



Toothfriendly

NEWSLETTER OF TOOTHFRIENDLY INTERNATIONAL

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Sugar discussion:
Dentists call for a radical rethink



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„Oversimplification is poison for credible dietary advice.“



Toothfriendly novelties



Meet us between  halls 10/11

SUGAR

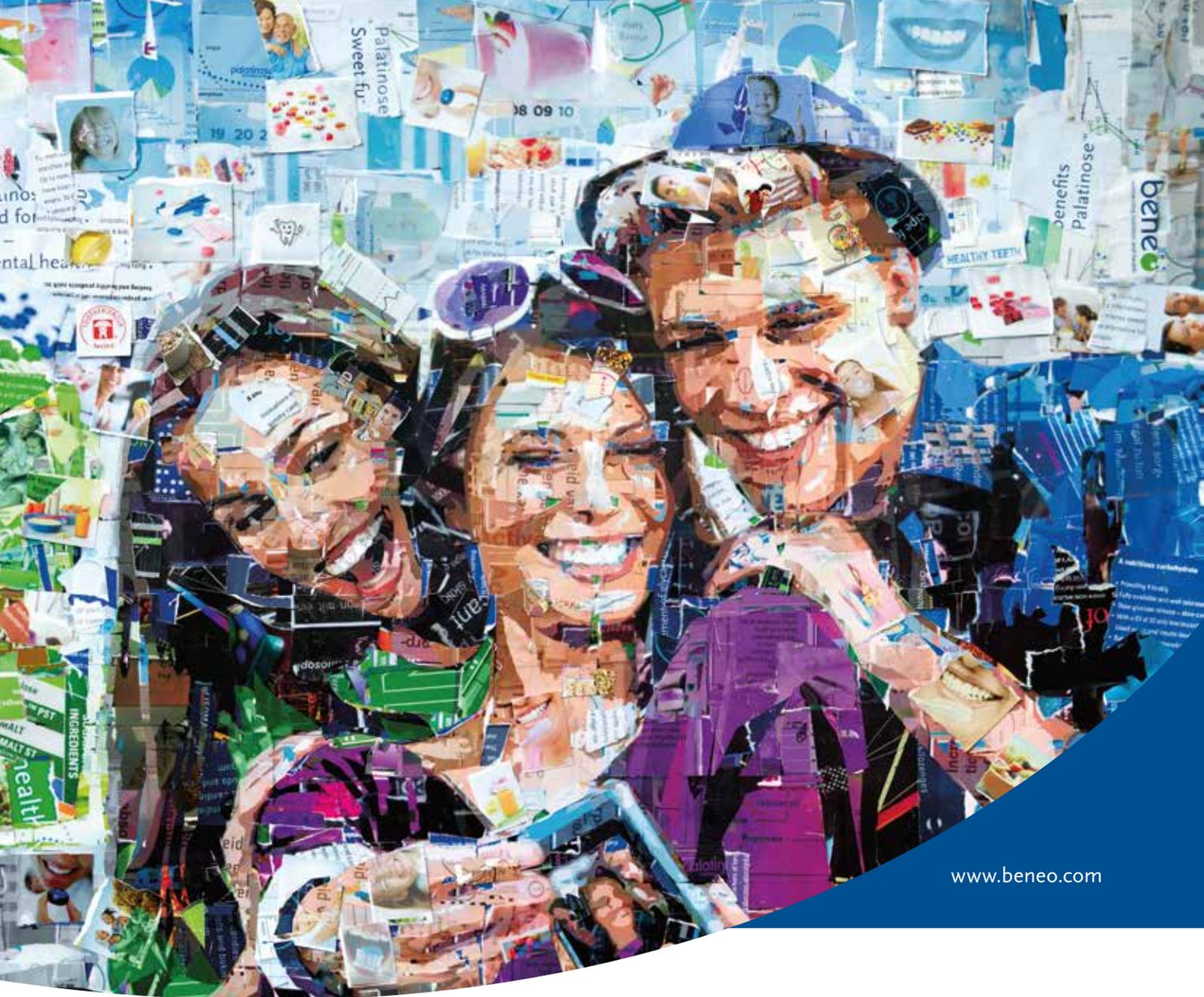
IS THE NEW **BAD** - OR IS IT?

