



Perio & Diabetes

Recommendations for patients and the public



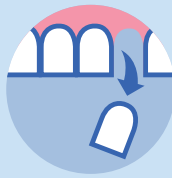
Periodontitis & diabetes mellitus at a glance



Diabetes and periodontitis are **chronic non-communicable diseases**, whose prevalence increases with age.



There is a **bidirectional (two-way) relationship** between periodontitis and diabetes.



If untreated, periodontitis causes **tooth loss**.



Periodontitis is **easily diagnosed** and **clinically controlled**. With regular high-quality supportive treatment, clinical results can be maintained.



People with sub-optimally controlled diabetes (both type 1 and 2) suffer from increased periodontal **inflammation/destruction/breakdown**.



People with periodontitis **have an elevated risk** of pre-diabetes or developing type 2 diabetes.



People with both diabetes and periodontitis have a **greater likelihood of more severe medical complications** (affecting eyes and kidneys) **and even death** than people with diabetes alone.



Periodontal treatment in people with diabetes **results in a significant reduction in glycated haemoglobin (HbA1c) levels** three months after periodontal therapy, with emerging evidence available also for six months.



Early diagnosis, prevention, and co-management (dentists and physicians) of both diabetes and periodontitis is of utmost importance.



Successful periodontal treatment has a **clinically significant effect on general health** and should have a place in the treatment of people with diabetes.



Recommendations for patients and the public

Gum disease and diabetes are connected

Periodontal (gum) diseases and diabetes are both chronic diseases that become more common as people get older. About 80% of people aged over 35 suffer from some kind of gum complaint and about 7% of the population suffers from diabetes, although in many cases this goes undiagnosed.

There are strong associations between the two diseases. Indeed, there is a two-way (bidirectional) relationship between periodontitis (a severe form of periodontal disease) and diabetes. This means that people with periodontitis have a higher risk of diabetes and patients with diabetes are three times more likely to develop periodontitis.

On top of that, controlling diabetes is more complicated when a patient also has periodontitis, and people who have both diabetes and periodontitis are at greater risk of suffering from certain severe medical complications – including heart disease, chronic kidney disease, and retinopathy – than people who have diabetes alone.

The good news is that early diagnosis, prevention, and the co-management of both conditions – with

doctors and dentists working together – can make a huge difference.

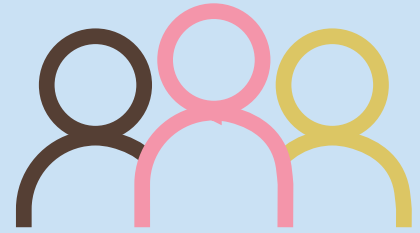
Periodontitis is easy to diagnose and control, and successful periodontal treatment reduces blood-sugar levels and may mean that diabetes patients can avoid having to take extra medication.

People with diabetes are advised to make an appointment with a dentist and provide him or her with information about their diabetes control and medication. All patients with newly diagnosed diabetes should receive a periodontal examination.

Patients with diabetes or periodontitis will need lifelong professional oral care and should have annual periodontal check-ups. Your dentist and dental hygienist will be able to provide you with a personal care programme.

At home, you should brush your teeth for a minimum of two minutes twice a day and clean in between teeth with interdental brushes (or floss) once a day. A healthy lifestyle will also help beat both diabetes and periodontal disease.

Periodontitis and **diabetes mellitus** are **both widespread conditions** among the **world's population**



Diabetes mellitus
Approx. 415 million people

Prevalence:
constantly rising



Periodontitis
Western countries, more than 50% of the population

Prevalence:
750 million people around the world with **severe forms**

Diabetes general facts

- ✓ Diabetes is now a global epidemic.
- ✓ In 2017, diabetes caused an estimated 4 million deaths worldwide.
- ✓ There are an estimated 212 million people with undiagnosed diabetes.



