



# Nutrition for Family Living

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## July, 2006 Topics

- Parenting Styles Impact Children's Weight
- Soy - - a medical miracle or just another food?
- Fighting obesity one project at a time!

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## Parenting Styles Impact Children's Weight

By Heather Harvey and David Riley

A recent article in the June 2006 issue of Pediatrics looked at the question of whether or not four different parenting styles had any relationship to a child's weight status in first grade. This study used data from a national study that had height and weight information on 872 children as well as parenting styles at 4 ½ years of age in addition to height and weight data in first grade.

The four different parenting styles used in this study were authoritative, authoritarian (sometimes called domineering), permissive and neglectful. Authoritative parents are sensitive to their child's needs, set appropriate and reasonable limits and encourage children to do things on their own in a supervised environment. Authoritarian parents are strict, with many rules and do not necessarily take into account the child's level of development or needs when setting behavior expectations. Permissive parents do not have many rules or structures, are very sensitive to the child's needs, often 'doting' on the child and do not expect the child to do much on their own. Neglectful parents are not at all sensitive to the needs of the child and do not have expectations for the child's behavior. Parenting styles were determined using two scales, one for maternal sensitivity to the child's needs, based on observation, and the second was expectations for child self-control, based on a survey of the mother. Scores on these two scales served as indicators for assigning parenting styles. Table 1 shows the relationship between the scales and parenting styles.

	<i>Maternal Sensitivity</i>	<i>Expectations for self-control</i>
<b>Authoritative</b>	High	High
<b>Authoritarian</b>	Low	High
<b>Permissive</b>	High	Low
<b>Neglectful</b>	Low	Low

Table 1: Parenting styles

This 4-factor model of parenting styles has been supported by hundreds of research studies conducted in several countries and across social classes and ethnicities in the U.S. Across all groups studied, authoritative parenting has been consistently associated with the most competent children. The children of authoritative parents are the most socially skilled and intellectually engaged preschoolers and school-agers, and they are significantly less likely than other children to get low grades, smoke or use alcohol or other drugs as teenagers. Research at the University of Wisconsin-Madison even showed that teenagers with Authoritative parents were significantly less susceptible to anti-social peer influences (i.e. to do things they shouldn't, like skip school or shoplift).



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Children of mothers who indicated high sensitivity to their child's needs, had less than half the risk of being overweight (BMI >95th percentile for age and sex) compared to mothers who showed low sensitivity to their child's needs, when income and race were taken into account. When parenting style was considered, only 4% of children of authoritative mothers were overweight, compared to 17% of children of authoritarian mothers. Children in authoritarian households had almost five times the risk of overweight in first grade as children in authoritative houses. Approximately 10% of children with permissive and neglectful mothers were overweight, which was twice the risk of overweight in first grade compared to children with authoritative mothers. One limitation of the study was that mother's and father's BMI were not known and therefore could not be taken into account during analysis.

When considering parenting style, is it possible that the child's behavior or weight caused the parents to adopt a certain parenting style? While this may happen in some cases, the authors attempted to look at this and found no connection. We also know from experimental interventions that when parents are taught to be more authoritative in their interactions with their children, then their children change in positive ways. For example, one famous set of experiments in Oregon was conducted with families whose early adolescents were already in trouble with the law. When the parents were taught to be more warm/nurturing with their children, and also to be more effectively controlling and demanding, these adolescents were far more likely than equally troubled peers to avoid future delinquency, to improve their school grades, and to have much more enjoyable relationships with their parents. So we know, from these experiments, that authoritative parenting causes differences in children in these other areas (social behavior, delinquency, school grades), and it is therefore highly likely to be one of the causes of obesity as well.

This study suggests that parents that provide a strict environment without paying attention to the child's emotional level (authoritarian) increase the risk that their child will be overweight. Parents that are sensitive to their child's emotional and psychological responses (authoritative) are more likely to have healthier weight children, according to this study. But why should parenting style matter with respect to obesity? Researchers do not know for sure, but they believe that one key is that authoritative parenting teaches children to self-regulate themselves, while the other parenting styles are less effective at this. Neglectful and Permissive parents, of course, do not even ask a child for self-control. An authoritarian parent enforces control from the outside, so the child behaves correctly so long as the parent is there to monitor them. Only the authoritative parent teaches the child how to make good decisions on his or her own, even in the absence of the parent. For example, an authoritative parent might say to a preschooler "Don't throw the ball in the house," and when asked why, might explain, "I worry that the lamp might be broken by the ball." Research confirms that when the child learns the reason for the rule, then the child self-regulates his or her own behavior (in the absence of the parent) far better. Self-regulation, in turn, could have a big impact on diet and nutrition. This matches well with the suggested roles for parents and children in the "division of responsibility" feeding relationship that is encouraged because it allows children to self-regulate based on their own needs.



