

Abedulce®

Birch Sugar



100% Birchsugar lozenges

Say goodbye to caries

Caries is by far the most widespread infectious disease of teeth. Affected teeth rot and, in the case of heavy caries infection, secondary ailments may break out that can severely injure the body. Bacteria that cause caries dwell in, and nourish in, an acidic environment. It means that the foods that cause the hyperacidity in both the oral and the whole organism, promote the emergence and dissemination of the caries-causing germs. This group of products includes, in particular, sugar and white flour products, but also milk, eggs, meat, and many other products of our daily lives.

In the case of hyperacidity, the organism tries to neutralize the pH value with minerals by extracting these from the bones. This could lead to a weakening of the bones and, in severe cases, to osteoporosis and other deficiency diseases. In today's nourishment, which mainly consists of industrially processed and refined raw materials, our body receives an amount of minerals that is insufficient to balance this hyperacidity. The body is therefore lead to take additional measures in order to support it in its struggle against the caries agents.

This is why the provision of effective dental care, from the very beginning, is important in order to remain healthy.

Correct dental care

Healthy dental care indicates that we should brush our teeth a minimum of twice a day to remove food caught in the spaces between the teeth.

For this purpose, it is recommended that dental floss should be used as it reaches the food caught between the teeth.

While brushing your teeth it is important to remember not to press too hard as the gums are very sensitive and prone to inflammation. This happens quite often, especially among adults and the elderly, and can cause gum regression and, finally, the loss of teeth. Toothbrushes with soft bristles must be used, and you should brush your teeth carefully. Finally, the mouth must be rinsed thoroughly with water.

But, even after you have brushed your teeth correctly, the caries germs can remain in the oral area, and multiply if the oral cavity is acidic (pH value below 7). Consequently, the body fails to mineralize the gums and the teeth effectively. For this reason, nourishment plays a relevant role in the health of teeth, alongside with the correct dental care.



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Searching for the right recipe

To eliminate caries germs effectively we must complete dental care with something else. Birch sugar is such a complement. A research has revealed that birch sugar is a strong alkalizing nutrient which cannot be metabolized by caries-evoking bacteria. Birch sugar has a lasting protective effect on gums and teeth. When it is present, the bacteria starve and the oral area undergoes an alkaline cleaning which prevents an occurrence of caries. The teeth receive protection, and the body can effectively mineralize the gums and the teeth in an alkaline environment.

To ensure the efficient elimination of bacteria, it is important to let the birch sugar affect the oral cavity for at least 5-10 minutes.

Birch sugar dissolves in the mouth very quickly, and it is difficult to keep it in there for such a long time. A means that is often used, in an attempt to solve this problem, is to chew gum sweetened with birch sugar. These chewing gums have quite a low concentration of birch sugar, and additionally contain fillers and other substances. Also, as birch sugar dissolves in several seconds after an intake of the chewing gum, the desired alkalization of the oral cavity is not necessarily achieved. One has to chew a lot of these chewing gums every day in order to gain the desired effect.

Due to this, nowadays pills or pellets with a much higher birch sugar concentration are produced. However, in order to bind the birch sugar, other sweeteners, fillers and adhesive additives are mixed in. Therefore, birch sugar pills and pellets are not pure, and contain aromas, colouring agents, fillers, and other components. These components can influence and reduce their effect, quite apart from the fact that we intake the flavouring agents, colourants and the fillers daily with the product.



It is very difficult to hold the birch sugar in the mouth for 5 to 10 minutes even in a form of pill or pellet.

ABEDULCE – 100% natural dental care of the 21 st century

We have developed a process for production of hard candy from clean birch sugar – ABEDULCE.

Each candy contains 3.8 g of clean birch sugar which dissolves very slowly, and can comfortably act for 5-10 minutes so that the caries germs will be blocked and begin to starve. The teeth and the gums are protected and can be mineralized in an alkaline environment. A lasting dental care is guaranteed.

Ingredients

ABEDULCE contains no aromas, colourants, fillers or adhesives. ABEDULCE is a clean natural gluten-free product. It is 100% vegan and is designed for daily consumption. Having a glycemic index of 7, ABEDULCE is also suitable for persons with diabetes. It contains 100% best Finnish birch sugar and is produced in an elaborate process of natural crystallization.

Application:

Put one ABEDULCE candy in your mouth immediately after a dental care procedure and suck it (do not crunch).

ABEDULCE dissolves very slowly and increases the content of calcium and phosphate in the salivary flow. A healthy alkaline pH value mineralizes the teeth, the bones, and the gums.

After that, refrain from drinking or rinsing your mouth for 30 minutes. ABEDULCE is especially effective before going to bed.



