Acidic Drinks and Tooth Enamel Erosion | Core Dental

Canonical: https://www.coredental.com.au/acid-attack-the-effects-of-acidic-drinks-on-tooth-enamel/

Details:

Acidic drinks such as lemon water, soda water, fruit juice, soft drink and wine can wear away tooth enamel, particularly when you sip them through the day. Enamel starts to break down when the pH in the mouth falls below about 5.5, and once enamel is lost it does not grow back. At Core Dental we encourage you to enjoy the drinks you like in moderation, keep them to mealtimes where you can, and see your dentist if you notice sensitivity or yellowing.

What is acid erosion?

Acid erosion is the gradual loss of tooth enamel caused by acids that do not come from bacteria in plaque. Enamel is the hard outer layer of each tooth. When it is exposed to strong acids again and again, it starts to soften and wear. Underneath enamel sits dentine, which is naturally yellow, so people with enamel loss can notice their teeth looking more yellow and feeling sensitive.

What pH level starts to damage enamel?

pH is a scale that shows how acidic something is, and the lower the number, the more acidic the liquid. Enamel begins to break down when the pH of the saliva in the mouth falls below 5.5.

Some everyday drinks sit well below that point:

Carbonic acid, the acid in soda water, has a pH of about 3 to 4.

Lemon juice has a pH of about 3.

Because both are acidic enough to soften enamel, they can contribute to erosion when you are exposed to them often.

Which drinks can put your enamel at risk?

Lemon water, soda water and mineral water with added acids, fruit juice, soft drinks, energy drinks and wine can all be acidic. Citrus fruit and mineral water can form part of a healthy diet, and plain mineral water contains no sugar, but any acid in these drinks is easy to forget. The risk grows with how often and how long your teeth are in contact with acid.

What happens when enamel wears away?

As enamel thins, the dentine beneath is exposed. People may notice:

teeth that look yellower

sensitivity to hot and cold

discomfort with foods and drinks such as ice cream or cold beverages

Enamel does not regenerate, so prevention matters. These symptoms can also have other causes, so an examination is the way to find out what is happening in your mouth.

Do you have to give up lemon water and soda water?

No. Moderation and frequency are the two keys. A glass of soda water or lemon water with an evening meal is generally low risk. Sipping on acidic drinks all day gives your mouth no chance to neutralise the acid, and that repeated exposure is what causes damage.

Ideas that may help:

keep acidic drinks to mealtimes rather than sipping through the day

drink water alongside or afterwards

ask your dentist whether a straw suits you

ask your dentist or hygienist about when to brush after an acidic drink, as brushing straight away may not suit softened enamel

What can you do if you think you have acid erosion?

Prevention is the focus, but if you think you may already have erosion or sensitivity, book an examination. Your dentist can look at the wear on your teeth, talk through your diet and daily habits, and explain suitable options. Depending on your situation, treatment can reduce sensitivity and improve the appearance of your teeth, and may include fillings and restorations or cosmetic options . Your dental hygiene appointments are another chance to talk about prevention.

Acid from the stomach, not just the glass

A page about acidic drinks can leave the impression that erosion is a diet problem and nothing else. It is not, and the other cause is the one people are least likely to connect to their teeth.

The Victorian Department of Health puts the two sources side by side: dental erosion is "the loss of the surface of your teeth due to acids you eat or drink, or acids coming up from your stomach". On the second of those it is blunt about the strength involved. "The stomach contains many strong acids that are used to digest food. Vomiting and reflux can cause these stomach acids to enter your mouth." And: "Stomach acids are very strong and can cause substantial damage to the teeth."

The Department then names the situations where this happens, and the list is broader than most people expect: "people with bulimia, morning sickness or reflux (which can sometimes occur without you knowing) may experience this problem".

That parenthesis is the part worth sitting with. Reflux can be silent. Someone can have no heartburn, no sense of anything coming up, and still be bathing their teeth in stomach acid overnight. It is one of the reasons a dentist may ask about digestion when the thing you came in about was a sensitive tooth — the pattern of wear often sits on surfaces that diet alone does not explain.

