



Ensure Children's Dental Health is Top of the Class

With children returning to school after a summer filled with sunshine, deliciously refreshing drinks and snacks, and routine thrown out the window, what can we do, as healthcare professionals, to help with the oral care and health of our younger population?



Written by Dr Yvonne MacAuley, Clinical Fellow in Paediatric Dentistry, Children's Health Ireland at Crumlin

The mouth is the gateway to the rest of the body, and with dental caries being the most common chronic disease for children in Ireland, for many years there has been a push to put the mouth back into the body, and think of oral healthcare as a continuum with general health^{1,2}.

It is recommended that all children have their first trip to the dentist by no later than the age of one, however, in Ireland the first free dental screenings are offered when children are in 2nd class, therefore, many are developing irreversible, yet preventable dental problems prior to being seen by a dentist. Not only can this result in loss of a tooth, but it has knock-on effects with pain and infection resulting in need for time off school (and work for parents), decreased ability to concentrate and learn in school, sleep disruption and potentially Emergency Department visits and admission to hospital for emergency care³.

Pharmacies are often the first point of contact for healthcare advice for many people, with pharmacists often more accessible than other healthcare professionals. This puts all of the members of your team in a powerful position to offer preventative and emergency advice to patients and parents

(including expectant parents) when it comes to oral health care. The earlier the prevention begins, the better!

Teething and dental development:

- Children have a total of 20 primary (baby/milk) teeth. These begin to appear through the gums at approximately 6 months old, with the last ones coming in at 2.5-3 years old. Every child is different, and many parents will appreciate reassurance that there are several variations of 'normal' when it comes to tooth eruption. Teething has gained a very bad name, however, the jury is out on the range of symptoms it causes. Children may excessively dribble, experience mild soreness of their gums, and have flushed cheeks. Sugar-free analgesics (such as paracetamol and ibuprofen) can be recommended for short term use, while teething rings cooled in the fridge can soothe irritated gums⁴. It is important to advise parents that diarrhoea, fever, or other systemic symptoms are not caused by teething, and that teething is responsible for only a very mild and transient temperature elevation. Significant fever in a young child must be taken seriously and addressed appropriately. Numbing gels

are not typically recommended by dentists, due to the local anaesthetic content which can be dangerous for the very small child if overused. Similarly, dentists do not recommend teething granules due to their sugar content (in the form of lactose).

- The permanent dentition begins to come in at around age six, and this can begin with either the exfoliation of the front teeth and replacement with new teeth (incisors), or the appearance of new permanent molars behind the baby molars. The last baby tooth tends to fall out at around age 12, however there can again be wide variation in this. By age 12-13, most children will have 28 permanent teeth present.

- The Orthodontic Society of Ireland and the American Association of Orthodontists recommend that children have their first visit with an orthodontist (dentist who provides braces) by the age of seven, in order to allow early recognition of developing malocclusions/bite problems⁵.

Brushing:

- For babies, prior to tooth eruption, the mouth and gums can be gently wiped with gauze or a clean, damp wash cloth if parents wish. This will help to remove milk residues and bacteria, as well as introduce good oral hygiene habits.

- A soft-bristled, age-appropriate toothbrush, wetted with tap water, should be used as soon as the first tooth appears⁶. The teeth and gum pads should be brushed twice

daily, with bedtime brushing being the priority. If brushing proves a challenge, playing music or singing a song as a distraction can help for the two minutes it takes.

- From the age of 2 until 7 years old, a pea-sized amount of fluoridated toothpaste (>1000ppm fluoride) should be used on a soft brush, with parental assistance (until children can tie their own shoelaces)⁷. The toothpaste can be a 'children's' toothpaste, but ensuring the correct fluoride concentration (>1000ppm) is key.

- As children get older, they may be able to brush unsupervised, using a pea sized amount of >1000ppm fluoridated toothpaste, however, every child's development is different, and some may need assistance for a little longer.

- Many children will report a 'spicy' taste from mint toothpastes, and some children with oral sensitivities may not be able to tolerate any toothpaste flavours- there are options of flavour-free toothpastes and these have changed toothbrushing time for the better for many parents!

