Embargoed for release:
Monday, Mar. 6, 2006, 12:01 AM ET

Contact: Andrea Duggan
Children's Hospital Boston
617-355-6420
andrea.duggan@childrens.harvard.edu

Reducing teens' intake of sugary drinks

In randomized trial, a simple beverage-focused intervention led to weight loss

Children's intake of sugar-sweetened drinks – sodas, sports drinks, "juice drinks," iced teas, lemonades and punches – has surged in recent decades, in step with the rise in childhood obesity. Now, in the March issue of *Pediatrics*, researchers from Children's Hospital Boston report that a novel intervention to limit consumption of sugary drinks – home deliveries of noncaloric beverages – had a beneficial effect on weight loss.

The randomized, controlled trial, led by Cara Ebbeling, PhD, and David Ludwig, MD, PhD, in the hospital's Division of Endocrinology, enrolled 103 children aged 13 to 18 through a Boston area high school. The teens were offered a $100 mall gift certificate if they stuck with the six-month study, and all did.

Half the teens, picked at random, received weekly deliveries of noncaloric beverages of their own choosing – bottled waters and artificially-sweetened drinks. They were instructed to avoid sugar-sweetened beverages and advised on how to choose noncaloric drinks outside the home. Monthly phone calls and refrigerator magnets ("Think Before You Drink") provided reminders. The remaining teens, serving as a control group, were asked to continue their usual eating and drinking patterns.

At the end of six months, the group receiving beverage deliveries had an 82 percent reduction in consumption of sugary drinks, while intake in the control group remained unchanged. The heavier the teen was initially, the stronger the effect on body weight. Among the heaviest one-third of teens, the beverage-delivery group had a marked decrease in body mass index (BMI), while the control group had a slight increase – a group-to-group difference of almost 1 pound per month. Other factors affecting obesity – physical activity levels and television viewing – did not change in either group.

Ebbeling calculates that a single 12-oz sugar-sweetened beverage per day translates to about 1 pound of weight gain over 3 to 4 weeks. "Sugary beverages have no nutritional value and seem to make a huge contribution to weight gain," she says.

Comprehensive weight-loss programs often do not have a substantial effect on body weight, Ebbeling adds. “People often get overwhelmed by nutrition advice and give up,” she says. “We opted to study one simple, potentially high-impact behavior, and made it easy for adolescents to replace sugary drinks with noncaloric beverages.”

Although the intervention targeted only the home environment, previous research suggests that home is where adolescents get the majority of their food and beverages. “It should be relatively simple to translate this intervention into a pragmatic public health approach,” the authors comment. “For example, schools could make noncaloric beverages available to students by purchasing large quantities at low costs.”

The study was supported by the National Institute of Diabetes and Digestive and Kidney Diseases and the Charles H. Hood Foundation.

Ebbeling and Ludwig are now starting a larger study that will seek to enroll 240 overweight students at multiple schools in greater Boston. Coinvestigators include Henry Feldman, PhD and Stavroula Osganian, MD, ScD, MPH, of Children’s Clinical Research Program and Virginia Chomitz, PhD, from the Institute for Community Health in Cambridge, Mass.

- ### -