

EB Dental Problems and Solutions



Individuals with EB may have teeth with severely malformed enamel (enamel hypoplasia) and/or dental caries depending on the EB type. The enamel is usually normal in simplex and dystrophic EB types. Generalized enamel hypoplasia is typically limited to junctional EB. Rarely, individuals with non-junctional EB types may have generalized enamel hypoplasia. Rampant dental caries occurs in junctional EB partly because of the enamel hypoplasia. Dental decay also is frequently seen in patients with severe recessive dystrophic EB. This excessive dental caries results from severe soft tissue involvement which leads to dietary changes (soft and high carbohydrate), increased oral clearance time (secondary to limited tongue mobility and oral scarring), and creates an abnormal tooth/soft tissue relationship. Oral involvement also reduces the ability to practice preventive measures directed at reducing caries.

Because dental caries can form rapidly in individuals with recessive dystrophic and junctional EB, dental examinations should begin by 1 year of age and be conducted at least twice a year. If caries becomes a problem then more frequent visits (4 times a year) are indicated for preventive treatments and examination. Individuals with mild EB can be treated much as any other patient. The dentist should, however, be made aware of any history of mucosal fragility and oral blistering since dental therapy can precipitate oral lesions even in mildly affected patients. Many dentists are not familiar with EB and the patient or parent must help educate the health care team. An altered approach to treatment may be required in individuals with enamel hypoplasia or rampant caries, extreme fragility of the mucosa and/or the presence of microstomia (a decreased oral opening size). Individuals with severe soft tissue involvement requiring multiple restorative and/or surgical procedures are often best managed with general anesthesia.

Preventing tooth decay is most challenging for individuals with severe mucosal involvement. In patients prone to oral blistering, oral hygiene may best be accomplished with a soft bristled, small headed toothbrush. Many small headed children's toothbrushes are available, some of which have special grip handles that may be helpful to individuals with hands involvement. Running the bristles under hot water prior to brushing makes them even softer. Parents need to brush children's teeth until about the age of 6 or 7 years because children lack the manual dexterity to properly clean their teeth. Parents should be very careful not to damage the gums or make the brushing experience negative and unpleasant. It is important, however, that the teeth be cleaned at least once a day preferably just prior to bedtime.

Be sure and use a fluoridated toothpaste. In small children a pea size amount is adequate to deliver the fluoride to the teeth. For individuals prone to developing cavities there are special high strength prescription fluoride toothpaste. Strongly flavoured toothpaste (mint) may be irritating to the individuals with severe oral involvement; however, there are numerous non-mint flavours available. Bubble gum flavor is a big hit with children (and some adults). In addition to the systemic fluorides that we get in the water or alcoholic fluoride rinses available for the EB patients that are sensitive to strong flavouring agents and alcohol. Non-alcoholic rinses with greater amounts of fluoride are available by prescription. Chlorhexidine mouth rinses (an antibacterial rinse) also may

assist in controlling dental caries; however, sensitivity due to the high alcohol content can be problematic. This may be overcome by swabbing it directly on the teeth. Chlorhexidine rinse is a prescription item.

There are a variety of fluoride treatments applied by dentists. The most common treatment consists of placing a 1.23% acidified gel in a tray that is held in the mouth for 4 minutes. The high concentration of flavoring agents and acid nature of the gel make it unacceptable to some EB patients. Milder flavored neutral sodium fluoride gels are available that may be less irritating to fragile mucosa. Recently, a high concentration fluoride varnish has become available in the United States offering a wonderful option for delivering maximum fluoride protection to the teeth of individuals with even the most sensitive mucosa. This varnish is simply painted on the teeth by the dentist.

The diet constitutes major difficulty in caries control, and due to the complex systemic nutritional demands of individuals with severe EB types, this may be best managed with the assistance of a dietician. The effects of any diet planning should be considered with regards to dental health and tooth friendly foods (cheese, vegetables, fresh fruits) eaten as much as possible. Be careful of the less obvious cavity-producing foods such as highly sweetened breakfast cereals, raisins and dried fruits. Cavity-producing oral bacteria can ferment carbohydrates from a wide variety of foods. Other helpful hints are to rinse the mouth or drink water after eating if brushing is not possible. Bottle or breast feeding infants at bedtime can result in nursing caries after the teeth are present (1 year of age). If nursing continues after 1 year, great care should be taken not to give the bottle while the infant is going to bed. Virtually any bottle-fed liquid, except water, can cause rapid tooth decay of the baby teeth.

Individuals with even the severest forms of EB can now maintain their natural dentition providing them the ability to chew, eat a healthy diet and have a pretty smile. In the not too distant past, dental extraction was considered the treatment of choice for individuals severely affected with EB. Now we are able to prevent tooth decay, restore malformed enamel and help produce good alignment of the teeth. The future looks even brighter as dental prevention continues to improve, new dental materials are stronger and more esthetic than ever and new technologies, such as dental implants, continue to improve. Dental health for all EB patients has become a reality and that is really something to smile about.