The Department's advice here is not dental. It is to "seek medical treatment for management of reflux or vomiting", because the dental treatment that follows repairs damage rather than stopping it. If the acid keeps arriving, so does the wear.

A note on morning sickness. Pregnancy is on that list for a straightforward reason, and it is temporary — but a few months of repeated vomiting is long enough to matter. The same neutralising steps below apply, and the one to avoid is brushing immediately afterwards.

Sources: Better Health Channel (Victorian Department of Health), Dental erosion, betterhealth.vic.gov.au (reviewed 22 October 2025). Accessed 6 November 2026.

What to do in the thirty minutes after acid

Most erosion advice is about what to cut out. The more useful advice is about what to do in the half hour afterwards, because that is where an ordinary habit can make the damage worse.

Do not brush straight away. The Department's instruction is specific: "Make sure you have neutralised any acid before brushing your teeth. Wait at least 30 minutes after the acid exposure before brushing your teeth, to allow your saliva to neutralise the acid in your mouth."

The reason sits in a sentence from the same page: acid "can also soften the tooth surface, making it easier for it to be worn away by abrasion or teeth grinding. This is known as acid wear or erosive tooth wear." Brushing a softened surface scrubs away what the acid has loosened. The brush is not the villain — the timing is.

What to do instead, in the Department's own words. Following exposure to strong acids, you can help to neutralise the acid by:

"rinsing your mouth with water or a fluoride mouth rinse"

"rinsing your mouth with a sodium bicarbonate (baking soda) mouth rinse (one teaspoon of baking soda in a glass of water)"

"consuming dairy products, such as unsweetened milk and cheese"

Then brush, gently, later. The Department's wear-minimising tips are to "use a soft-bristled toothbrush with fluoride toothpaste" and to "brush your teeth gently, but thoroughly" — and, for anyone who grinds, to "wear a custom-made dental splint if you grind your teeth at night", since grinding and softened enamel compound each other.

Reading the label, not just the drink. The Department also points at something invisible in a taste test: "Food acids are often added to processed foods and drinks." Its method for finding them is the ingredient list. "The ingredients are listed in order of their amount in the food, with the most being listed first. The closer any food acids are to the start of the list, the more acid the product will have in it." It names three to watch for in particular: "food acids 330 (citric acid), 331 (sodium citrate), and 338 (phosphoric acid) which are especially bad for teeth."

One more product note. On toothpastes and rinses, the Department suggests you "consider using dental products containing 'stannous fluoride' [tin (II) fluoride]", and states the basis carefully: "Recent studies suggest stannous fluoride is effective in reducing tooth erosion." Suggests, and reducing — not prevents. Worth asking about, not worth treating as a fix.

What saliva can and cannot repair

Saliva does more against erosion than any product, and there is one thing it cannot do at all. Both halves matter, because the first is why early erosion is worth catching and the second is why late erosion gets expensive.

What it does: "Saliva can wash acids out of your mouth into the stomach, it can neutralise acid, and it can repair the early stages of erosion."

What it cannot do: "However, it cannot grow back the lost tooth surface."

So the window is real but it closes. The Department describes where things go from there: "Dental erosion, if untreated, can lead to the progressive loss of the surface of the tooth. The loss of tooth structure can require complex and lengthy dental treatment involving fillings, veneers, crowns and potentially root canal treatment." And on treatment: "If your teeth have had dental erosion, the lost surface of the tooth may need to be replaced with fillings or crowns."

Dry mouth makes all of it harder. "A reduced flow of saliva (dry mouth) can increase your risk of dental erosion." The causes the Department lists are medications, which "can affect your salivary glands and reduce the amount of saliva they produce"; dehydration, including from "excessive intake of caffeine found in coffee, tea, chocolate and cola drinks"; and "some specific diseases or conditions", with Sjogren's disease named as an example. Its advice is to "stay well hydrated, as this improves your

saliva", and that "if you have a constant dry mouth, you may be at increased risk of dental erosion".