Periodontitis general facts

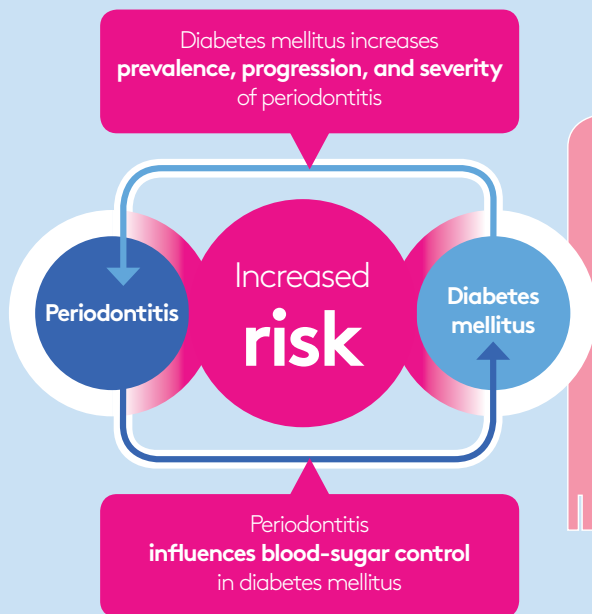
- ✓ Periodontal diseases, i.e. gingivitis and periodontitis, are the most prevalent inflammatory diseases of mankind.
- ✓ If untreated, periodontitis causes tooth loss.
- ✓ If left untreated, people with periodontitis have poorer nutrition, speech, and self-confidence and a lower quality of life.
- ✓ Periodontitis is associated with a higher level of atherosclerosis, endothelial dysfunction, and higher levels of systemic inflammation.
- ✓ Periodontitis is easily diagnosed and clinically controlled; with regular high-quality supportive treatment, clinical results can be maintained.

Gum disease requires lifelong attention and professional care.

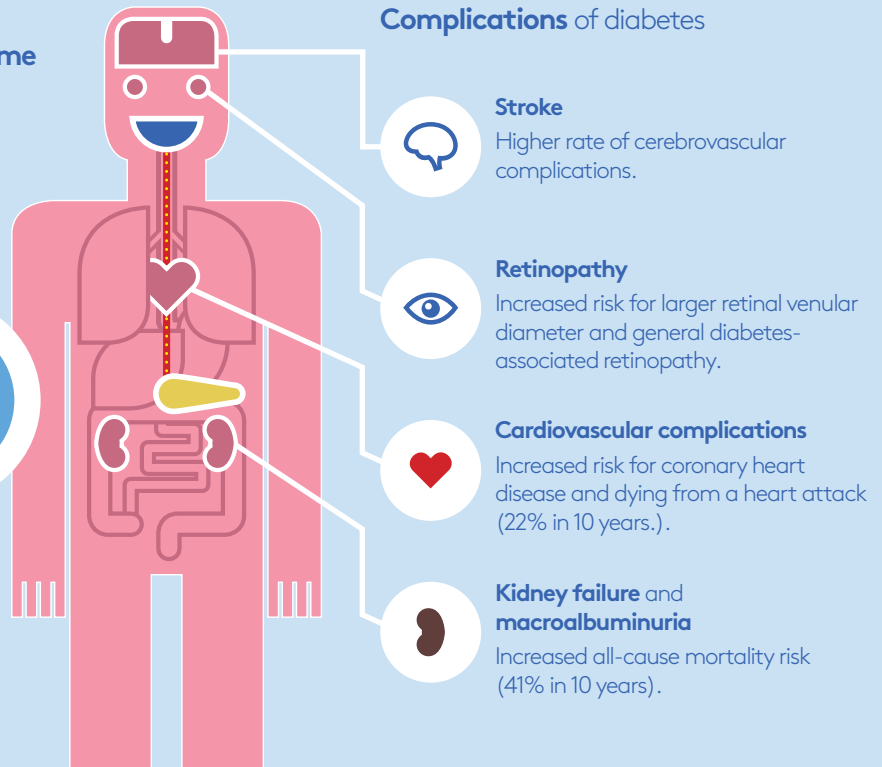
Visit your dentist!

