily basis really were not helpful in determining when the babies were going to be able to receive all nutrition orally as opposed to some portion through IV feedings. And, of the objective tests we performed, only the measurement of the digestive enzymes was predictive of when babies would get to full feedings.”

Understanding feeding intolerance and predicting the attainment of full feedings are important in determining whether the distress of a baby is a feeding issue or something else. Knowing that could impact the immediate, bedside decision-making of physicians.

“In the long term, it is important in developing a care plan for preterm babies,” he said. “One thing we know is that babies, born at the same gestational age, and at the same weight, can differ in how they respond to feedings. If we have a better idea of which of the babies would lag in their gastrointestinal development, those babies could potentially be cared for in a way that would minimize their health risks.”

Others involved in the study were Ching-Nan Ou and E. O’Brian Smith of BCM.

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