Sugar-free
OTC medicine



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for-spoon**
sweeteners





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Toothfriendly International is a non-profit association working for better oral health.



MYTH BUSTER Dr. Bär is the Director of Tooth-friendly International and an expert in the field of Food Scientific and Regulatory Services.

Sugar might be good for you

Remember the days when your dentist told you NOT to eat chewing gum? Well, if you are in your forties or fifties, you might. In the early 1980's the dentists' rule-of-thumb was that all sweets are bad for you. It wasn't until the 1990's that health professionals around the world felt confident to say that sugar-free chewing gum was actually beneficial to oral health because it stimulates the flow of saliva.

Soon we may see the rehabilitation of another term that has been demonised by health professionals relying on dogmas, i.e. „sugar“. The rehabilitation is based on the fact that the term „sugar“ either means sucrose, i.e. a defined single substance, or is it used as collective term for all mono- and disaccharides which have widely differing properties. Some sugars – isomaltulose and tagatose, for example – are, unlike sucrose, not fermented by the microorganism of the dental plaque and hence are safe for teeth. And one particular novel sugar – psicose – is not just low in calories but practically calorie-free.

For these and other reasons, health professionals and consumer advocates, food manufacturers and regulators are called to no longer use the term „sugar“ when in fact sucrose is meant.

Dr. Albert Bär
 Toothfriendly International



Emoticons have the strongest impact on health perceptions



Consumers are more influenced by emotions than words, finds UK-based nutrition label survey.

Smiling and frowning faces are more effective than simple words or traffic lights, according to a representative study published in *Appetite*. The effects of emoticons and simple colour labels were tested among 955 people in the UK. According to the researchers, what affects consumers and what authorities deem informative may not be in total alignment.

Emoticon labels yielded stronger effects on perceptions of taste and healthiness on snacks than simple colours. Moreover, emoticon labels may be particularly appealing to children, who have been found to understand and act upon communicated emotions as early as infancy. *Vasilijevic et al. (2015) Appetite Vol. 91, p. 56-63.*



Consumers begin to distinguish „good“ and „bad“ carbs

According to recent consumer research commissioned by Beneo, consumers start to differentiate between so-called „good“ and „bad“ carbs. The study done with 5000 consumers in five different European markets reveals that grocery shoppers are particularly wary about sugar. In consumers' mind, high amount of sugar on the nutritional label often corresponds to „empty calories“.

On the other hand, sugar is still perceived as an excellent mood booster with great taste. This means that consumers are open-minded about healthier alternatives to sucrose as long as they do not have to make sacrifices on taste. (www.beneo.com)

Consumers critical towards sugar in dairy

Despite concerns, consumption of sugared dairy is on the rise.

An international survey conducted by DSM among more than 5,000 adults across five countries shows that consumers have major concerns about added sugar in dairy. The survey data reveals that 80% of the consumers agree that dairy foods with low or no sugar are better for their health, and that over 60% are concerned about sugar content in these products. Despite that, the growth in the consumption of sugared dairy is predicted to stay, especially in countries like China, U.S. and Brazil. (www.dsm.com)



SWEET, SWEET YOGHURT

Consumers love the taste, but have growing concerns about added sugars.

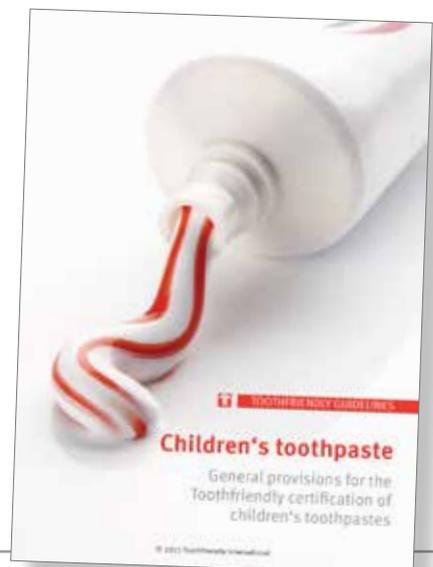
New guidelines for children's toothpaste

Toothfriendly International has for the first time issued criteria for the certification of children's toothpaste. Companies wishing to display the Toothfriendly label on their product label must comply with provisions that include the content of bioavailable fluoride and the conditions of use.

