



## How Many Licks Does It Take to Reduce Tooth Decay?

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OKEMOS, Mich., Sept. 9 /PRNewswire/ — The affiliated companies of Delta Dental of Michigan, Ohio, Illinois, Tennessee and Indiana are funding two clinical studies to determine if sugarless lollipops containing licorice extract can reduce the bacteria that causes tooth decay in nursing home residents and Head Start children.

(Photo: <http://www.newscom.com/cgi-bin/prnh/20080909/CLTU093> )

The investigations are a collaborative effort of the University of Michigan, the University of California – Los Angeles (UCLA) and the Beaumont Hospital Division of Geriatric Medicine. Delta Dental's Research and Data Institute is providing the grants as part of its mission to remain on the cutting edge of finding solutions to oral health problems.

"Despite great advances, dental decay is one of the most common childhood diseases with more than half of children ages 5 to 9 having had at least one cavity or filling," said Jed J. Jacobson, D.D.S., M.S., M.P.H., chief science officer at Delta Dental. "At the other end of the spectrum, the oral health of many U.S. elderly nursing home residents can be very poor because disabilities make self-care difficult and access to professional dental treatment may be limited."

The lollipops, manufactured by Dr. John's Candies of Grand Rapids, Mich., were developed using FDA-approved materials by Dr. Wenyuan Shi, a microbiologist at the University of California – Los Angeles (UCLA), and C3 Jian, Inc., a research and development company in California. The orange-flavored, sugarless lollipops contain extract of licorice root (*Glycyrrhiza uralensis*), which targets and is thought to kill the primary bacteria (*Streptococcus mutans* or *S. mutans* and *Lactobacillus casei*) responsible for tooth decay.

Using a saliva test, the amount of *S. mutans* and *Lactobacillus casei* in the patients' mouths is measured before and during lollipop use, as well as for several weeks afterward. All personal identifying information is removed from the samples before they are sent for analysis.

"We know good oral health is inextricably linked to overall health," Jacobson said. "With these studies, we hope to find simple, effective regimens that will encourage prevention and control of dental disease in nursing home residents and children."

The second study kicks off this week at the Head Start and Early Childhood Programs division of Lansing, Mich.-based Capital Area Community Services, Inc. A group of 100 preschool students ages 3 to 5 enrolled in the Head Start program will receive a lollipop for 10 minutes twice daily for three weeks.

"The study will examine the practicality of this delivery system in a classroom setting and hopefully establish a model that can be replicated," said Jacqueline Tallman, R.D.H., B.S., M.P.A., principal investigator of the study. "Three to 5 years of age is an important time in children's oral health development and there is a strong need for new prevention measures."

The first study started last month at nursing homes operated by Beaumont Hospital in the Detroit area. Forty nursing home patients will be participating in the study. For three weeks, half will be given the herbal lollipops twice a day and half will be given placebo lollipops.

"Although many people are keeping most of their teeth as they age, dental decay remains a common cause of tooth pain, infection, and tooth loss in the elderly," said Domenica Sweier, D.D.S., Ph.D., clinical assistant professor, University of Michigan School of Dentistry and consultant to the study. "An affordable means to prevent these oral health problems may be to reduce the bacteria that cause decay through a simple routine easily incorporated into a patient's schedule. This cutting-edge research may transform the future of oral care."

"If successful, this would be a huge step forward in the dental and general health of our nursing home patients as well as their quality of life," said John Voytas, M.D., a geriatric medicine specialist who is leading the research at Beaumont. "It also would reduce costs associated with dental problems such as cavities and more serious conditions."

### About *Streptococcus mutans* and *Lactobacillus casei*

There are approximately 700 types of bacteria in the human mouth. While most are harmless, two of the most common – *Streptococcus mutans* (*S. mutans*) and *Lactobacillus casei* – are considered the primary culprits in tooth decay. They live in a biofilm (plaque) that adheres to the teeth, consume sugar and release acid that erodes tooth enamel, causing decay. Regular brushing and flossing, along with dental checkups, can help to keep *S. mutans* and *Lactobacillus casei* in check.

### About Delta Dental

The affiliated companies of Delta Dental of Michigan, Ohio, Illinois, Tennessee and Indiana are collectively one of the largest dental plan administrators in the nation. In 2007, the enterprise paid out nearly \$1.8 billion for dental care for more than 6.2 million enrollees. Offices are located in Okemos and Farmington Hills, Mich.; Columbus and Cleveland, Ohio; Lisle, Ill.; Nashville, Knoxville, and Memphis, Tenn.; and, Indianapolis and Greenwood, Ind.

### About Delta Dental's Research and Data Institute

The Research and Data Institute was established in 2005 to develop innovative and scientifically based dental benefits that improve health. The institute, which has the world's largest database of dental claims information, works closely with researchers from the University of Michigan, UCLA and other leading universities in the United States.

### Additional links

More information on the organizations affiliated with these studies is available at:

-- Capital Area Community Services, Inc., <http://www.mcaaa.org/directory/caca.htm> -- Beaumont Hospitals, <http://www.beaumont.com>

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Delta Dental's Research and Data Institute

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### Web site:

<http://www.mcaaa.org/directory/caca.htm><http://www.beaumont-hospitals.com><http://www.dent.umich.edu><http://uclasod.dent.ucla.edu><http://www.drjohns.com>