Bruxism

One of the most common concerns we hear from parents is how to deal with their children grinding their teeth at night while sleeping. Children's dentists should have the experience and technical ability to give advice and treat this condition.

Grinding of the teeth, or technically referred to as bruxism, is mainly seen in children as 'sleep bruxism' and is considered a sleep movement related disorder in a similar classification as restless leg syndrome (RES). Sleep bruxism can be definitively diagnosed in a sleep laboratory by means of a costly test called polysomnographic recordings⁠¹.

There does not appear to be a close relationship between pain associated with temporomandibular joint disorder (TMD) and bruxism² but there is a relationship between sleep disturbances and bruxism.³⁴


It has been reported that up to 88%\textsuperscript{5} of children but only 15%\textsuperscript{6} of adults experience bruxism. Bruxers have higher levels of adrenalin\textsuperscript{7} and seem to be more anxious. Bruxism is reported by parents to occur most frequently between the ages of 3-6 years of age and is more common in boys. Children of parents who had bruxism are twice as likely to experience bruxism themselves.\textsuperscript{8}

In a minority of cases bruxism is severely harmful to the teeth causing wear on or deterioration of the teeth. In this photo you can see that the teeth are flat with all the cusps (pointy part) of the molar teeth worn down.

Sometimes, the damage is so significant that a hole in the tooth forms. If this hole penetrates to the center of the tooth, called the pulp chamber, pain will develop and a baby root canal will be needed to fix the tooth.

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If a tooth that has been damaged by bruxism also has a cavity, restoring this already compromised tooth can be challenging. The fillings can become loose from the force of the grinding and recurrent cavities have a tendency to form around and under the filling as seen in this radiograph.

Also, the fillings and tooth structure around the filling have a tendency to break, as seen in this photo.

At this point, placement of a cap around and over the tooth is usually the best option to restore the tooth. Sometimes even the stainless steel crown placed on the tooth can be worn down, causing a hole to form and thus requiring replacement.
An oral appliance called a bite guard or mouth guard may be used to prevent damage to the teeth.

For children in the 3-6 year old age range, when bruxism is most common, it is difficult for a child to keep the appliance in their mouth. For children older than 6 and into the mixed dentition phase (both primary and permanent teeth present), the appliance needs to be changed frequently due to the teeth coming and going. Typically, placement of appliances during orthodontic treatment (braces) is not necessary but if orthodontic treatment has been completed and bruxism has not subsided, an appliance can and should be made to prevent damage to the permanent teeth.