These guidelines have been laid down and accepted by a panel of independent, qualified experts convened and consulted by Toothfriendly International. They can be down-

loaded at www.toothfriendly.org.

„At first sight one may think that every toothpaste is Toothfriendly“, says Dr. Albert Bär of Toothfriendly International. „However, when examining the composition and labelling of the children's toothpastes sold in different countries, it is apparent that there are major differences. There also were differences between declared and actually found levels of bioavailable fluoride, which calls for independent post-marketing surveillance.“



Toothfriendly at Swiss schools



SWITZERLAND Oral health education is an important part of the curriculum in most Swiss school districts. Starting in kindergarten and continuing at school, it provides guidance to correct tooth brushing technique, fluoride use and nutrition - as well as explains the meaning of the Toothfriendly label.

The Swiss Aktion Zahnfreundlich („Action Toothfriendly“) is an official partner of the Swiss school dental instructors. „Last year we provided a record amount of material to schools; thousands of booklets, work sheets, posters and stickers,“ says Claudia Uebelmann of Aktion Zahnfreundlich.

The result of the Toothfriendly information campaign is impressive. By now, over 90% of Swiss consumers recognise the Toothfriendly pictogram and understand its significance.

Today, the range of Toothfriendly products includes not only chewing gum and candies, but also instant tea for babies, medical products and table-top sweeteners. „The latest addition is Toothfriendly chocolate“, says Uebelmann. „The Swiss do love their chocolate, so we are particularly proud to be finally able to offer a Toothfriendly alternative.“



Oral health instructor Daniela Frey Perez in Willisau with her school class.

WHO FINANCES IT?

The cost of the Toothfriendly public information campaign is covered by payments of the confectionery manufacturers who pay a small licence fee for the use of the Toothfriendly logo on their products. Therefore, this programme does not require funds from government-sponsored public health programmes.

what's new?



SWEET & STRONG

Latest addition to Fisherman's Friend range: Honey and Lemon



PACKAGE REDESIGN

New Dentistar pacifier design by German Novatex



FRESHMAKER EXPANDS

Perfetti van Melle's successful Mentos mints are launched to new markets.



DENTIST'S TREAT

Toothfriendly chocolate from Zahnfreundchen is now available in Switzerland.



Free sugars are defined by the WHO Nutrition Guidance Advisory Group as follows: "Free sugars include monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit concentrates.

Dentists call for radical rethink on sugars discussion

While consumers are being encouraged to cut back on the amount of sugar they eat, dental experts say: it's not the amount but the frequency that matters. Also, new healthier sugars are on the horizon.

Remember Atkins or the Paleo craze? While consumers already seem to have lost their appetite for low-carb foods – the movement peaking in 2004 – they are still being told to cut back on sugars.

The updated guidelines from the World Health Organisation set a maximum of 10% of total energy intake from free sugars, with 5% as a target. The latter equates to around five to eight teaspoons of sugar a day, or one glass of orange juice.

Eating too much sugar, says WHO, may lead to dental problems or obesity which can cause heart disease, cancer and diabetes.

Not all experts agree to this, however. „The new WHO guidelines are too simplified“, says Dr. Albert Bär of Toothfriendly International. „Sugar is not bad by definition, but the way some people consume certain sugar is bad for health“, he states. For starters, there is no such thing as *the* sugar. Sugar in the chemical sense of the

word stands either for sucrose or for a number of substances with similar chemical characteristics but widely different physiological properties in terms of bioavailable calories, dental properties, glycemic effect as well as absorption from the gut.

The energy value of different sugars varies from about 0.5-4 kcal/g, the glycemic index from 0-100%, the dental quality from no risk to high risk, the sweetness from 20% to 100% (sucrose as a reference). In other words,

SUGARS

a number of sugars with widely differing properties are encompassed by the collective term „sugars“ or, even more sloppily, „sugar“.

