

The danger of mouth acidity

Having bad teeth can be depressing, expensive and embarrassing.

Don't blame soft, weak teeth or inherited problems. Don't be embarrassed or depressed if you have trouble flossing. Dental disease occurs in an acidic mouth, whether you floss or not.

The great news is that you can prevent bad things happening to your teeth. You can prevent your teeth from crumbling, breaking, being sensitive and wearing out.



The first step is to know your mouth pH

Acidity in the mouth softens teeth and promotes harmful bacteria and plaque.

Control mouth acidity and protect your teeth from harmful bacteria that cause cavities and gum disease!

In an acidic mouth harmful bacteria will grow. Below pH 5.5 the enamel of your teeth will be damaged and cavities will start to form.

You need an alkaline mouth

In an alkaline mouth teeth are repaired (remineralization). When your mouth is alkaline you will help strengthen your teeth and eliminate harmful bacteria at the same time.

Measure mouth pH and keep it alkaline

ALKALINE = PROTECTION

Testing mouth acidity can tell you if you are at increased risk for dental disease.

Use special litmus pH paper to test your mouth acidity.

Testing pH is easy and important for your dental health.



Measure pH often- mouth acidity changes.

Almost everyone has a more acidic mouth at night, as they age, during hormonal changes, with acid reflux or with medications.

Sometimes a safe alkaline mouth may become acidic in a stressful situation or due to something as simple as a sinus infection.



The foods or drinks you consume (even diet ones) may be acidic: even some dental mouth rinses can be acidic.

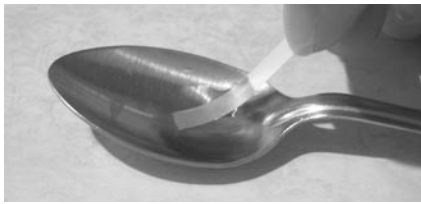


pH testing is important for your dental health!

Open the the pH litmus testing paper and remove the roll from it's plastic container, then remove the foil wrapper.

Replace the roll into the plastic container and feed the end through the cutting slot.

IMPORTANT: Do not discard the pH color chart included in the plastic container, you'll need this to read the results of your test.



1. Tear off about 1 inch of litmus paper from the roll.
2. Spit some saliva into a spoon.
3. Dip the litmus paper into the saliva.

4. Hold the litmus paper up to the pH color chart to match the color and determine your pH reading.



What can you do if your mouth is acidic?

There are many foods that can make your mouth alkaline:



Almonds and other nuts
Milk, Cheese and dairy products
Bananas, Apples, Pears and Grapes
Carrots, Celery and Potatoes
Water (but, water pH varies!)
XYLITOL



Sweet Solutions:

Xylitol is an easy and convenient way to make your mouth alkaline. Xylitol is delicious and is your own special weapon in the fight against mouth acidity and dental disease.

Xylitol looks and almost tastes like sugar (sucrose) but with 40% fewer calories. When Xylitol dissolves in your mouth, it makes a sweet sugary solution that is alkaline (the opposite of acidic).

Studies show that eating two teaspoons of Xylitol each day (6-10 grams) for 5 weeks will remove harmful germs from plaque on your teeth and in 6 months 95% of these germs will be removed from your whole mouth.



Use 100% Xylitol to protect your teeth.

Always choose products sweetened with 100% Xylitol. Do not be fooled by products that claim to contain Xylitol but use cheaper sweeteners like sorbitol mixed with a small amount of Xylitol (2%). These products will not protect you and sorbitol can even cause mouth bacteria to thicken.

Xylitol comes from the fibers of fruits and vegetables. Birch wood was the original source of Xylitol over 60 years ago and remains the premier source today.

Xylitol has been used in Europe for baking, cooking and to sweeten coffee and tea.

During the 1950s it was discovered that Xylitol could prevent ear infections in children. Researchers have found Xylitol prevents dental disease and mouth infections.



Hundreds of studies have confirmed the safety and dental health benefits of Xylitol. The US military has a program where Xylitol gum is used by the troops to protect their teeth.

Xylitol was used in diabetic treatments over 100 years ago.

Did you know?

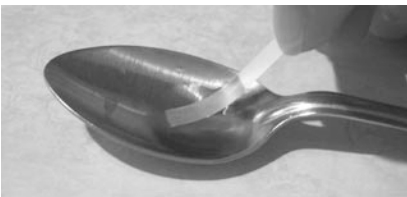
Native Americans wrapped medicines in the bark of birch trees to preserve them from fungus and bacteria. The birch bark was also made into teething rattles for children, and bitten into by adults.