- It is also encouraged (no matter your age) to spit out the excess toothpaste when finished brushing, but not to rinse with anything after- a habit many of us need to change!⁷

- Mouth rinses are not commonly recommended, however, flossing will help to clean in between the teeth (the parts the brush cannot reach!)- this can be a tricky task in





a moving child and requires good dexterity and perseverance in an older child.

Digit sucking habits and soothers:

- These habits are known as non-nutritive sucking (NNS) habits. While prolonged habits such as these can lead to changes in the bite, it is important not to remove soothers too early, as they are commonly replaced by the thumb, which is a habit much harder to cease! The American Academy of Paediatric Dentistry recommends trying to stop all NNS habits by three years old⁸.

Diet:

- A common cause of caries in preschool aged children is night time feeding, either prolonged, on demand breast feeding, or bottle feeding with anything other than water. The HSE recommends beaker use from 6 months onwards, and weaning all bottle-feeding by one year old⁹. All juices should be avoided, if possible (even 100% fruit or 'no-added sugar' juices).

- With regards to caries development, the frequency of food/drink consumption is the most important factor. Sugar

consumption should be minimised, but this is especially important between meals¹⁰. It can take saliva up to 60 minutes to return to its optimum pH, therefore if snacking occurs more frequently than this, the mouth does not have an opportunity to recover fully before the next acid attack.

- Parents and patients can be made aware of 'good snacks' such as whole fresh fruit, raw vegetables, unsweetened popcorn, cheese and yoghurt. Raisins and other dried fruits are best avoided, due to their high sugar content and very sticky consistency¹¹.

Medications:

- Where possible, sugar-free versions of medication should be considered. Many over the counter vitamins and oral liquid medications have high sugar concentrations to make them more palatable. Sometimes it is not possible to substitute medications, therefore rinsing with water, or wiping the mouth out following medication administration should be encouraged.

Trauma:

- All patients and their parents who present with dental trauma should be advised to attend a dentist as soon as possible, no matter what the injury, however,

there are a few important hints and tips for time-sensitive emergency management.

- If a primary/baby tooth is knocked out, it should be located, if possible, but should not be reimplanted.

- If a permanent tooth is knocked out, the sooner it is replaced into the socket, the better the prognosis. If the tooth cannot be replaced, it should be placed into milk until it can be reimplanted. If teeth are broken, the pieces should be located, if possible, stored in milk, and brought to the dentist.

- The Dental Health Foundation Ireland have excellent posters ('Save That Tooth') to demonstrate emergency care of traumatised teeth¹².

- As with everything, prevention is better than cure, therefore mouthguards should be encouraged. Dentist fabricated mouthguards will follow all the recommended guidelines for their proper fit to provide the best protection, however, for children with frequently-changing dentition due to the exfoliation of primary teeth and eruption of permanent teeth, this may not be a financially feasible option. Some dentists may be able to work around mobile primary teeth and their successors, however, alternative options such

as boil-and-bite mouthguards may be necessary in these instances for the short term.

Dental pain and red flags for infection:

- Finally, with all of the prevention advice above, hopefully many children will avoid dental problems, however, no doubt pharmacists and their teams will be the first port of call for many parents of children complaining of dental pain.

- Analgesics recommended by dental practitioners for dental pain are paracetamol and ibuprofen [13]. These can be alternated to avoid breakthrough pain prior to the next dose administration. Parents should also be advised to bring their child to the dentist as soon as possible to assess and address the source of the pain.

- Children will occasionally develop swelling associated with their dental pain. This can develop and progress very rapidly and be very dangerous, therefore, emergency attendance with a dentist or to a local Emergency Department is required. This is especially important if patients present with systemic symptoms such as a fever, vomiting or nausea, or difficulty opening their mouth/swallowing/opening their eye, or visible swelling of the face¹⁴.

- Antibiotics are generally not recommended for small localised swelling in the mouth, but are reserved for spreading infection resulting in facial swelling. They will not remove the source of the problem, therefore a dental visit should always be advised.

As dentists, we are always so grateful to all healthcare professionals who advocate for dental and oral health, and with many children being the most vulnerable in our population, the earlier and more often we can encourage a healthy mouth, the more children we can save from preventable disease!

References available on request