Sucrose is not the only sugar

According to Dr. Bär, the WHO report quite wrongly evokes in the consumers mind the impression that everything that is sugar chemically is equally bad nutritionally. Ignoring the differences between sugars, with regard to both nutritional effects and health effects, i.e. lumping together all sugars in the category of „sugars“ for the purpose of nutritional labelling, further cements a wrong perception and indeed misleads consumers about the food they eat. Also, the term *free sugars* is problematic as it stipulates a general difference between naturally occurring and industrially added sugars for which there is little if any evidence.

„Furthermore, the WHO report relies completely on the amount of sugar, not the frequency of sugar intake“, criticizes Dr. Bär. From dental perspective, this does not make any sense: teeth are more affected by the frequency of sugar consumption than by the sheer amount. Sipping a soda throughout the afternoon is more harmful than drinking the whole can in one go.“

According to Dr. Bär, neither sugar bashing in the media nor a sugar tax is likely to change bad dietary habits significantly, and particularly not in those segments of the population who would need it most. Changing nutritional and thus behavioral habits is achieved in the first place by proper and balanced information. Reducing sugar in certain foods may help reduce total intake somewhat, but it will never have the same impact that an information mediated and emotion driven modification of the eating habits will have.

Egg is back, too

The history knows many examples of foods or ingredients wrongly demonized as „bad“. In the 1980s, nutrition researchers concluded that eating foods that contain cholesterol, such as eggs, somehow translated into a heart attack risk. Consequently, egg consumption dropped by about half

in America. There was just one problem – which was that there was no scientific evidence that consuming eggs increased the risk of a heart attack. In fact, as early as 1990 the evidence was pointing in the opposite direction. But it has taken a very long time before the myth has been busted in consumers' minds, and some may even today avoid eggs for the wrong reasons. Also the days when margarine was promoted as the safer alternative for butter are gone.

“Over the last years both nutritionists and regulators have constantly made the same mistake. It's time to change and start looking at foods as a whole and not only to the effects of individual ingredients, says Dr. Bär. „Sugar is neither the inevitable path to weight gain nor are all forms of sugar causing caries. Oversimplification is poison for credible dietary advice.“

Also Claudia Strauss, Managing Director of UK-based consulting agency Future Thinking, believes that many

consumers are struggling to understand whether they should be cutting out sugar, fat or both. “There continues to be confusion as to what being healthy really means and what foods you should and shouldn't eat“, she says. „Consumers are bombarded with extensive and often contradictory messages which are leaving them feeling unengaged and helpless.“



References:

WHO Guideline (2015) Sugars intake for adults and children.

HEALTHIER SUGARS

ISOMALTULOSE is a natural constituent of honey and sugar cane and has a very natural sweet taste. Like sucrose, it is fully digested and provides the same caloric value of approximately 4 cal/g. However, isomaltulose enters the blood at a slow rate, avoiding high peaks and sudden drops in blood glucose and therefore insulin levels as well. This leads to a more balanced and prolonged energy supply from of glucose. Isomaltulose is used increasingly as a Toothfriendly sugar substitute in a number of foods including health drinks, baby tea and chewing gum.

TAGATOSE is a Toothfriendly low glycemic monosaccharide, very similar to fructose in structure. It is naturally occurring and can be found in some dairy products. Tagatose is almost as sweet as sucrose. However, it is metabolized differently, has a minimal effect on blood glucose and insulin levels and furthermore provides a prebiotic effect. Tagatose is particularly useful for making caramel because it develops excellent such flavour notes.

PSICOSE (also known as D-psicose or allulose) is found in small quantities in jackfruit, figs, raisins and wheat. It resembles closely the taste and sweetness of sucrose. When psicose is consumed, the body absorbs it, but does not metabolize it. Psicose is therefore practically calorie-free and it has no impact on blood glucose or insulin levels. Researchers have also found psicose to be well tolerated. The large scale production of pure psicose is still in development but marketing of a psicose syrup has started in the US and in Japan.

E-commerce boosts the sales of „naturally healthy“ sugar substitutes

Mix rising interest in natural sweeteners with consumers' increasing willingness to experiment with new ingredients – and throw in some e-commerce – and you get new generation spoon-for-spoon products made with erythritol, stevia, xylitol and isomaltulose.