There are reports of African tribes using sticks from special trees to clean their teeth and some Russian children have been given the juice of birch bark to drink while their teeth were growing.

Start eating 100% Xylitol and Test your “Xylitol” pH



1. Eat some Xylitol: either as granular Xylitol, a mint or chewing gum.
2. Let the Xylitol ‘juice” bathe your teeth and “swish” it around.



3. Now spit into a spoon.
4. Dip the litmus paper into the liquid.

5. The color should give you a number higher than 7 showing that you have a safe and alkaline mouth. At this pH level your teeth will be hardening and harmful bacteria cannot grow.



Xylitol Research

Mothers can affect their baby's dental health. The study showed that mothers could avoid infecting their children with cavity-causing bacteria by chewing gum containing 100% Xylitol. The children had 70% less dental decay compared with children of mothers who did not chew Xylitol gum. The greatest benefit occurred when the mothers chewed the gum for a full year before their babies' teeth erupted.



Source: Isokangas P, Soderling E, Pienihakkinen K, Alanen P. Occurrence of dental decay in children after maternal consumption of Xylitol chewing gum, a follow up from 0-5 years of age. J Dent Res 2000; 79:1885-9.

When the children this study were re-examined some years later, the beneficial effects had continued.

Source: Soderling E, Isokangas P, Pienihakkinen K, Tenovuoto J, Alanen P. Influence of maternal Xylitol consumption on mother-child transmission of mutans streptococci; 6 year follow up. Caries Res 2001; 35: 173-7.

Xylitol can prevent decay as effectively as a sealant.

This study compared the effectiveness of prevention between eating Xylitol and the application of sealants on teeth. School age children either chewed Xylitol gum regularly for several years or were treated with professionally applied sealants. The effectiveness at preventing tooth decay was compared by visual and radiographic examination. After five years there was no difference seen between the groups. The protection offered by chewing Xylitol gum was equal to a sealant. A choice of which treatment is to be used should be made on an individual basis.

Source: Alanen P, Holsti ML, Pienihakkinen K. Sealants and Xylitol chewing gum are equal in caries prevention. Acta Odontol Scand. 2000 Dec; 58(6): 279-84.

Eating 5 to 10 grams of Xylitol a day reduces acid-producing bacteria in the mouth by as much as 90%.

A study of children who chewed Xylitol gum showed that they had a greater reduction in the number of cavity-producing bacteria than children who did not chew Xylitol gum. Maximum effect was produced by chewing 100% Xylitol gum three or more times a day, directly after meals.

Source: Scheie A A, Fejerskov O, Danielsen B. The effect of Xylitol-containing chewing gums on dental plaque and acidogenic potential. *J Dent Res* 1998; 77: 1549-54.



Xylitol has been shown to heal early cavities.

This study showed the healing effect that occurred when children chewed Xylitol gum. The study was with 500 children and after two years some cavities in the Xylitol group had healed. The healing in this group was significant.

Source: Makinen KK, Makinen PL, Pape HR Jr, Allen P, Bennett CA, Isokangas PJ, Isotupa KP. Stabilization of rampant caries: polyol gums and arrest of dentine caries in two long-term cohort studies in young subjects. *Int Dent J* 1995 Feb; 45(1 suppl 1): 93-107.

Xylitol can help replace minerals in demineralized enamel.

When minerals are lost from enamel, Xylitol may contribute to the process of rebuilding and repair in the deeper layers of demineralized enamel, by bringing minerals to the area.

Source: Wennerholm K, Arends J, Birkhed D, Ruben J, Emilson C-G, Dijkman AG. Effect of Xylitol and sorbitol in chewing gums on mutans streptococci plaque-pH and mineral loss of enamel. *Caries Res* 1994; 28: 48-54.

Xylitol helps increase the flow of saliva.

Chewing Xylitol gum can increase the flow of saliva and change the acidity level of the mouth in such a way as to affect the type of bacteria that colonize teeth. The bacterial plaque appears to no longer damage teeth by means of its acidity, since the bacteria present do not appear to produce acids.

Source: Aguirre-Zero O, Zero DT, Proskin HM. Effect of chewing Xylitol chewing gum on salivary flow rate and the acidogenic potential of dental plaque. Caries Res 1993; 27: 55-59.

Xylitol controls plaque growth.

Xylitol controls the formation of plaque by interference with the adhesion of the bacterial layer and also by neutralizing the plaque and creating a hostile pH for growth.

Source: Soderling E, Makinen KK, Chen CY, Pape HR Jr., Loesche W, Makinen PL. Effect of sorbitol, Xylitol, and Xylitol/sorbitol chewing gums on dental plaque. Caries Res 1989; 23:378-84.