Why the check-up interval is the lever. The Department ties erosion care to timing rather than to any product: "It is important to visit your dental professional every six to twelve months so that they can identify dental erosion early, determine the cause, and then work with you to prevent further dental erosion and tooth wear."

Identify, determine the cause, prevent further. Note the order. Finding the wear is the easy part; the question that changes the outcome is what is causing it, and that is a conversation about drinks, reflux, medications and grinding rather than a treatment plan on its own.

Sources: Better Health Channel (Victorian Department of Health), Dental erosion, betterhealth.vic.gov.au (reviewed 22 October 2025); Tooth decay, betterhealth.vic.gov.au (reviewed 28 June 2025). Both accessed 6 November 2026.

Frequently asked questions

Can damaged tooth enamel grow back?

No. Enamel cannot regenerate once it is lost, which is why prevention matters. Your dentist can explain ways to protect the enamel you have and discuss treatment if wear has already occurred.

Is soda water bad for your teeth?

Soda water contains carbonic acid with a pH of about 3 to 4, which is below the 5.5 level where enamel begins to break down. An occasional glass with a meal is generally low risk, while sipping it all day is more of a concern.

Is lemon water bad for your teeth?

Lemon juice has a pH of about 3, so lemon water can be acidic enough to soften enamel when you drink it often. Having it occasionally, perhaps with a meal, is generally quite safe compared with sipping it all day.

Why do my teeth look yellow and feel sensitive?

When enamel wears away, the yellow dentine underneath is exposed, which can make teeth look yellower and feel sensitive to hot and cold. Other conditions can cause similar symptoms, so please have an examination to find the cause.

Can a dentist help with acid erosion?

Yes. At Core Dental our dentists can examine your teeth, talk about your habits and diet, and explain options that may reduce sensitivity and improve how your teeth look. Treatment depends on your examination.

Should I brush straight after a fizzy drink?

No. The Victorian Department of Health advises the opposite: "Wait at least 30 minutes after the acid exposure before brushing your teeth, to allow your saliva to neutralise the acid in your mouth." Acid softens the tooth surface, and brushing a softened surface wears it away faster. Rinse with water instead and brush later.

Can reflux damage my teeth without me knowing?

It can. The Department lists reflux among the causes of erosion and adds that it "can sometimes occur without you knowing". Stomach acids, it says, "are very strong and can cause substantial damage to the teeth". If your wear pattern does not match your diet, that is worth raising with both a dentist and a doctor — the Department's advice is to "seek medical treatment for management of reflux or vomiting", because dental repair does not stop the cause.

Does morning sickness affect teeth?

Morning sickness is on the Department's list of situations where stomach acid reaches the mouth, alongside reflux and bulimia. The practical step is the same as for any acid exposure: rinse rather than brush immediately, and wait at least 30 minutes before brushing.

Which food additives should I look out for on a label?

The Department names three in particular: "food acids 330 (citric acid), 331 (sodium citrate), and 338 (phosphoric acid) which are especially bad for teeth". It also gives a way to judge how much is in there — ingredients are listed in order of amount, so "the closer any food acids are to the start of the list, the more acid the product will have in it".

Is there anything that neutralises acid after a meal?

The Department lists three options: rinsing with water or a fluoride mouth rinse; a sodium bicarbonate rinse, which it describes as "one teaspoon of baking soda in a glass of water"; and "consuming dairy products, such as unsweetened milk and cheese".

Can saliva repair erosion?

Partly, and only early on. Saliva "can repair the early stages of erosion", but the Department is explicit about the limit: "However, it cannot grow back the lost tooth surface." Once surface is gone it is replaced, not regrown — with fillings or crowns, and in advanced cases the Department mentions veneers and potentially root canal treatment.

Does dry mouth make erosion worse?