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Scientific research of birch sugar for dental care (within the period from 19721 to 2004)

The studies show that the birch sugar (xylitol) is an easy, effective and lasting means of caries prophylaxis. Up to the present moment, about 300 specific researches of xylitol effect in dental care have been undertaken. We have recapitulated the most important studies for you:

Turku sugar studies A) [1975]

Source: Scheinin, A., Mäkinen, K.K. (1975) Turku Sugar Studies I-XXI. Acta Odontol. Scand. 33 (Suppl. 70): 1-349.

Period: 2 years of study [1972 – 1974]

Respondents: 115 participants between 12 and 53 years of age

Trial groups: a "sucrose group", a "fructose group", and a "xylitol group".

Administration: xylitol 50 -67g/day with regular nutrition

Turku sugar studies B) [1975]

Source: Scheinin, A., Mäkinen, K.K. (1975) Turku Sugar Studies I-XXI. Acta Odontol. Scand. 33 (Suppl. 70): 1-349

Period: 1 year [1973 – 1974]

Respondents: 100 dental medicine students

Trial groups: a "sucrose group" and a "xylitol group"

Administration: 6.7g/day in a form of chewing gum

Results:

- Highly significant reduction of caries (over 85%) with xylitol.
- Alternation of DMFS index with the xylitol group = 0.0
- Significant difference in DMFS index within 6 months
- Significant changes also under consumption of xylitol of only 6.7g/day
- Remineralization effect under continued xylitol administration was confirmed

DMFS index = is a contraction for conclusion on the health/disease state of the teeth, in which D= decayed, M = missing, F = filled (with dental filling), and S = surface. An index value of 1 means that out of 28 remaining teeth, one tooth either has caries,*

or is filled or missing.

Ylivieska research [1982 – 1984] –Follow-up in 1987 and 1989

Source: Isokangas, P., Mäkinen, K.K., Tiekso, J., Alanen, P. (1993) Long-term effect of xylitol chewing gum in the prevention of dental caries: a follow-up 5 years after termination of a prevention program. Caries Res. 27:495-498.

Period: the research lasted for 2 years

Respondents: pupils, 11-12 years of age

Trial groups: a „standard prophylaxis group“, a „+ xylitol prophylaxis group“

Administration: xylitol, 7 – 10g / 3x day as chewing gum

Results:

- As a compliment to a standard oral hygiene xylitol has a significant improvement effect in caries prophylaxis.
- Long-lasing protection of teeth is also achieved by the application of xylitol.
- Prophylactic effect against caries is stronger with the erupting teeth

Belize studies [1989 – 1993]

Source: Mäkinen, K.K., Bennett, C.A., Hujoel, P.P., Isokangas, P.J., Isotupa, K.P., Pape, H.R., Jr., Mäkinen, P.-L. (1995) Xylitol chewing gums and caries rates: a 40-month cohort study. J. Dent. Res. 74:1904-1913.

Period: the research lasted for 40 months Respondents: 1,300 pupils (6 – 8 YO) Trial groups: a "sucrose group", a "sorbitol group", and a "xylitol group".

Administration: xylitol, 15g /7x day as chewing gum

Results:

- Children from the xylitol chewing gum group had shown a significantly lower caries development within 40 months as compared to the children from the control groups.
- Xylitol has an anticariogenic effect immediately after the beginning of administration thereof.
- Even in a follow-up 5 years after the xylitol administration, the children have shown to have healthier teeth.

Mother/Child study, Finland [2000]

Source: Isokangas P., Söderling, E., Pienihäkkinen, K., Alanen, P. (2000) Occurrence of dental decay in children after maternal consumption of xylitol chewing gum: a follow-up from 0 to 5 years of age. J. Dent. Res. 79:1885-1889

Period: the research lasted for 5 years

Respondents: mothers of neonates

Trial groups: a "xylitol group", a "fluoride group", and a "chlorhexidine group".

Administration: xylitol, 6 – 7g / 4x day, xylitol chewing gums

Results:

- Administration of xylitol can prevent the transmission of caries germs (Streptococcus mutans) within the family.
- The studies substantiate a thesis that caries is a contagious disease.
- Xylitol administration to the mothers has a preventive effect on tooth caries development among their children.

Pastilles study [2004]

Source: Z.Gintner, J. Szöke, Á. Patthy, E. Söderling, J. Bánóczy (2004) Effect of xylitol pastilles on tooth plaque and Streptococcus mutans. Oral prophylaxis and children's dentistry. 26:93-95 [Wirkung von Xylit-Pastillen auf Zahnplaque und Streptococcus mutans. Oralprophylaxe & Kinderzahnheilkunde 26:93-95]

Period: the research lasted for 4 weeks

Respondents: 59 young adults [20-25 years of age]

Trial groups: a "xylitol group", a "control group"

Administration: xylitol 5g/ 4x day as pastilles

Results:

- Xylitol, even in delivery form of pastilles, brings a significant reduction of plaque mass and caries germs (Streptococcus mutans).
- Reduction of plaque mass by means of xylitol administration becomes significant even after 4 weeks of administration.
- Xylitol has a favorable influence on mouth hygiene.