Xylitol may be of benefit to orthodontic patients.

This study showed that Xylitol can help to prevent cavities and gum disease during orthodontic treatment.



Source: Graber TM, Muller TP, Bhatia VD. The effect of Xylitol gum and rinses on plaque acidogenesis in patients with fixed orthodontic appliances. Swedish Dental Journal (15) 1982; 41-55.

The greatest benefit for children is eating Xylitol while their teeth are erupting and from 100% Xylitol.

The most beneficial time to eat Xylitol was during the period of tooth eruption into the mouth, especially when started one year prior to the tooth eruption.

Source: Hujoel PP, Makinen KK, Bennett CA, et al. The optimum time to initiate habitual Xylitol gum chewing for obtaining long-term caries prevention. J Dent Res 1999; 78: 797-803.

The effect of Xylitol for frail older people.

A clinical trial showed that along with oral health benefits, Xylitol may also reduce osteoporosis and offer protection against aging-related loss of bone.

It has been speculated that this effect is the result of Xylitol's ability to promote intestinal absorption of calcium and B vitamins which may aid bone remineralization.

Source: Debra Simons, Susan R. Brailsford, Edwina A.M.Kidd, David Beighton. The effect of medicated chewing gums on oral health in frail older people: a 1 year clinical trial. Journal of the American Geriatrics Society. August 2002.



Xylitol can help the elderly.

A study in an Ohio Veteran's Affairs Medical Center showed that not only did Xylitol have a preventive effect on root surface caries but it also may have an effect on reducing the craving for tobacco.

Finland: Ylivieska Study. 1999

A two year study was conducted in a small Finnish rural town with children aged 11-12 who ate 7 to 10 grams of Xylitol in chewing gum daily. The decay rate was already low but test groups on Xylitol showed a 30-60% reduction in new dental caries development compared to the control group not chewing gum.

Source: Hujoel PP et al: The optimum time to initiate habitual Xylitol gum chewing for obtaining long term caries protection. J Dent Res 1999; 78(3) 797-80.



Belize. Studies from 1989-1995

In this study of over a thousand children, researchers followed the level of caries in children chewing and not chewing gum. This study was of the long term consumption of Xylitol. The children chewed sugar gum and three types of sugar free gum including a Xylitol group. The study showed that carious lesions in dentin and enamel were stabilized in the Xylitol group. Re-examination of the subjects five years later showed that teeth that had erupted after the study ended had significant reduction in decay rates. In other words, some of the decay actually healed.

Source: Makinen KK, Bennett CA, Hujoel PP, Isokangas PJ, Isotupa KP, Pape HR Jr, Makinen PL. Xylitol chewing gums and caries rates: a 40 month study. J Dent Res 1995 Dec; 74(12): 1904-13.

Hungary: School Children Study. 1983- 1985.

The study supported the suggestion that Xylitol and fluoride act synergistically to reduce dental caries.

Xylitol chewing gum resulted in marked reductions in plaque formation and oral bacteria counts. The results showed that Xylitol was able to enhance oral health measures even in patients with good oral hygiene.



Source: Scheinin A, Pienihakkinen K, Tiekso J, Banoczy J, Szoke J, Esztari I, Zimmermann P, Hadas E. Collaborative WHO Xylitol field studies in Hungary. VII. Two-year caries incidence in 976 institutionalized children. Acta Odontol Scand. 1985 Dec; 43(6):381-7.

The Extra Danger of Dry Mouth

Who is at risk?

People with a dry mouth - have mouth acidity and are at a greater risk for dental damage.

A dry mouth is caused by saliva thickening or drying up for the following reasons:

Stress and Aging

Mouth Breathing (due to allergies, sinus, blocked or broken nose, athletic running and aerobic exercise or simply sleeping and breathing with your mouth open)

Dehydration (due to exercise, illness, hot weather or hormonal changes.)

Most medications (For example: Ritalin, Allergy and Asthma medications, anti-depressants, etc.)

ACIDS + DRY MOUTH = CAVITIES

If you have a dry mouth you will lack natural protection of saliva. You will not have saliva to:

1. Lubricate teeth
2. Dilute and balance acidity
3. Bring minerals to teeth



Xylitol will help lubricate your teeth, by stimulating saliva. It makes your mouth alkaline and brings minerals to your teeth.

