



Cystic Fibrosis Research News

Title:

Age-Related differences in Dental Caries and Associated Risk Factors in Individuals with Cystic Fibrosis Ages 6-20 years: A Pilot Study

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What was your research question?

Cavities are not considered a problem for individuals with cystic fibrosis (CF), but this belief is based on old science. We assessed cavities in people with CF and identified potential reasons why teens and young adults with CF may lose protection against cavities.

Why is this important?

Individuals with CF are living longer, which underscores the importance of good oral health. Evidence-based standards of care are needed to ensure that individuals with CF have a chance to benefit from programs that promote healthy teeth throughout their lives.

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What did you do?

We enrolled 85 individuals with CF aged 6 to 20 years in Washington state. We collected saliva, asked participants to complete a paper survey, and completed a dental exam. Similar data for individuals without CF (“controls”) were obtained from a national dataset.

What did you find?

Children with CF aged 6 to 9 years had significantly fewer decayed teeth than children without CF. Tooth decay was similar for teens and young adults with and without CF. In other words, children with CF may be protected against cavities compared to children without CF, but teens and young adults with CF may be at similar risk for cavities as other teens and young adults. Factors related to saliva, fewer dental visits, fewer fluoride treatments at the dentist, and increased carbonated beverage intake potentially explain why teens and young adults with CF lose protection against cavities.

What does this mean and reasons for caution?

The study challenges the current standard of dental care for individuals with CF. While this was the largest U.S. dental CF study since 1980, there were relatively few participants, the study took place at a single center, and we excluded non-English-speakers. Our findings need to be validated with larger, multi-center studies. The goal is to develop interventions that improve the oral health, general health, and quality-of-life of individuals with CF.

What’s next?

We need to know how dental disease is related to other outcomes in individuals with CF, like lung function and stress. We also need to identify mechanisms that connect oral and pulmonary disease. For instance, the bacteria that cause cavities could affect the bacteria involved in exacerbations and progression of lung disease.

Original manuscript citation in PubMed

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Age-Related+differences+Heterogeneity+in+Dental+Caries+and+Associated+Risk+Factors+in+Individuals+with+Cystic+Fibrosis+Ages+6-20+years%3A+A+Pilot+Study>