

The “Bitter Truth” Behind the Sweetened Medication

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Sugar is one of the main causes of dental decay. Consuming less sugar by eating fewer sweets, cakes, biscuits and sugary drinks is an important measure in limiting dental decay. However, many people, especially children, take liquid medicines on a regular basis, not realising that over half the spoonful is sugar. The “bitter truth” is that sugar contained in medicines is just as harmful to teeth as sugar in sweets.

Several pediatric liquid medications may contain components named excipients or “inactive ingredients”, which can be deleterious to the dental structures, causing dental caries or erosion. Among these components, the most common are fermentable sugars. Sugars such as sucrose, fructose and glucose are added to Liquid oral medicines to improve taste. The presence of sucrose in medicines leads to pH drop of dental plaque, and also acts as substrate for fermentation of oral microbiota, contributing to dental caries.

Children’s teeth are unlikely to be harmed by occasional brief courses of sugar containing medicines. Asthma, convulsions, recurrent urinary tract infections, cardiopathies, epilepsy, chronic renal failure, juvenile idiopathic immuno-compromised conditions however, are examples of common disorders that provide a sizable number of children liable to be exposed to long term treatment with drugs. Even some cough medicines that are brought on an over the counter basis contain sugar and are regularly used by young children over relatively long periods.

Reducing the cariogenic potential of children’s medications should be of concern to all health professionals. From an individual point of view it would be possible through educating children and their parents regarding the need to brush the teeth after taking each dose, to take medicines at meal times rather than between meals, to avoid taking medicines before bed, and the need to fluoride applications and regular preventive dental care. The liquid oral medications are usually viscous syrups that penetrate into the fissures and proximal areas, which are inaccessible to the toothbrush. Children should also be encouraged to rinse their mouths with water after taking liquid medications

Pediatricians have the opportunity to influence the oral health of children as they are the first health professionals to come in contact with infants and young children. They are in an ideal position to influence the supply and use of pediatric medicines. Special needs

patients and/or parents/caregivers of children should be informed of the increased risk of tooth decay associated with the chronic use of sugar-sweetened medications. They should also be counseled regarding oral hygiene and other preventive measures.

The pharmaceutical industry should be aware of the high risk of decay associated with prescription and over-the-counter drugs containing sugar and should be encouraged to employ non-acidogenic sweeteners like polyalcohols (sorbitol, and xylitol). Manufacturing children’s medicines containing no fermentable carbohydrates with low prices should be the best public health policy. In addition, research should be developed in order to find acceptable levels of carbohydrates to help preserving medicines’ palatability.

Pediatricians should preferentially prescribe sugar-free medicines and promote sugar free medicines to their patients. Thus manufacturers will be forced to produce sugar free medicines. Future campaigns should aim at increasing consumer’s demand. Awareness of the danger posed by these medications should be promoted not only among prescribers, but also among pharmacists, manufacturers, regulatory authorities, and the public in order to bring about increased availability and use of sugar-free liquid medicines. A public health policy must be implemented in order to limit sugar in medicines.

It is important that health professionals, particularly pediatricians and child health care providers, be aware of the risk of oral health imbalance during the continuous use of pediatric medicines. Awareness among the health care professions, instilling oral hygiene for all children under medication, use of non cariogenic substances in medicines or sugar free medicines will help in reducing the “bitter effects” of sweetened medicines on tooth to a considerable extent.

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