ALKALINE + SALIVA = PROTECTION

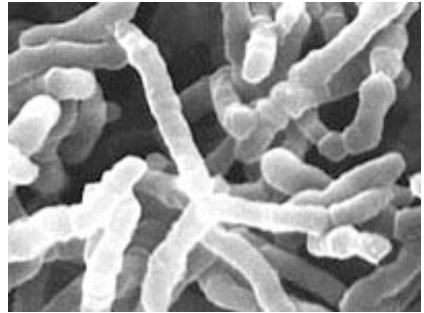
The Chemistry of Mouth Care



How often do you clean your teeth?

You may be surprised how quickly bacteria grow on teeth. The first bacteria on a clean tooth are harmless and for 8 hours these bubble-shaped germs cluster and join like raindrops.

“12 hour” brushing is important because after 12 hours many bacteria change and become tubular or “worm-like” in shape. These harmful bacteria grow and multiply in the deeper layers closest to the tooth.



More germs attach on the outside, forming a barrier which cuts off oxygen to them. The oxygen shortage causes germs to change and become “anaerobic”. These are now the most damaging “cavity forming” bacteria and they produce acids that take minerals out of teeth and inflame the gums.

Helpful Suggestions:

Bacteria live on your toothbrush! Be sure to frequently clean your brush with an antibacterial rinse.

Always disinfect your toothbrush before packing it to travel and avoid packing it in a plastic bag.

Never share toothbrushes.

Mouth rinsing for dental health



There are specific special mouth rinses that, along with eating Xylitol, can stop “dental time”.

The Complete Mouth Care System can prevent cavities and gum disease with daily use. You will be amazed how clean teeth feel. Your teeth and gums will be protected. Used regularly you can heal early cavities and strengthen teeth while you sleep.

The Complete Mouth Care System

This is a great way for teenagers and adults to strengthen their teeth. The secret is to use special rinses in the right order.

Your teeth will feel really clean and shiny. In a short time people will tell you how shiny and strong your teeth look.

Always clean your teeth before bed (since most tooth damage happens when you are sleeping) and again in the morning.

STEP ONE

pH Balancing Rinse

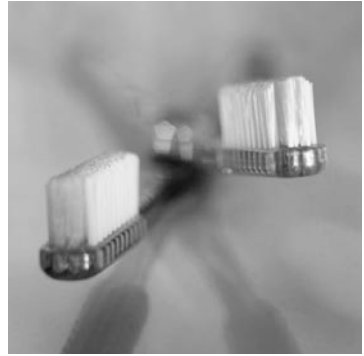
It is important only to brush your teeth in a neutral pH or alkaline mouth. A balancing rinse prepares your teeth for brushing. If you brush your teeth while you have an acidic mouth your teeth are soft and are more likely to be damaged by the abrasiveness of the toothpaste.

A pH balancing rinse can also help to loosen food particles, clean the mouth and gently remove light staining, whitening your teeth.

STEP TWO

Brushing

Brush your teeth thoroughly. Don't forget your front teeth (at gum level). People often "turn their wrist" as they brush and forget these teeth. If you avoid these teeth each day you will have problems here.



Many people open too wide (making it impossible to clean back upper molars). Brush inside lower teeth first and the outside later.

Take care to brush the gum on the inside of back molars (along the side of your tongue). Brushing can make gums bleed, but this is part of the healing process. (Gently brush the area that bleeds, rather than avoiding it.) Remember to disinfect your toothbrush (after brushing) by dipping it in an antiseptic rinse.



Choice of brush:

It is best to use a soft bristle brush to avoid gum damage during brushing. Choose a brush with a head that fits the size of your mouth. Use a smaller brush head for children and anyone with a smaller mouth.

Choice of toothpaste:

With so many choices available today it is hard to know which is best for you. The recommended choice is a basic fluoride toothpaste. You should not worry about whitening your teeth or freshening your breath with your toothpaste.

STEP THREE

Power Wash

Rinse your mouth with an antibacterial rinse to kill bacteria. Don't worry if this rinse contains alcohol or is acidic, you will be rinsing it off your teeth in the next step. Again simple is better, avoid plaque and tartar control products. The important thing in this step is to kill the bacteria.

STEP FOUR

Fluoride Rinse

Protect with a fluoride rinse. Keep the fluoride rinse on your teeth as long as possible. The fluoride is what helps to remineralize your teeth and strengthen them. It is especially important to rinse before bed, so your teeth are getting stronger while you sleep. Be careful in choosing the strength of fluoride rinse; a more concentrated fluoride rinse is not better.

The fluoride rinse should be the last thing you do before bed.

IN BETWEEN

The Power of Xylitol

Protect your teeth all day with Xylitol. After eating or drinking anything you should eat Xylitol to bring your mouth pH back into the safe zone.

