

Rampant caries in the primary dentition

June 1997

Rampant caries is a severe form of tooth decay that can affect milk teeth or permanent teeth. It is characterised by its speed of onset and progression, by the pattern of attack and its cause. Many teeth are affected often starting with the upper incisors. The lower incisors are usually, but not always spared. Sites which are normally at low risk of decay may be attacked. Destruction is frequently both rapid and extensive, because of this rampant caries poses a challenging management problem for dentists and patients.

What is rampant caries?

The term 'rampant caries' has prompted numerous definitions and synonyms within dentistry. Generally it can be described as decay that spreads quickly, destroying the crowns of many or all of the erupted teeth. In practice, this can be taken to mean that at least two of the upper incisor teeth have developed decay¹. It also affects surfaces that are normally less likely to decay and can lead to early pulp damage. Usually, there is an absence of decay of the lower incisors. Teeth may appear brown or black and are often said by parents to have come through decayed. Other terms commonly used to describe this include; Nursing Bottle Caries, Baby Bottle Tooth Decay (BBTD), Baby Bottle Caries, and Nursing Bottle Syndrome².

What causes rampant caries?

Many of the synonyms for the condition come from the frequent association between rampant caries and certain infant feeding practices. Inappropriate nursing habits such as the prolonged or frequent use of sugary drinks in a nursing bottle or feeder cup are the main cause. This is typically the case when the child is left with a bottle or fed during the night or prior to sleeping. Although the condition is most often associated with drinks from bottles, it is rare, but possible to develop rampant caries from breast milk if feeding is carried out on demand, nocturnally or for prolonged periods³. Late or inappropriate weaning has also been associated with rampant caries⁴.

Who is at risk?

The prevalence of caries in pre-school children has generally declined over the past three

decades in the UK. The decline has not been uniform though with a polarisation of caries in about 20 per cent of the UK population⁵. These high caries groups show a prevalence of rampant caries that is considerably greater than that found in the population as a whole.

Rampant caries is a disease of deprivation which is frequently more extensive in inner city areas⁶. In the United Kingdom the relationship between ethnicity and caries in children has been extensively researched. Almost without exception, those children from a lower socio-economic or minority ethnic background suffer the highest levels of rampant caries in developed societies.

How can rampant caries be prevented ?

Milk or water should constitute the majority of drinks given to young children⁷. If another drink is chosen the following advice should be followed:

- Always follow manufacturers' instructions on usage and dilution of drinks
- Serve only at meal time and keep drinking times short
- Never leave infants alone with any drink
- Never use drinks on a dummy or as a comforter
- Ideally serve from a spoon, trainer beaker or cup, but not from a bottle
- Do not give at bedtime or during the night.

Is there anything else that can be done?

In addition to altering the way in which sugary drinks are consumed, parents should also remember to brush their children's teeth with a small pea sized amount of a low dose fluoride toothpaste as soon as the teeth erupt.

For children who are considered to be at high risk and are living in areas with water supplies with less than 0.3ppm fluoride ion, supplements may be used. It is advisable though that fluoride supplements only be given following guidance from a dentist. Current fluoride dosage recommendations for those living in areas with water supplies containing less than 0.3ppm fluoride are⁸:

in areas with less than 0.3ppm fluoride	
Age	mg F per day
6 months to 3 years	0.25
3 years to 6 years	0.50
6 years and over	1.00

Fluoride supplements should not normally be given to children living in areas with water containing fluoride at a level of 0.7ppm or more. In areas

with fluoride levels at or between 0.3 and 0.7 ppm the suggested dosages are⁸:

Guidelines for F supplements in areas at or between 0.3 and 0.7ppm fluoride	
Age	mg F per day
6 months to 3 years	0
3 years to 6 years	0.25
6 years and over	0.50

References:

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