

Fighting the escalating trend toward obesity with an ecological approach, the college's faculty members and Cornell Cooperative Extension educators are designing and offering programs that encourage healthful eating and more active lifestyles.

New York's Obesity Epidemic Spurs Researchers and Educators into Action

BY CLARE ULRICH

Gone are the days when rolls of body fat were regarded as status symbols. Today, we know that being overweight or obese contributes to chronic health conditions such as heart disease, diabetes, cancer, arthritis, asthma, and depression. In New York State alone, where 58 percent of residents are overweight or obese, annual health care costs associated with adult obesity exceed \$6 billion, of which taxpayers absorb nearly \$5 billion. None of this signals quality of life by any standards.

While biological, psychological, social, and environmental factors figure complexly into the rise of obesity, the reality remains that it is a preventable condition. Researchers predict that by 2010 the root causes of obesity—poor nutrition and physical inactivity—will become the leading underlying causes of preventable deaths in the United States.

Recognizing the seriousness of the problem, New York State published in January 2005 its first-ever Strategic Plan for Overweight and Obesity Prevention. In her preface to the plan, former Commissioner of Health Antonia Novello wrote: “[The plan] will shape our thinking and our response not only as individuals and families, but also for settings we find ourselves in, such as our communities, workplaces, schools, and health care environment, so that all can work together to achieve healthy weights through healthy daily living.” In concert with this goal, the College of Human Ecology is playing a key role in integrating research and outreach throughout New York State.

“Our faculty help frame the state agenda for obesity prevention that determines state policy and provides state funding for projects that are based on best practices and show >>>



New Yorkers Weigh In on Childhood Obesity

"Little is known about the public's support for policies to reduce childhood obesity," says John Cawley, associate professor of policy analysis and management, "especially if the policies lead to higher taxes. To fill in this gap, we surveyed New York State residents on their support for specific policies and their willingness to pay higher taxes to reduce childhood obesity."

Cawley crafted a series of questions for the 2006 Empire State Poll, a survey of New York residents that is conducted annually by Cornell's Survey Research Institute. The policy questions related to three specific foods—candy, chips, and soda.

Respondents were asked how they felt about banning advertisements for candy, chips, and soda during children's television programming; raising taxes on candy, chips, and soda; and banning these foods from schools. They were also queried about their willingness to pay higher taxes to cut childhood obesity in half.

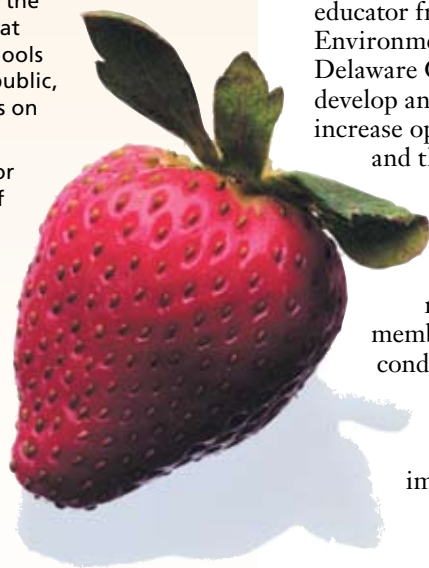
"Eighty-one percent of New York State residents say that they think childhood obesity is a major problem," Cawley says. "So, you might conclude from this that almost any policy proposal that could reduce childhood obesity is going to generate a lot of support from at least a majority of New Yorkers. But it turns out that's not true."

It turns out that 63.4 percent of the people polled think the government should ban candy, chips, and soda from schools. However, 56 percent were opposed to raising taxes on those same foods. And only 48.9 percent favor a government ban on TV advertisements.

Cawley also found that the average New Yorker is willing to pay \$47.25 in higher taxes every year to cut childhood obesity in half. However, more than a third refuse to pay even \$10 a year toward that end, and about 16 percent are willing to pay \$200 or more a year.

"This study provides some new, important information for policymakers and practitioners in New York," Cawley says. "Given that 81 percent of New Yorkers think childhood obesity is a problem, there is an opportunity to enact well-designed anti-obesity policies. But the risk is that the opportunity could be squandered if legislators choose policies that lack a lot of support. Overall, the survey results suggest that policies aimed at limiting the sale of calorie-rich food in schools could receive the most support from the public, while a clear majority oppose raising taxes on candy, chips, and soda."

There are many possible ways to prevent or treat obesity. Cost-effectiveness studies of various anti-obesity interventions are needed to ensure that the budget allocated to prevent childhood obesity is used to maximum effectiveness, Cawley adds.



impact," says Josephine Swanson, assistant dean and administrator of Human Ecology's Cornell Cooperative Extension (CCE). "Our research, in turn, is informed by practice, which guides where we will go in the future."

In June 2005, the college sponsored a conference at Cornell titled, "Ecology of Obesity: Linking Science and Action," for practitioners and researchers interested in applying an ecological approach to obesity prevention. The ecological approach holds that the individual does not exist in isolation but rather develops over the life course within a context that includes family, community, society, and global influences.

