



# White Spots on Children's Teeth

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## Abstract

The whiteness of the teeth can be a sign of extreme health of the mouth and teeth; and some people do everything they can to keep their teeth whitening as possible, which includes several times brushing during the day, regular referrals to the dentist for the special cleaning of the teeth, and the use of bleaching or whitening products. But sometimes on the tooth surfaces, white opaque spots will be appearing. This white shade is distinct from other parts of the tooth; and its presence on the teeth is annoying for some people. The presence of white spots on the teeth can be a sign of their decay [1], so finding out the reasons is important. The main factors are involved in the formation of white spots can be summarized in 5 topics; fluorosis, plaque accumulation, diet, enamel hypoplasia, and sleeping with an open mouth. This problem is not excluded in children, and it always worries parents. Therefore, it is better for the parents to refer to the pediatric dentist to observe these spots on the teeth of their children. In this article, we will discuss the causes of occurrence, treatments, and possible prevention of this complication.

## Main Causes

For various reasons, white spots may appear on the teeth. The dentist can find out about it and suggest the best way to treat it. Among the common causes of white spots on the teeth, we can include the following:

### Dental fluorosis

Fluoride can increase the strength of the tooth and prevent its decay. On the other hand, high fluoride use for the growing tooth can result in a reverse reaction, consequently, it might cause the tooth to decay and color changes. This happens when children consume large amounts of fluoride-containing fluids or fluoride toothpaste [2]. Fluorosis can cause a cavity, depression or fossa on the tooth enamel, which will make it difficult to brush and clean.

### Diet

Eating plenty of acidic foods can cause white spots on the teeth, because foods that are high in acidity cause erosion of the enamel [3]. This outer layer protects teeth against the damages. Foods that have high levels of sugar can also cause acidic plaque on the teeth leads to enamel erosion. Acidic foods and beverages include soft drinks or soda, some fruits such as lemon, orange and grapefruit. The acid reflux of the stomach and its passage from the pharynx to the mouth can also cause white spots on the teeth [3].

### Enamel hypoplasia

This defect is commonly known as the absence or lack of the growth of enamel. The enamel hypoplasia can be the result of a deficiency of one of the nutrients that cause the tooth mineral loss [4]. Among the factors that cause this problem is celiac disease, in which, due to the weakening of the immune system, the body has difficulty in absorbing nutrients [5,6]. Using antibiotics to treat the infection can also disrupt nutrient uptake. In addition, smoking during pregnancy can also cause this problem for the baby in the future. Other symptoms of enamel imperfections are the presence of cavities and lines on the teeth surfaces, and the sensitivity of the tooth [7].

### Plaque accumulation on the teeth

White spots on the teeth can be caused by the accumulation of bacterial plaques. This problem can be due to a lack of oral hygiene, including negligence of brushing or regular flossing; it may occur as a side effect of the use of orthodontic brackets. These spots which can appear after the removal of the brackets are caused by the formation of plaques below or around the brackets. Failure to observe proper hygiene; or the inability to completely remove plaque between teeth and brackets, will eliminate tooth minerals [8].

## Sleeping with open mouth

Parents may see white spots on children's teeth in the morning after waking up, which may disappear after a few hours. This usually happens after sleeping with an open mouth during the night. These white spots are caused by the dehydration level of the enamel [9]. By currency of the saliva on the surface of the teeth, they are re-hydrated, and white spots will be disappeared. Common colds can make children sleep with the open mouth at night [9].

## Treating White Spots on Teeth

White spots on teeth can be annoying for most people, but there are several therapeutic options to eliminate them.

### Bleaching

This treatment is one of the tooth whitening processes under the supervision of the dentist. This process helps to balance the color of the enamel. It can completely whiten the teeth so that the whole tooth color matches the color of the white dots. Bleaching technique for people whose white spots on their teeth is a result of excessive fluoride intake is not effective [10]. This process makes the white spots looks whiter and find a different color on the teeth.

### Microabrasion

This is a process in which a layer of enamel is removed by a mild scratch on the tooth surface. Through this process, white spots will be removed, and the appearance of the teeth will improve.

### Resin micro infiltration

This approach is used for the treatment of the labial surface of the teeth with the appearance of white spots [11]. This technique was found to be an effective treatment for masking white spot lesions. Compare with enamel Microabrasion or conventional restorative techniques, this method is less invasive [12].

### Chin straps

Using this orthodontic appliance, help keep children's mouth to be closed during sleep. The Mouth Strap is designed for those who breathe through the mouth during sleep [13,14] which puts a stop to dry mouth.

Dry mouth is more noticeable in people who have a prolonged period of mouth breathing especially during the night which could lead to the appearance of white spots on the teeth.

### Nasal decongestion drugs

Parents should notice if their children have a common cold, sinusitis, or other viral infections that cause nasal congestion, they should give them nasal congestion drugs before going to bed so that they do not breathe through the mouth while sleeping.

### Veneers

In special cases, depending on the extent of the white spots,

the dentist may suggest parents cover them with Porcelain Veneer. But, most of the pediatric dentists do not agree with this treatment plan.

## Prevention of White Spots on the Teeth

To prevent white spots on teeth, proper oral hygiene should be followed. Toothbrushes and dental flossing are of special importance on a regular basis. Waterjets dental irrigator and waterpiks help eliminate plaques around orthodontic braces and the teeth. The dentist may recommend using toothpaste that is designed to remineralize the enamel and protect it against white spots. Limiting the use of sugar and acidic foods can help protect the enamel and prevent white spots on it. If the mother is pregnant, she should leave smoking to ensure the health of her baby's teeth in the future. To prevent excessive exposure of children to fluoride, parents should watch out for their brushing. They should not place a large amount of toothpaste on the toothbrush. In addition, teach the children not to swallow toothpaste while brushing. Furthermore, parents should watch out for the use of the child's fluoride and, if necessary, prohibit the fluoride-containing drinks. Fluoride is available in industrial juices, water-packed, and other non-alcoholic drinks.

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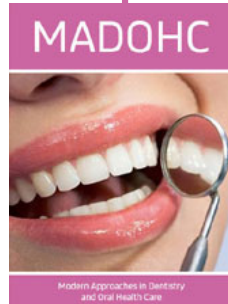
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