Medical Xpress

Researchers Harness Basic Survival Tactic to Fight Childhood Obesity

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(PhysOrg.com) -- University at Buffalo researchers are adapting our innate interest in consuming a variety of foods, considered an evolutionary survival tactic, to develop new interventions to treat obesity in children.

The project is funded by a 5-year, $2.9 million grant to Leonard Epstein, PhD, UB professor of pediatrics and social and preventive medicine, a nationally known expert on childhood obesity. Epstein developed the popular "Stoplight Diet" used widely to help families instill healthy eating habits in overweight children.

The new research is funded by the National Institute for Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health.

The study is based on the concept of "habituation," the point at which a person no longer is interested or motivated to eat a particular food. Laboratory-based experiments have shown that, compared to non-obese participants, obese persons are slower to reach that disinterest point, so they continue to eat and consume more calories. However, research also has shown that a new food regenerates the interest in eating.

Epstein and colleagues believe they can adapt these proven behavioral motivation concepts to help children lose interest in non-nutritious foods through habituation, while tempting them with new choices of healthy foods. If the approach changes behavior, it would result in weight loss.

"Despite the consistent body of research showing that habituation is a mechanism that can influence energy intake," says Epstein, "there has been no research designed to translate habituation theory to interventions for adult or pediatric obesity.

"Understanding how variety influences energy intake may be important in understanding how food variety is related to the increasing prevalence of obesity."

The study is aimed at overweight 8-12-year-olds. During the first year of the grant, researchers will conduct a series of laboratory-based studies to test factors that may influence habituation to entrees and snacks in both the short- and long-term. One of these studies will test the effects of simultaneously reducing the variety of high-energy-density (high calorie, non-nutritious) foods while increasing the variety of low-energy-density (low calorie, healthy) foods.

In years two and three, researchers will test these approaches with participants in their homes. If they are successful, during years four and five these findings will be translated into interventions pediatricians can use in their practices to treat childhood obesity.

"Childhood obesity is a prevalent problem that tracks over time," says Epstein. "Obese youth are at increased risk of becoming obese adults. We think this research will provide new treatment strategies to interrupt this extremely unhealthy progression."

Provided by University at Buffalo