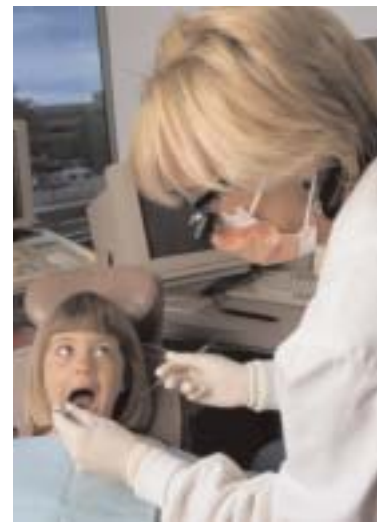

Preventing Tooth Decay and Saving Teeth with Dental Sealants

What Are Dental Sealants?

Dental sealants are thin plastic coatings that are applied to pits and fissures (grooves) on the chewing surfaces of the molars to prevent tooth decay by creating a physical barrier against bacterial plaque and food.¹

First permanent molars erupt at about age 6, and second permanent molars erupt at about age 12. Applying dental sealants to tooth surfaces with pits and fissures shortly after the teeth erupt helps prevent decay. Older adolescents and adults may also benefit from the selective application of dental sealants.²



Preventing Tooth Decay

If all children and adolescents received appropriate amounts of fluoride and had dental sealants applied to susceptible tooth surfaces, most tooth decay in children and adolescents could be prevented.² The primary benefit of fluoride is that it safeguards the smooth surfaces of the teeth, and dental sealants protect the surfaces with pits and fissures.³

About 90 percent of tooth decay in children's permanent teeth occurs on the tooth surfaces with pits and fissures.⁴

Only 23 percent of 8-year-olds and 15 percent of 14-year-olds have dental sealants on their molars, compared with the national objective of 50 percent for both age groups.⁵

Dental sealants are effective both in preventing tooth decay and in arresting the progression of tooth decay.⁶

Improving Awareness

Increased public awareness of dental sealants, and improved communication between parents and oral health professionals, will help parents make informed decisions about dental sealant application for their children.⁷

Racial and ethnic minorities and individuals with low levels of formal education and low incomes are least knowledgeable about oral disease prevention. Because they lack insurance or access to preventive services, children from these groups have fewer dental visits and fewer dental sealants.⁷

Cost

In the United States, 25 percent of children and adolescents—typically those from the most vulnerable groups—experience 80 percent of all tooth decay occurring in permanent teeth.⁴ Targeting children at high risk for tooth decay and applying dental sealants can result in considerable savings for society.⁸

In 1999 the average cost of applying one dental sealant was \$27.00, compared with the average cost of \$73.77 for filling one cavity.⁹

If early lesions are sealed instead of restored, the total cost of treatment is lower.¹⁰

If tooth decay progresses, it may be necessary to perform extensive and expensive procedures.³

Access to Care



As few as 3 percent of children from families with low incomes have dental sealants, compared with the national average for children of 23 percent.⁵

Eleven percent of African-American 8-year-olds and 5 percent of African-American 14-year-olds have dental sealants, compared with 26 and 19 percent of white children and adolescents in these age groups.⁵

Thirty-five percent of 8-year-olds whose head of household has at least some college education have dental sealants, compared with 17 percent of children of the same age whose head of household has less than a high-school education.⁵

Most dental sealants are applied in private dental offices, yet children and adolescents at greatest risk for tooth decay are least likely to receive private care.³

Lack of dental service coverage under many insurance plans, and the difficulty of accessing dental care for uninsured, underinsured, and medically indigent groups, make dental sealants hard to obtain.¹¹

Programs

Based on a systematic review of the evidence of effectiveness of population-based interventions to prevent and control tooth decay, the Task Force on Community Preventive Services strongly recommended school-based or school-linked pit and fissure sealant delivery programs.¹²

The large network of targeted school-based dental sealant programs in Ohio, supported by Maternal and Child Health Services Block Grant funds, has led to remarkably consistent dental sealant prevalence among 8-year-olds. Among targeted schools, children from all racial groups and income levels achieved or exceeded the *Healthy People 2010* objective for 8-year-olds with dental sealants on their first permanent molars.¹³

To help build more effective state and territorial oral health programs, the Association of State and Territorial Dental Directors initiated the Best Practices Project, which includes examples of proven and promising school-based dental sealant programs.¹⁴

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