"We carry that model with us in our extension outreach, working with faculty to make the environments where people

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live more conducive to healthy eating and active living," Swanson says. "The ecological approach is not a magic diet. It promises long-term impacts."

Since the conference, and a subsequent New York State-sponsored Childhood Obesity Prevention Invitational Summit, held in Albany in November 2006, in which several Human Ecology faculty members participated, the college has implemented a number of new research and outreach projects and collaborations to address both adult and childhood obesity. Several are highlighted here.

Small Steps Are Easier Together

Carol Devine, associate professor of nutritional sciences; Barbour Warren, research associate; and Mary Maley, health educator from Cornell's Program on Breast Cancer and Environmental Risk Factors (BCERF), have teamed with Delaware County CCE executive director Jeanne Darling to develop and test a community environmental program to increase opportunities for physical activity and healthy eating and thus prevent excess weight gain among women. The

program was motivated by Warren's review of breast cancer research, which shows that postmenopausal women who are obese have about twice the breast cancer risk of women of normal weight. A team that included community members and the Cornell researchers began by conducting assessments of the social and built environments that were contributing to obesity. They then developed interventions that were likely to generate community participation and have an impact.



Ten-week walking programs were organized in spring 2006. Participants on 12 walking teams were given pedometers and asked to add 2,000 extra walking steps at least three times a week. Twenty percent of the team members met the goal. In addition, community members added healthful food choices at 22 community events such as church coffees and school events that reached 542 people.

Local funding and enthusiastic support for Small Steps, the aptly named project, has made it possible to continue it for another three years. In addition, the Cornell researchers will test the Small Steps program in four new locations—a hospital and a school in Delhi, N.Y., as well as two new locations in Dunkirk, N. Y. The assessment tools and the community techniques that are being tested in the project are being used to design a model program that could be replicated anywhere. More information about the project is available on the BCERF web site at <http://envirocancer.cornell.edu/BCERResearch/obesity.cfm>.

“What we’re doing will set the stage for us to broaden our work and tailor the program for other groups, including children,” Darling says. “The research is such a critical component because that’s what drives us to make the bigger environmental changes that will help reduce obesity rates.”

Combating Childhood Obesity

Over the past 30 years, the obesity rate has nearly tripled for children ages 2 to 5 years and youth ages 12 to 19 years, and it has quadrupled for children ages 6 to 11 years.

The New York State Department of Health has declared childhood obesity a major health problem. According to the Centers for Disease Control and Prevention, 28 percent of New York high school students are overweight or at risk of becoming overweight, and 33 percent of low-income children between 2 and 5 years of age in New York are overweight or at risk for overweight.

In economic terms, however, childhood obesity looks misleadingly benign. Health care costs average \$15 per obese child per year compared to \$4,289 per obese adult per year. “Where childhood obesity becomes really expensive is when obese children grow up to be obese adults,” says John Cawley, associate professor of policy analysis and management. “The real expenses of obesity arise from somebody living 40 years as a diabetic, having a heart attack, and going to the hospital and running up a \$50,000 bill. Most of those things aren’t as likely to happen to children.”

While this suggests that prevention strategies in childhood would be a cost-effective approach to reducing adult obesity, Cawley says that there aren’t enough studies on cost-effectiveness to know which interventions work best.

“But the good news,” he points out, “is evidence that even small daily decreases in calorie intake or small increases in physical activity can have a huge impact on weight over the long run.”

Even though little is known about effective intervention strategies for preventing excessive weight gain among children, it is likely that different settings and circumstances will require different strategies to achieve ecological change.



Eat Well/Play Hard

For example, in cooperation with Head Start and the Women, Infants, and Children (WIC) program in Herkimer County, CCE held a series of workshops in spring 2006 for nine Head Start families. Six weekly sessions provided hands-on exposure to simple and healthy meal preparation, food choice education, cost-effective food shopping, and active play. At the end of each session, parents and children participated in a family play activity. Through a WIC Healthy Lifestyle Grant, each parent received a “Fit WIC” kit of activities for promoting active play with their children at home, along with a \$25 gift card if they attended all six sessions. Seven parents graduated from the program, and evaluations were very positive.

“There’s no lecturing out there anymore,” says Linda Robbins, assistant director of the Herkimer County CCE and a nutrition educator. “People have to make choices and learn that they are in charge of their own health. They need to be involved in the process. And that’s what we do. We make things fun. We make things interesting. We provide >>>

accurate information. It's the age-old story of teaching people how to fish rather than just giving them the fish. You have to enable participants to make positive lifestyle changes so that when the workshops end, they are able to continue the behavior changes they have tried during the workshops and, in this case, do that as a family."

CHANCE

The preschool- and elementary-school years are ages when children develop lifelong habits, making these ideal times to introduce healthy practices. But, according to Jamie Dollahite, associate professor of nutritional sciences, targeting educational efforts directly to young children is unlikely to have a large benefit.

"Parents are the gatekeepers for young children," says Dollahite, who serves on a New York State task force for childhood obesity prevention. "Children go home to households with parents who may make poor choices. So we started thinking, 'How is it that we can help parents improve their parenting skills around food choice and active play?'"

