

Penn Nursing study answers: What's a good breakfast for kids?

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Credit: Wikipedia.

A team of researchers, led by Tanja Kral, PhD, Associate Professor in the Department of Biobehavioral Health Sciences at the University of Pennsylvania School of Nursing, concluded that a breakfast high in protein - like eggs - keeps children fuller longer than cereal or oatmeal, causing them to eat fewer calories at lunch. The study, recently published in *Eating Behaviors*, also concludes that the effects of a protein-rich meal don't last throughout the day. It only impacts a mid-day meal.

The study recruited forty, 8- to 10-year-old children to consume one of three, 350-calorie breakfasts (eggs, oatmeal, or cereal), then played games with research staff and then ate lunch, once a week for three consecutive weeks. On each occasion, every participant had to eat their entire breakfast, but could eat as much or as little lunch as desired.

Throughout the morning, they answered questions like, "How hungry are you?" and "How much food do you think you could eat right now?" Their parents also logged in a food journal what the children ate the remainder of the day.

According to the research, after consuming the egg breakfast (scrambled eggs, whole wheat toast, diced peaches, and one percent milk) children reduced their energy intake at lunch by seventy calories. That's roughly equivalent to one small chocolate-chip cookie.

Moderately active children in the same age range as those who participated in the study generally need between 1,600 and 1,800 calories daily. The 70-calorie drop at one meal equals about four percent of a child's daily caloric needs. Eating beyond the caloric threshold, even by a little, can cause excess weight gain and obesity in children, if sustained.

"I'm not surprised that the egg breakfast was the most satiating breakfast," said Kral. "What does surprise me is the fact that, according to the children's reports, eating the egg breakfast didn't make them feel fuller than cereal or oatmeal, even though they ate less for lunch. We expected that the reduced lunch intake would be accompanied by lower levels of hunger and greater fullness after eating the high protein [breakfast](#), but this wasn't the case."

Future research should study children over a longer period of time as these findings could have important implications for the prevention of obesity, particularly for young people. "Approximately 17 percent of US children and adolescents are considered obese," Kral says. "It's really important that we identify certain types of food that can help children feel full and also moderate caloric intake, especially in [children](#) who are prone to excess weight gain."

More information: Tanja V.E. Kral et al, Comparison of the satiating properties of egg- versus cereal grain-based breakfasts for appetite and energy intake control in children, *Eating Behaviors* (2016). [DOI: 10.1016/j.eatbeh.2015.11.004](https://doi.org/10.1016/j.eatbeh.2015.11.004)

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