The table-top sweetener market is in a turmoil: the classic sugar replacers aspartame and sucralose have found competition in ingredients with a more „natural“ flair. The sales are currently being driven by a combination of two particular sweeteners: steviosides and erythritol. Together they build a dream team by both being all-natural, non-glycaemic and non-cariogenic with a high intestinal tolerance.

Stevioside is a plant-derived intensive sweetener which is about 300 times sweeter than sucrose but also has a slightly bitter note and unpleasant aftertaste.



The bulk sweetener erythritol on the other hand features a clean and pleasant taste profile similar to sucrose, although it also is reported to have a light cooling effect. Furthermore it provides qualitative and additive synergy in blends with intense sweeteners such as steviosides by providing bulk and masking undesired taste characteristics.

Besides erythritol and stevia, also xylitol has its loyal customer base. „Xylitol does have some challenges compared to erythritol“, says Kati Weiss of Toothfriendly International. „It has the same caloric value as sucrose and limited gastric tolerance which makes it less suitable for deserts and coffee.“

On the other hand, says Weiss, xylitol has gained significant consumer acceptance over the past twenty years through its commercial use in chewing gums and mints.

„What we also know is that often consumers' beliefs about sweeteners have a bigger influence than health claims or science. If they believe that something is healthy, the belief conquers all.“

Besides erythritol, stevia and xylitol, also isomaltulose (with the trade name Palatinose) has found its way to the spoon-for-spoon market. „Clean taste, toothfriendliness and low glycemic index are the key benefits of isomaltulose“, says Weiss. „Unlike most polyols, isomaltulose is also very well tolerated.“



E-commerce booms

As e-commerce grows in all areas of business, it should be no surprise that spoon-for-spoon sweeteners see digital business explode as well. For many sugar substitutes, online presence is actually becoming the front door to the brand.

The role of social media is also increasing as its capabilities to inform and persuade consumers through peer recommendation is immense. Clickable campaigns on sites like Facebook and Twitter may soon sell more products than brick-and-mortar stores.



GREEN AS A BIRCH TREE

Sweete is a combination of erythritol and stevia sold with an „all-natural“ claim.

Birkenzucker and Xucker contain xylitol which - sometimes, yet rarely - is derived from birch trees.

Spoonful of sugar...

...helps the medicine go down, sang *Mary Poppins* famously in the 60s, but the opposite is true today. Medicinal products that come to contact with teeth - chewable vitamins, cough syrup, teething gel – are increasingly sold in Toothfriendly varieties.

In many countries the sales of sugar-containing OTC medicine have been sliding as the “sugar is evil” message gains ground in the media and in the minds of consumers.

Laia Grao from Toothfriendly International confirms that manufacturers are influenced to change mainly by consumer pressure. „We see a long-term shift in the consumption of sugar-free and Toothfriendly products“, she says. „Young mothers are particularly looking for medicinal products without sugar. The Millennials – the

generation born in the 2000s – will further accelerate the switch away from sugar, since a larger proportion of them have grown up with zero sugar products.“

According to Grao, pharmacy-stocked OTC brands depend on their products having a “healthy” image even more than regular lozenges and mints sold at the supermarket. Their core consumers include the most health-conscious people and they are also the first ones to have taken onboard the anti-sugar message.



NO SUGAR
Hustagil cough syrup, Dentilin teething gel and Centrum Junior vitamins are examples of Toothfriendly-certified medicinal products.



HOW ARE PRODUCTS TESTED FOR TOOTHFRIENDLINESS?



Whether a food, food ingredient or a medicinal product is „Toothfriendly“ or not can be determined by means of an *in vivo* plaque-pH-telemetry test. In Switzerland, this test method has been used for more than 40 years. On an international level, the validity of the method was recognised in 1985 when more than 70 scientists from 8 countries reached a consensus on the methods to be used for assessing the cariogenic potential of food. It was concluded that appropriately conducted plaque-pH-telemetry tests are sufficient to identify non-acidogenic or hypo-acidogenic foods, i.e. foods that even under conditions of frequent consumption do not present a significant caries risk for human teeth (De Paola 1986).