Yes. "A reduced flow of saliva (dry mouth) can increase your risk of dental erosion." The causes the Department lists include some medications, dehydration — including from "excessive intake of caffeine found in coffee, tea, chocolate and cola drinks" — and conditions affecting the saliva glands such as Sjogren's disease. A constant dry mouth is worth having looked at rather than managed with water alone.

Does grinding make acid damage worse?

The two work together. Acid "can also soften the tooth surface, making it easier for it to be worn away by abrasion or teeth grinding", which the Department calls acid wear or erosive tooth wear. Among its tips for minimising wear is to "wear a custom-made dental splint if you grind your teeth at night".

How often should erosion be checked?

The Department's interval for this is "every six to twelve months", and it says what the visit is for: to "identify dental erosion early, determine the cause, and then work with you to prevent further dental erosion and tooth wear". How often suits you is a question for your own dentist rather than a fixed rule.

Related services and further reading

General dentistry

Dental hygiene

Dental checkup

Fillings and restorations

4 things to avoid if you have sensitive teeth

Can you reverse tooth decay?

How vitamins and minerals affect your teeth

Cleaning between the teeth

How can we help?

If you are noticing sensitivity or changes in your teeth, we can help at any of our nine practices. Call 13 13 16 or book online for a dental checkup , or ask about emergency dentistry if you have severe pain or swelling. Call 000 for life-threatening symptoms.

Core Dental at a glance

Nine Core Dental clinics across Melbourne: Southbank, South Melbourne, Caroline Springs, Carrum Downs, Epping, Wyndham, Berwick, Bayside and Glenferrie.

Open six days a week: Monday to Friday 8.00am to 6.00pm and Saturday mornings.

Interest-free payment plans, HICAPS on-site claiming and bulk billing for eligible children under the Child Dental Benefits Schedule.

Call 13 13 16 or book online.

Contact Core Dental

Phone	13 13 16
Booking	Online via coredental.com.au, or call 13 13 16
Hours	Monday to Friday 8.00am to 6.00pm, Saturday 8.00am to 1.30pm (Bayside Saturday 8.30am to 1.30pm), Sunday closed
Clinics	Southbank , South Melbourne , Caroline Springs , Carrum Downs , Epping , Wyndham , Berwick , Bayside , Glenferrie

This article is general in nature and does not replace advice from a registered dental practitioner who has examined you. Results, recovery times and potential risks vary for each individual. Seek advice from a qualified, AHPRA-registered practitioner before proceeding.

Do acidic drinks wear away tooth enamel?

Yes. Drinks such as lemon water, soda water, fruit juice, soft drink and wine are acidic and can wear away enamel when they are sipped often. Core Dental recommends moderation and keeping them to mealtimes.

At what pH does tooth enamel start to break down?

Tooth enamel starts to break down when the pH in the mouth falls below about 5.5. Soda water has a pH of about 3 to 4 and lemon juice about 3, both well below that level.

Does tooth enamel regrow once it is lost?

No, enamel does not regrow once it has been worn away. Core Dental's dentists focus on prevention and can discuss treatment if enamel loss has already caused sensitivity or changed how your teeth look.

Why does eroded enamel cause sensitivity?

When enamel wears away, the dentine underneath is exposed. Dentine is naturally yellow and reacts to hot and cold, so teeth can look yellower and feel sensitive to ice cream or cold drinks.

How often can I drink lemon water or soda water?

An occasional glass, such as with an evening meal, is generally quite safe. Sipping acidic drinks throughout the day is the main concern because your mouth cannot neutralise the acid between sips.

Who can assess acid erosion at Core Dental?

Our dentists at any of our nine Core Dental clinics can examine your teeth for enamel wear, talk through your diet and habits, and explain options. Call 13 13 16 or book online for an appointment.

Can Core Dental treat sensitivity caused by acid erosion?

Our dentists can discuss treatment that may reduce sensitivity and improve the appearance of your teeth, depending on your examination. Results vary for each individual, so an assessment comes first.