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UNC researchers find MSG use linked to obesity

CHAPEL HILL – People who use monosodium glutamate, or MSG, as a flavor enhancer in their food are more likely than people who don't use it to be overweight or obese even though they have the same amount of physical activity and total calorie intake, according to a University of North Carolina at Chapel Hill School of Public Health study published this month in the journal *Obesity*.

Researchers at UNC and in China studied more than 750 Chinese men and women, aged between 40 and 59, in three rural villages in north and south China. The majority of study participants prepared their meals at home without commercially processed foods. About 82 percent of the participants used MSG in their food. Those users were divided into three groups, based on the amount of MSG they used. The third who used the most MSG were nearly three times more likely to be overweight than non-users.

"Animal studies have indicated for years that MSG might be associated with weight gain," said Ka He, M.D., assistant professor of nutrition and epidemiology at the UNC School of Public Health. "Ours is the first study to show a link between MSG use and weight in humans."

Because MSG is used as a flavor enhancer in many processed foods, studying its potential effect on humans has been difficult. He and his colleagues chose study participants living in rural Chinese villages because they used very little commercially processed food, but many regularly used MSG in food preparation.

"We found that prevalence of overweight was significantly higher in MSG users than in non-users," He said. "We saw this risk even when we controlled for physical activity, total calorie intake and other possible explanations for the difference in body mass. The positive associations between MSG intake and overweight were consistent with data from animal studies."

As the percentage of overweight and obese people around the world continues to increase, He said, finding clues to the cause could be very important.

"The U.S. Food and Drug Administration and other health organizations around the world have concluded that MSG is safe," He said, "but the question remains – is it healthy?"

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Co-authors on the study included Liancheng Zhao and colleagues from Fu Wai Hospital and Cardiovascular Institute at the Chinese Academy of Medical Sciences in Beijing. Other researchers on this study were from Northwestern University in Chicago and the INTERMAP Cooperative Research Group.

The study is available online at: http://www.nature.com/oby/journal/v16/n8/full/oby2008274a.html

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