In October 2005, Dollahite led the effort to develop and implement a pilot program called Collaboration for Health, Activity, and Nutrition in Children's Environments (CHANCE), funded through the New York State Expanded Food and Nutrition Education Program, which Dollahite directs, and based on guidelines from the state's Activ8Kids! childhood obesity prevention program. The CHANCE team includes Kate Dickin and Wendy Wolfe, research associates, and Tisa Hill, research support specialist, in nutritional sciences.

Rachel Dunifon, associate professor of policy analysis and management, and Laura Colosi, an extension associate in policy analysis and management, are collaborators along with nutrition and parenting educators in five Cornell Cooperative Extension associations. CHANCE targets key behaviors and environmental factors that could help low-income families in New York City and in Jefferson, Monroe, Suffolk, and Tompkins counties raise healthy-weight children.

Participants report cooking with less fat, cooking more often and ordering take-out less, cutting down on soda consumption, reducing TV time, and encouraging more physical activity.

Nine interactive, hands-on lessons were designed to build parenting skills, using what Dollahite calls a "dialogue approach." Rather than listen to lectures, participants are encouraged to bring stories of their own lives and experiences to group discussions and are given activities to take home and try with their children, such as preparing nutritious recipes and engaging in physical activity games together.

"Parents really tap into their own power and often take control of their lives in ways they haven't done before," says Dollahite.

Healthy Starts

A collaboration between Nancy Wells, assistant professor of design and environmental analysis, and Christine Olson, professor of nutritional sciences, aims to prevent excessive weight gain in pregnant women and to promote appropriate weight gain in their infants.

The germ of the idea arose from a study Olson presented at the New York State Obesity Invitational Summit that showed a significant, positive correlation between mothers who gained more than the recommended amount of weight during pregnancy and their children's risk of overweight. Children whose mothers were overweight at the beginning of their pregnancies and also gained more than the recommended amount of weight during pregnancy showed an even higher risk.

"We wondered what we could do to reduce the proportion of women who are gaining too much weight during pregnancy," explains Olson, who helped plan the state Obesity Summit and serves on a state task force for early recognition of childhood obesity.

Olson and Wells are enlisting health and nutrition professionals from the eight New York counties served by Bassett Healthcare (Chenango, Delaware, Fulton, Herkimer, Madison, Montgomery, Otsego, Schoharie) including CCE educators to help design environmental interventions, or alterations to the physical environment. The group is called the "Healthy Start Partnership."

"If you want to encourage physical activity," explains Wells, "you could build a community garden, which encourages healthy behavior."

"Nutritionists tend to think about nutrition at the individual level," Olson adds. "Nancy brings the perspective of an environmental psychologist and expertise in physical activity and neighborhood design. Having both perspectives really helps our partners think more broadly about what they can do in a community."

A coordinated marketing campaign promoting breastfeeding that includes billboard ads, posters, radio and TV announcements, mailings, and community presentations is heightening awareness and support in Herkimer County for breastfeeding—a health practice associated with decreased risk of obesity in both mothers and infants. Extension educator Linda Robbins and WIC director Judy Seoldo are "sparkplugs" for the work with community partners who will develop and implement the interventions. Graduate student Leigh Gantner is mapping the availability and price of nutritious food in the eight-county area to look for correlations to mothers' risk of obesity.



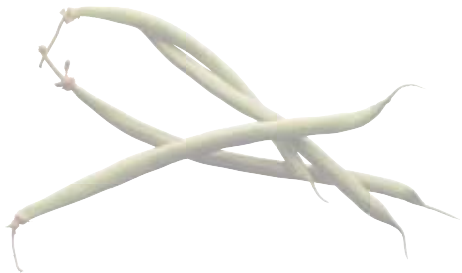
Looking Ahead

Following the Ecology of Obesity conference, the college's Bronfenbrenner Life Course Center provided funding to create a working group to foster cross-disciplinary and interdepartmental collaboration on obesity research. This has enabled faculty, students, and extension educators to stay in touch with each other's work and to receive feedback on new ideas.

There are also efforts to increase the capacity of professionals to address obesity using distance technology. In late 2006, Cornell NutritionWorks, the Division of Nutritional Sciences' online professional development program, offered for the first time a new six-week, online course called "Preventing Childhood Obesity: An Ecological Approach," which guides practitioners in applying concepts to their local communities and enables them to exchange ideas with a facilitator and other participants. The course continues to be offered on a regular basis.

The Cornell Farm to School Program is dedicated to increasing the amount of locally grown food served in New York's schools. Educators work with food-service professionals to improve the quality of school meals, strengthen markets for farmers, and teach students about agriculture and food.

"Collaboration is the way we need to do business," Robbins says. "Everybody has resources they can bring to the table, but we need to work together. That's what we've found to be successful in changing behavior." ●●●●



Cornell NutritionWorks is an interactive web site offering online professional development to nutrition and health practitioners, including Cornell Cooperative Extension educators throughout New York State. There are roughly 1,500 members from across New York, and an ongoing collaboration with the New York Departments of Health and Education called SPIN, "Schools Plus Professionals in Nutrition," which trains nutrition professionals who are then matched with public schools.

www.nutritionworks.cornell.edu

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