

**EDUCATION OF CAREGIVERS CAN IMPROVE ORAL HEALTH FOR CHILDREN, STUDY SHOWS**

Improving dental health traditionally has centered on educating children to adopt good dental care habits. But how do the educational levels and dental care habits of parents or other caregivers affect the child’s dental health?

Researchers from Ohio’s Case Western Reserve University (CWRU) using data from a 2007 CWRU dental school study tested the hypothesis that a caregiver’s educational level influences how often they and their children brush their teeth and visit a dentist for routine examinations. The researchers also explored the impact these habits had on the risk of the children developing caries. The study found that caregivers who completed high school were 1.76 times more likely to visit the dentist, compared with those who did not graduate from high school. The children of caregivers with high school diplomas were nearly 6 times more likely to visit a dentist routinely. Children who visited a dentist regularly had approximately one-quarter as many untreated caries as those who did not have regular visits.

The educational level of caregivers was directly associated with approximately one-third fewer untreated decayed teeth and 28% fewer decayed or filled teeth among the children under their care. The study confirms the value of caregiver education relative to a child’s oral health and shows how the caregiver’s behavior influences the child’s oral health habits.

The CWRU research team also provided children in the study with dental examinations, tooth sealants, toothbrushes and toothpaste, as well as lessons on proper care of their teeth. When dental problems were found, letters were sent to the caregivers advising them of the child’s need for follow-up care. Not all caregivers sought help for the children, however. Nearly 100 study participants—with or without high school diplomas—did not seek routine dental care at least once a year.

“Changing their ways with literature and instructions didn’t always work,” said Dr. Masahiro Heima, a pediatric dentist and faculty member at CWRU School of Dental Medicine. “So we need to focus on behavioral change.”

The study was supported by grants HRSA/MCHB R40-MC07838 and CTSC U11 RR024989 from the Health Resources and Services Administration and the National Center for Research Resources, respectively.

For more information on this study, visit [http://www.karger.com/Article/FullText/368560](http://www.karger.com/Article/FullText/368560).

**STUDY POINTS TO EASIER DENTAL VISITS FOR CHILDREN WITH AUTISM**

For a child with an autism spectrum disorder, a trip to the dental office can be a daunting experience. The bright lights, the loud sounds of dental instruments, and being touched in and around the mouth can present major challenges for such children.

In an article published May 1 in *Journal of Autism and Developmental Disorders*, researchers from the University of Southern California (USC) and Children’s Hospital Los Angeles (CHLA) explored the feasibility of adapting dental environments to be more calming for children with autism, as well as for other children anxious about receiving dental treatment.

“The regular dental environment can be quite frightening for children with autism who, not knowing how to react, tend to be completely averse to whatever we’re trying to do,” said Dr. José Polido, one of the study’s authors and head of dentistry at CHLA and assistant professor at the Herman Ostrow School of Dentistry of USC.

The study included 44 patients from CHLA: 22 with autism and 22 “typically developing,” defined as children not on the autism spectrum. Both groups underwent 2 dental cleanings. One cleaning took place in a regular dental environment and the other in a “sensory adapted” dental environment.

Researchers adapted the dental environments by turning off overhead office lights and headlamps, projecting slow-moving visual effects onto the ceiling, and playing soothing music. Instead of using traditional means to secure the child into the dental chair, practitioners used a seat cover that looked like a gigantic butterfly whose wings wrapped around the child and provided a comforting deep-pressure hug. During each session, researchers measured the child’s physiological anxiety, behavioral distress, and pain intensity.

Researchers found that both the typically developing children and those with autism spectrum disorders showed decreased physiological anxiety and reported lower pain and sensory discomfort in the sensory-adapted dental environment.

Researchers noted that their study represented a unique collaboration of researchers from CHLA, the University of Southern California, and the University of Illinois. The study was supported by grants from the National Institute of Dental and Craniofacial Research, the National Institutes of Health, and the Health Resources and Services Administration.

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pediatric dentists and occupational therapists working together to help children with autism, a group reported to have poor oral health. They said their findings also could represent a cost savings to the health care system, with fewer insurance reimbursements paid to dental offices for the extra staff and general anesthetic often needed for children with autism.

Next up, the researchers plan to use a larger sample size to assess which factors (age, anxiety, sensory over-responsivity) can help predict which children will best respond to intervention.

Dr. Sharon Cermak, the study’s lead author and a professor at USC, said the group’s “long-term goal with this study is to help dentists develop protocols for their own dental clinics to see how sensory components are contributing to behavioral issues. I think these protocols can be translated across the globe.”

For more information on this study, visit http://link.springer.com/article/10.1007/s10803-015-2450-5.

**FLUORIDATION HELPS OLDER ADULTS KEEP THEIR TEETH, STUDY FINDS**

Water fluoridation helps older adults keep their teeth just as it does with children, but it has no effect on overall bone density in the elderly, a new study out of Ireland shows.

Published in February, the study was part of The Irish Longitudinal Study on Aging (TILDA) and was conducted by researchers in the dental school of Dublin’s Trinity College. The study involved nearly 5,000 people older than 50 years.

Data from TILDA and Ireland’s 2006 census showing the type of water supply in a person’s local area were used to assess the relationship between water fluoridation and oral health and bone density in older adults. Participants estimated approximately how many of their natural teeth they had, and some had their bone density estimated using ultrasound.

“This study found that a higher prevalence of households with fluoridated water in the local electoral district was associated with an increased probability of an older person having all [his or her] own teeth,” the researchers said. “There was no association found between the prevalence of fluoridated water and bone density.”

Fluoridation of public water supplies began in Ireland in 1964 and was extended to major cities and towns by 1970. Approximately 84% of Irish households have fluoridated water supplies, and its positive effects on oral health have been documented in a series of surveys. As in the United States, however, public water fluoridation remains a controversial health measure in Ireland.

The study’s main findings were as follows:

- The prevalence of fluoridated water was not significantly associated with osteopenia or osteoporosis.
- People living in areas with a high prevalence of water fluoridation were more likely to retain their natural teeth.
- The relative importance of fluoridated water compared with other sources of fluoride could not be assessed and is largely unknown in adults.

For more information on this study, visit http://tilda.tcd.ie/publications/research%20briefs/2015_Research%20Brief_Water%20Fluoridation.pdf.

**CORRECTION**

Dr. Diego Dalla-Bona and colleagues retract the last sentence of their March JADA article “Unilateral Ear Fullness and Temporary Hearing Loss Diagnosed and Successfully Managed as a Temporomandibular Disorder: A Case Report” (JADA. 2015;146[3]:192-194). The sentence in question reads: “From a literature search, we believe this to be the first case reported that shows successful management of ear fullness using common [temporomandibular joint disorder] multimodal noninvasive treatments.”

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**CALENDAR OF EVENTS**

**ADA—AMERICA’S DENTAL MEETING**

2015 Nov. 5-10, Washington, DC

2016 Oct. 20-25, Denver, CO

2017 Oct. 19-24, Atlanta, GA

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