The test measures the formation of acid by plaque bacteria from ingested food *in vivo*. Volunteers who carry a prosthesis with an implanted pH electrode, consume the test product in the ordinary way (or in the case of an ingredient, in a 10% solution with water). The oral bacteria come thereby into contact with the ingested food. If the food contains fermentable components, such as sugars and starch, acid will be formed. On the other hand, non-fermentable ingredients, such as sugar alcohols (polyols), will not result in significant acid formation. If the measured acidity does not exceed the critical limit (pH 5.7) during and for 30 minutes after consumption of the test food, the product is considered to be safe for teeth.

References: De Paola (1986) Proceedings of scientific consensus conference on methods for assessment of the cariogenic potential of foods. *J. Dent. Res.* 65 (Spec. Iss.):1540-1543.

Spain: Partnership with Odontologos de Hoy

BARCELONA 30'000 Spanish dentists and 10'000 dental hygienists received information about Toothfriendly labelling via the country's leading journal for dental professionals, Odontologos del Hoy. www.odontologosdehoy.com



New Toothfriendly Action Group in Croatia



ZAGREB Toothfriendly International has teamed up with Croatian Dental Society and Croatian Society for Pediatric and Preventive Dentistry. The purpose of the new action group is to promote Toothfriendly products and establish a national or regional Toothfriendly organization in the Balkan area. The first kick-off meeting was held in Zagreb in September. The meeting and its press conference was joined also by some industry members of Toothfriendly International. The baby nutrition specialist HiPP used the opportunity to promote its Toothfriendly range of baby teas in Croatia together with the country's leading dental professionals.

Turkish Dis Dostu masters social media

ISTANBUL We might have come late to the social media party, but our Turkish association Dis Dostu („Tooth Friend“) has embraced digital marketing fast and uses it cleverly to target specific target groups prone to the Toothfriendly message – such as young urban mothers. In May 2015, Dis Dostu invited 25 key bloggers for a posh event in a Toothfriendly-certified dental clinic, ensuring a wave of positive coverage in the social media. #disdostu #klinik32



Website revamp

BASEL The Toothfriendly team has launched a new website illustrating the charity work of the Toothfriendly Foundation. At the center of the redesign: responsive pages, meaning that the site is easier to navigate with mobile devices. www.toothfriendly-foundation.org

Toothfriendly Germany: 30 years of oral health promotion

BERLIN The year was 1985: the Berlin Wall was still dividing Germany, the Euro was a distant dream and sugar-free chewing gum only a recent novelty. It was also the year when a group of prevention-minded dentists teamed up for a German Toothfriendly initiative. Since thirty years, the “Zahn Männchen” label – the smiling tooth under a protective umbrella – is the association's guide to products which are guaranteed safe for teeth. To mark the commencement of the 30th anniversary year, Aktion zahnfreundlich e.V. held a press conference at the International Dental Show in Cologne in March 2015.



Toothfriendly at the FDI World Dental Congress

The Toothfriendly team won the hearts of Thai visitors at the annual World Dental Congress in Bangkok.



BANGKOK Over 1000 FDI World Dental Congress visitors signed a petition to endorse the Toothfriendly initiative in Thailand. The signatures were collected at the booth which Toothfriendly International co-shared with

Thailand's largest public health lobby, Thai Health Promotion Foundation.

„Thailand is a key market for us and we aim to have a strong presence here one day“, confirms Dr. Albert Bär of Toothfriendly International. „We already have a pH-telemetry laboratory in development here in Bangkok coupled with a local action group. South East Asia has also a strong market for sugar free confectionery and a very health-oriented consumption behaviour - a perfect ground for the Toothfriendly initiative.“



New downloads

BASEL Toothfriendly International has issued several new dossiers to aid the manufacturers in their attempt to create healthier products. You can download the dossiers at www.toothfriendly.org/downloads



RICOLA PROMOTION

600 Ricola boxes were distributed to dental professionals visiting the Toothfriendly booth.



SYNERGIES Toothfriendly International shared the FDI booth with Thai Health Promotion Foundation.



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