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### *Implications for educators:*

The authors of the article state: “it is the combination of sensitivity and expectations for self-control that seems to create an optimal environment for children with respect to limiting overweight risk.” Although there is not enough research to understand the diverse factors that influence weight status in children and adults, it is clear from this study that parenting style is one of the factors that can affect a child’s weight. When working with parents, it is important not only to educate about nutrition, but also the importance of establishing a positive nutrition environment that is neither too strict and controlling nor too loose and permissive. This is consistent with many of our nutrition education materials for parents, especially the following:

### Resources:

Bright Futures in Nutrition Family Fact Sheets

[http://www.uwex.edu/ces/wnep/tch\\_res/res\\_detail.cfm?resource\\_id=271](http://www.uwex.edu/ces/wnep/tch_res/res_detail.cfm?resource_id=271)

Parents and Children Sharing Food Tasks

[http://www.uwex.edu/ces/wnep/tch\\_res/res\\_detail.cfm?resource\\_id=194](http://www.uwex.edu/ces/wnep/tch_res/res_detail.cfm?resource_id=194)

Parenting Newsletters

<http://www.uwex.edu/ces/flp/parenting/>

### References:

Rhee KE, Lumen JC, Appugliese DP, Kaciroti N, Bradley RH. Parenting Styles and Overweight Status in First Grade. *Pediatrics*. 2006;117:2047-54.



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### Soy - - a medical miracle or just another food?

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By Susan Nitzke and Amanda Park

In 1999, the Food and Drug Administration gave food manufacturers permission to label products high in soy protein as having the potential to reduce heart disease risk. Since that time, consumption of soy protein has more than doubled, the number of soy-containing products on store shelves has exploded, and vast research on a variety of proposed “miracles” of soy has been conducted. Now many people, especially women concerned with menopausal symptoms, are left with unanswered questions.

Amanda Park, a recent graduate student in Nutritional Sciences at UW-Madison and now a Dietetic Intern at UW-Hospitals and Clinics, wrote an article on soy for the Wisconsin Dietetic Association and the Milwaukee Journal-Sentinel. You can read her article at this website: <http://www.jsonline.com/story/index.aspx?id=422244>.

Also, if you're interested in soy, don't miss this year's conference on Current Issues in Nutrition and Aging. One of the keynote speakers is D. Lee Alekel, the Professor-in-Charge of Iowa State University's Human Metabolic Unit Center for Designing Foods to Improve Nutrition. Dr. Alekel is conducting a study of soy and bone health and will share her insights on this controversial and confusing topic. For more information on the conference, visit this website: [http://www.uwex.edu/ces/flp/conference/06\\_current\\_concepts.cfm](http://www.uwex.edu/ces/flp/conference/06_current_concepts.cfm).



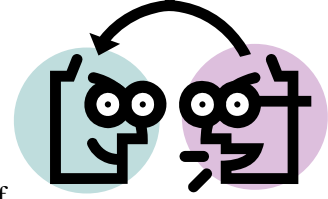
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## Fighting obesity one project at a time!

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By Ashley Valentine and Sherry Tanumihardjo

May 22 – 24 of 2006 marked the meeting dates of the Second Annual Project Directors Workshop for grantees who obtained funding under the United States Department of Agriculture/Cooperative State Research, Education, and Extension Service (USDA/CSREES) National Research Initiative in the areas of Human Nutrition and Obesity. The meeting was held at the USDA/Agricultural Research Service Children's Nutrition Research Center in Houston, Texas. **According to USDA/CSREES, "projects funded by this program are intended to lead to a better understanding of the behavioral and environmental factors that influence obesity and to the development and evaluation of effective interventions to prevent obesity."** Because funding is offered by USDA, 2 – 4 year projects must specifically relate to food or food systems in the US. Highlighted below are some of the projects presented at the workshop. Project summaries funded under the Human Nutrition and Obesity initiative are accessible at: <http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1095> (scroll down and click the link to "Abstracts of Funded Projects", about halfway down the page). These project summaries are intended to briefly show what other outreach specialists are doing in their communities. When the materials are released for public use, state specialists will be reviewing them for appropriateness and adaptation to Wisconsin.



### **Highlights of seven projects presented at the workshop:**

1. ***A Ground Level Weight Management Approach: Creating Healthy Home Eating Environments.*** Cullen, K.W.

Cullen and colleagues focus their project on creating a nutrition behavior change component for the Expanded Food and Nutrition Education Program (EFNEP). The group created six lessons for EFNEP. Each lesson includes a short video, handout, and goal-setting materials. In addition, all lessons have been translated into Spanish. To determine the influence of the program, the group will measure food insecurity, food preparation practices, food parenting practices and menu planning in study participants. [Materials will be available to the public in 2008, at the Children's Nutrition Research Center webpage: [http://www.kidsnutrition.org/.](http://www.kidsnutrition.org/)]

2. ***El Regalo De Salud (The Gift Of Health): A Radio Obesity Education Campaign Targeting Latino Parents.*** Archuleta, M.

