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Researcher provides further evidence that slow eating reduces food intake

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Two new studies by researchers at the University of Rhode Island are providing additional insights into the role that eating rate plays in the amount of food one consumes. The studies found that men eat significantly faster than women, heavier people eat faster than slimmer people, and refined grains are consumed faster than whole grains, among other findings.

Kathleen Melanson, URI associate professor of nutrition, along with graduate students Emily Ponte and Amanda Petty, presented their research at the annual meeting of The Obesity Society in Orlando this month.

In one laboratory study, which validated that self-reported eating rates reflect an individual's actual eating rate, Melanson and her lab team found that fast eaters consumed about 3.1 ounces of food per minute, medium-speed eaters consumed 2.5 ounces per minute, and slow eaters consumed 2 ounces per minute. This work is the first to validate self-reported eating rates that have been used in large population studies, which have shown relationships between eating rate and body weight.

The researchers also found what Melanson described as "very strong gender differences" in eating rates. At lunch, the men consumed about 80 calories per minute while the women consumed 52 calories per minute.

"The men who reported eating slowly ate at about the same rate as the

women who reported eating quickly," said Melanson, director of the URI Energy Balance Laboratory.

The second study, which examined the characteristics associated with eating rates, found a close association between eating rate and body mass index (BMI), with those individuals with a high BMI typically eating considerably faster than those with a low BMI.

"One theory we are pursuing is that fast eating may be related to greater energy needs, since men and heavier people have higher energy needs," said Melanson.

In what Melanson called her favorite result, the study also found that the test subjects consumed a meal of whole grains – whole grain cereal and whole wheat toast – significantly slower than when eating a similar meal of refined grains.

"Whole grains are more fibrous, so you have to chew them more, which takes more time," she said.

According to Melanson, these studies have raised a number of additional questions that she intends to pursue with future research.

"When you talk about eating rate, you have to talk about eating techniques," she explained. "It's not just about how long it takes you to eat, but how you eat."

She plans to study specific slow-eating techniques to see how they may affect appetite and weight loss. She will also examine other factors that might influence eating rate in daily life.

"We also want to recruit fast-paced eaters with a high BMI, teach them how to eat slowly, and see what role that might play in weight

management," Melanson said.

While the link between eating rate and obesity is still being studied, Melanson said that her research has demonstrated that eating slowly results in significantly fewer average calories being consumed.

"It takes time for your body to process fullness signals," she concluded, "so slower eating may allow time for fullness to register in the brain before you've eaten too much."

The latest research follows up on a landmark 2007 study conducted by Melanson that was the first to confirm the popular dietary belief that eating slowly reduces food intake. That study found that women who were told to eat quickly consumed 646 calories in nine minutes, but the same women consumed just 579 calories in 29 minutes when encouraged to pause between bites and chew each mouthful 15 to 20 times before swallowing.

Provided by University of Rhode Island