The Complete Mouth Care System will strengthen and help protect your teeth, but as soon as you eat or drink anything you need added protection. The more acidic or dryer your mouth is the more protection you need. There is a synergy between Fluoride and Xylitol, they work in harmony to improve your teeth.

To learn more visit www.zellies.com.

The Complete Mouth Care System is explained along with the recommended brands to use.

Bleaching and whitening products

Bleaching may seem a harmless thing to do and there are many tempting products on the grocery shelves. There is great demand for bleaching and little research on the subject.

It may be best to have bleaching done by a professional. If you do bleach your teeth, know the facts.

Here are some important facts:



Hydrogen peroxide is in most bleaching products and can damage gums so quickly and so badly that the gums may never grow back normally again.



When gums are damaged they shrink back and expose areas of the root. Not only does this make teeth sensitive, but it has an “aging” effect, making you look years older.

When gums shrink back they leave dark, empty areas between teeth which are not attractive and where food can get stuck.

Hydrogen peroxide appears to be a co-carcinogen. That means that it can “aggravate” the chance of getting cancer. This would be important for people who smoke or who have a concern about oral cancer.

Rinses containing hydrogen peroxide and home bleaching kits may be the most dangerous.

If you are going to bleach your teeth, remember:

Do not allow hydrogen peroxide to touch your gums. Research shows that inside a tooth is inflamed by bleaching. Teeth show inflammation for two to eight weeks.

Young teeth may be more damaged since the living part is closer to the outside of the tooth.

Remember: fillings will not beach. If your fillings are old and “leaky” the bleaching solution can get inside your tooth and will kill the nerve.

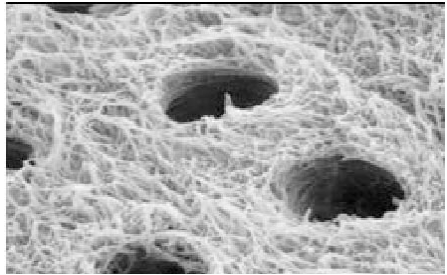
Other facts:

Tooth enamel is porous like a sponge but it is normally protected by a protein covering. The acids in bleaching agents dissolve this layer and then enter the porous enamel to bleach out stains.

Bleaching can leave the tooth porous and even more vulnerable to staining.

Tooth sensitivity is very common and seen in two out of three patients.

Bleaching may permanently damage enamel and long term effects on your teeth are unknown.



Q and A

Q: Is Xylitol safe? What is a safe dose?

A: Xylitol has been safely used for diabetics for over 100 years. It's recommended to eat at least 6 to 10 grams daily. Xylitol comes from natural sources, has a low glycemic index and you can safely eat 50 to 100 grams a day.

Q: How often should I use xylitol?

A: 6 grams of xylitol each day has been shown to eliminate harmful bacteria in about 5 weeks. Eat xylitol when your mouth is dry, and to protect your teeth after eating and drinking to maintain a neutral pH.

Are all “sugar free” products good for teeth?

A: Look at the ingredient label. Products containing sorbitol, manitol or maltitol may cause gastric problems at low dosage. Products containing sorbitol may actually increase the numbers of bad bacteria in your mouth . Test your mouth pH level following sugar free drinks, many are very acidic. Products sweetened with 100% Xylitol are by far the best for your health.

How do I choose the right oral care products?

A: Simple and chemical free is best. Try to avoid the regular use of products that contain whitening, plaque control or tartar control ingredients. These products may have strange chemistry or be very acidic.

What if I don't want to use a fluoride rinse?

A: Anyone who is experiencing brittle teeth, fillings or other dental work will benefit from a fluoride rinse which will build and strengthen teeth.

What age can children start the Complete Mouthcare Program?

A: Xylitol is perfectly safe for all ages, including babies. Water sweetened with Xylitol can be wiped on teeth or put in a bottle to protect erupting teeth. Xylitol gum and mints are a great way to make sure older children get their 6 grams a day.

As far as rinses are concerned, it is recommended that children around age 6 should begin to protect their new adult teeth with a Fluoride rinse. It is important that the child be able to rinse and spit.

Should my teenager use the program?

A: This is a critical time to take care of their teeth. Teenagers are prone to dry mouth, bad breath, gum disease and cavities. Xylitol and the complete mouth care system will protect their teeth and even freshen their breath. At the very least your teenager should rinse with Fluoride before bed and eat Xylitol after meals and snacks.

When do I finish using the program?

A: If you want to avoid soft teeth, sensitivity, brittle teeth, receding gums, cavities and bad breath, you will want to use the program for life. Your younger looking and healthy smile is your encouragement and reward.