Family meals, adequate sleep and limited TV may lower childhood obesity

February 8 2010, by Emily Caldwell

A new national study suggests that preschool-aged children are likely to have a lower risk for obesity if they regularly engage in one or more of three specific household routines: eating dinner as a family, getting adequate sleep and limiting their weekday television viewing time.

In a large sample of the U.S. population, the study showed that 4-year-olds living in homes with all three routines had an almost 40 percent lower prevalence of obesity than did children living in homes that practiced none of these routines.

Other studies have linked obesity to the individual behaviors of excessive TV viewing, a lack of sleep and, to a lesser extent, a low frequency of family meals. But this is the first study to assess the combination of all three routines with obesity prevalence in a national sample of preschoolers.

The researchers suggested that adopting these three household routines could be an attractive obesity-prevention strategy for all families with young children, especially because these routines may benefit children's overall development. However, they also cautioned that this study alone does not confirm whether the routines themselves, or some other factor, protect children from obesity.

The study appears online and is scheduled for publication in the March issue of the journal *Pediatrics*.

Each routine on its own was associated with lower obesity, and more routines translated to lower obesity prevalence among 4-year-olds, according to the analysis. The link between the routines and lower obesity prevalence was also seen in children with and without other risk factors for obesity.

"The routines were protective even among groups that typically have a high risk for obesity. This is important because it suggests that there's a potential for these routines to be useful targets for obesity prevention in all children," said Sarah Anderson, assistant professor of epidemiology at Ohio State University and lead author of the study.

Anderson co-authored the paper with Robert Whitaker, professor of public health and pediatrics at Temple University.

Anderson and Whitaker analyzed data collected in 2005 on 8,550 children who were born in the United States in 2001. The data were collected as part of the Early Childhood Longitudinal Study, Birth Cohort, a study conducted by the National Center for Education Statistics to provide information about learning environments, health and development of young U.S. children.

The researchers examined the association of childhood obesity among preschool-aged children with three household routines: eating the evening meal as a family more than five times per week; obtaining at least 10½ hours of sleep per night; and watching less than two hours per day of TV on weekdays - referred to as "screen-viewing time."

The researchers calculated the body mass index (BMI) of the children using the measured heights and weights of the children. BMI measurements were converted into percentiles for age and sex based on growth charts developed by the Centers for Disease Control and Prevention in 2000. For this study, children were considered obese if

their BMI scores were at or above the 95th percentile on those charts.

Eighteen percent of the children were determined to be obese by this standard. Among 4-year-old children whose households practiced all three routines, the prevalence of obesity was 14.3 percent. In contrast, almost one in four of the children (24.5 percent) living in households without any of the routines were obese.

The study also suggested that in households practicing none of these routines, adopting just one could lower a child's risk of becoming obese, and having two or three of the routines was more protective than just one.

"I imagine people are going to want to know which of the routines is most important: Is it limited TV, is it dinner, is it adequate sleep? And what this suggests is that you can't point to any one of these routines. Each one appears to be associated with a lower risk of obesity, and having more of these routines appears to lower the risk further," Anderson said.

That association could be seen even when children were already at higher risk for obesity based on other aspects of their lives, the researchers noted. For example, previous research has shown that children are at higher risk for obesity if their mothers are obese, if their household income is below the poverty level, if their mothers did not finish high school, and if they are growing up in a single-parent home.

All of those predictors of a higher prevalence of obesity in 4-year-olds were seen in this study. But even in these children, the practice of all three household routines appeared to lower the likelihood that they were obese.

She said the research suggests that an approach to obesity prevention that

emphasizes these routines might be acceptable to both parents and pediatricians because adopting these practices could enhance child well-being without a need to focus entirely on weight.

The researchers noted that the analysis revealed other important details. Many families already practiced at least two of the routines: 56.6 percent of families had dinner together at least six evenings per week, and 57.5 percent reported that their preschooler slept at least 10½ hours per night. TV time was limited to two hours or less among 40.4 percent of families.

On the other hand, some children were obese even when families practiced all three routines - a reminder that research based on large populations does not necessarily apply to every individual case.

"Our research suggests these routines may have the opportunity for impact. And they may help families move beyond the discussion of eating and exercise to other aspects of behavior and biology that have potential to be linked to obesity," Anderson said. "Parents should talk to their child's doctor if they're worried about their child's weight.

"It may be more difficult for some families than others to have regular meals together, ensure their child gets enough sleep, and limit TV time. However, given their specific circumstances and constraints, families with young children may want to consider what it would take for them to have these routines for their child. We should support parents in their efforts to establish and maintain these household routines."

Provided by The Ohio State University