Archuleta and her group seek to impact the Hispanic community through radio capsules, recipes, fact sheets, and a toll-free information and referral help-line focused on childhood nutrition and obesity, all originally offered in Spanish. The radio capsules have already aired in several cities and the group is looking to expand the network. The information/help line can be reached at 1-800-453-3003. For more information about this project visit the website: <http://www.cahe.nmsu.edu/nmrr/showfullrecord.php?recordid=160&ShowSpecialFields=off> .[Radio capsules are not yet available to the public.]



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3. ***Food Friends and Fun Moves: A Creative Approach to Obesity Prevention for Preschool Children and Families.*** Anderson, J.E., Kennedy, C., Davies, P., Serrano, E.

Anderson et al. approach the obesity epidemic with an intervention targeted at preschool children and their parents through a direct service program, "Food Friends and Fun Moves." The curriculum teaches children the importance of nutrition and physical activity through promoting new foods and the use of pedometers. The physical activity component (Fun Moves) is still under development. To learn more about the program, visit "The Food Friends" website at: <http://www.fshn.cahs.colostate.edu/nep/ff/index.html>.

4. ***Hawaii Community Resource Obesity Project.*** Beckham, S., Bradley, S., Shintani, T.

To tackle obesity in Hawaii, where rates are among the highest in the nation, Beckham et al. have designed a program to increase the availability of healthy foods produced in a local community through linking producers and distributors with clinical weight management interventions and educational materials. The group has opened a Dining Pavilion which sells healthy foods at affordable prices, established a farmers' market to allow local people to purchase locally grown, healthy foods at a cheaper rate than the retail market (which are mainly imported foods), and published numerous informational materials. They have also developed a 2-day diet education program and a Lifestyle Enhancement Program (LEP). To evaluate the influence of the programs, three groups of subjects will be studied. One group will undergo the diet program only, one group will participate in the LEP only, and the third will undergo both interventions (diet and LEP). For additional information, to read newsletters and publications, or to learn about the Waianae Coast Comprehensive Health Center (WCCHC) where much of the intervention is taking place, visit: <http://www.wcchc.com>. [Materials posted at the WCCHC website are ready and available for public use.]

5. ***Poverty and Obesity: Energy Density and Cost of Diets.*** Drewnowski, A., Townsend, M., Keim, N.

To help optimize diets of socially disadvantaged groups, Drewnowski et al. will investigate the relationship between diet quality and cost by developing a method to estimate habitual diet costs. They will examine links between diet quality, dietary energy density, and determine how taste, convenience, participation in food assistance programs and access to foods, among others, influence diet quality in relation to diet cost. With this information the group will attempt to use a new linear programming model to improve dietary habits of low-income women. [Materials are still in development and are not available to the public.]

6. ***Student-Centered Web-Based Communities: Multidisciplinary Approach for Adolescent Obesity Prevention.*** Boushey, C.J., Saviano, D., Weaver, C., McCabe, G.

The project led by Boushey et al. seeks to influence dietary behaviors, physical activity, and scientific literacy of 11 – 12 year-olds through the use of a web-based program called EAT MOVE LEARN. This program has four modules called EXPLORATIONS which meet many of the National Science Education Standards and can be used by teachers in a classroom setting. The investigators will evaluate differences in health outcomes (including body mass index, body fat, and physical activity) of sixth grade children who participate in the EAT MOVE LEARN program compared with those who do not. To explore the EAT



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MOVE LEARN program, visit the website:

[http://cahedev.nmsu.edu/development/eml\\_new/](http://cahedev.nmsu.edu/development/eml_new/). [Materials posted at the EAT MOVE LEARN website are ready and available for public use.]

7. ***Tween Power: Preventing Obesity Through Wise Expenditures of Resources.*** Anliker, J.A., Carbone, E.T., Shanley, E., Thompson, C., Black, M.

Anliker et al. are performing a descriptive study to characterize the purchasing behaviors of tweens (11 – 14 year-olds) and the impact of food and beverage advertising on this age group. Anliker et al. are examining the factors that influence adolescents to purchase the foods and beverages they do, the sources of money that adolescents use to purchase those items, and the level of consumer literacy (i.e., self-knowledge regarding money, consumer skills, diet, and health) of the adolescents and their families, among other factors. With these data, the group will develop the POWER program to teach youth, families of youth, nutrition professionals, and extension educators about making wise food and beverage purchases in the current food marketing environment. [Materials are still in development and are not available to the public.]

The project meetings are held annually at various locations in the US. This is one way that USDA disseminates the research that they are funding. Funds to attend the annual investigators' meetings are to be written directly into the grant budget. Wisconsin nutrition education programming will surely benefit from these integrated research and outreach projects as materials are released and reviewed by specialists.



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