Periodontitis and diabetes mellitus, a **two-way relationship**

What happens when you have **periodontitis** and **diabetes at the same time**



Complications of diabetes



Evidence of associations between both diseases

Impact of diabetes on periodontitis

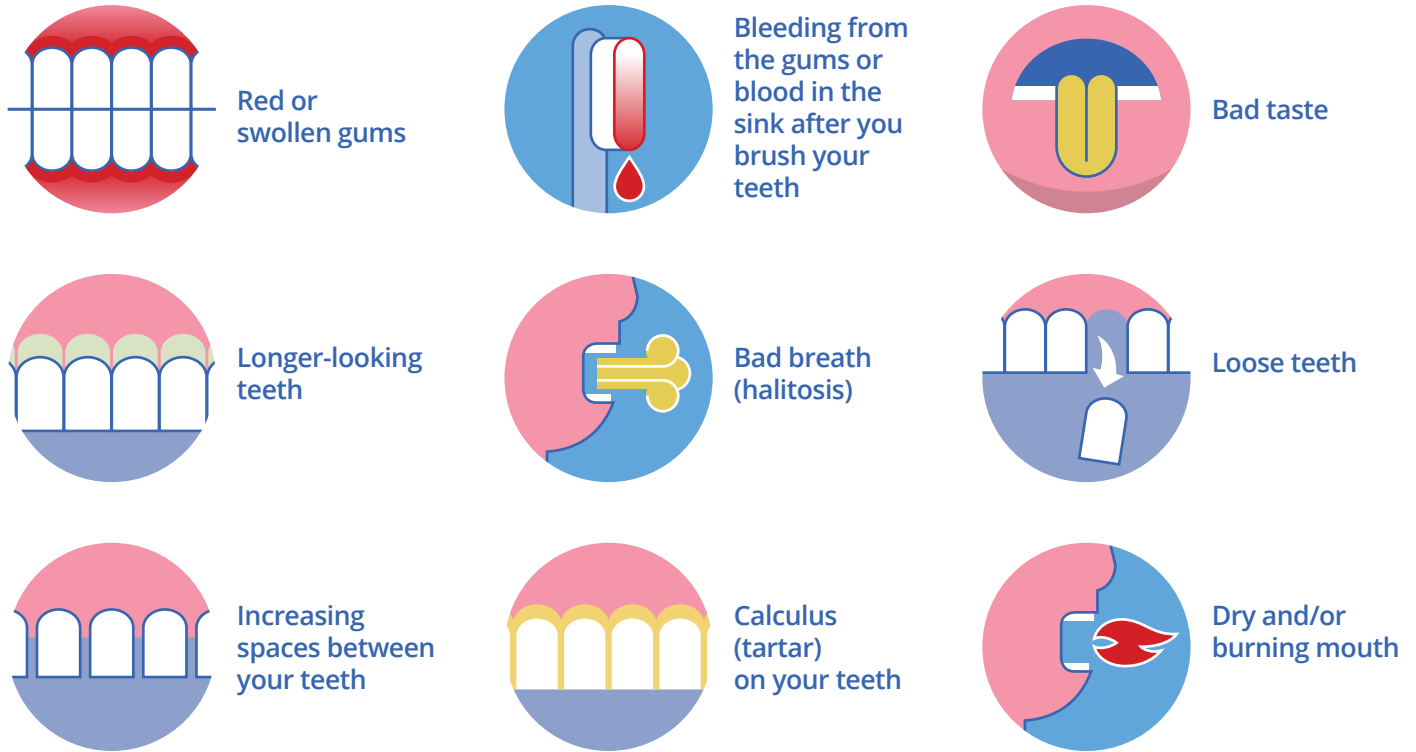
- ✓ Hyperglycaemia is associated with an increased risk and severity of periodontitis.
- ✓ There is a dose-dependent relationship between glycaemia and periodontal destruction.
- ✓ Patients with diabetes are three times more likely to develop gum disease.
- ✓ The control of diabetes is more complicated when periodontitis is also present in a patient (co-morbidity).
- ✓ People with diabetes who have good glycaemic control experience no more periodontitis than people without diabetes.

Impact of periodontitis on diabetes

- ✓ Healthy patients with periodontitis exhibit a higher chance of developing pre-diabetes and diabetes.
- ✓ People with severe periodontitis have an increased risk of developing type 2 diabetes.
- ✓ Periodontitis is significantly associated with poorer glycaemic control (HbA1C) and higher blood-glucose levels (glycaemia) both in people with diabetes and in those without the disease.
- ✓ There are higher levels of insulin resistance in people with periodontitis.
- ✓ People with periodontitis and type 1 or 2 diabetes, when compared to patients with just diabetes, have higher:
 - ocular complications (retinopathy);
 - renal complications (chronic kidney disease);
 - cardiovascular complications (heart disease, cerebrovascular events);
 - risk of mortality.

Signs and symptoms of periodontitis

Seek advice from your dental-care professional if you have the following symptoms:



How to prevent gum disease

- ✓ Seek advice from your dental-care professional twice a year.
- ✓ Brush your teeth twice a day (minimum two minutes).
- ✓ Clean in between the teeth every day: use interdental brushes – or floss if the gaps between your teeth are too tight.
- ✓ Live a healthy life (low refined sugars and high antioxidant nutrition, physical activity, reduced stress) and avoid smoking.

Benefits of periodontal therapy

- ✓ Successful periodontal therapy will arrest disease progression, stabilise bone levels, diminish symptoms, and lengthen the life expectancy of teeth.
- ✓ Successful periodontal treatment reduces circulating levels of inflammatory molecules in people with diabetes.
- ✓ In people with diabetes, periodontal care (therapy) is safe and effective.
- ✓ Periodontal therapy significantly reduces HbA1c and glycaemia both in people with diabetes and in those without the disease.
- ✓ Successful gum treatment reduces blood-sugar (HbA1c) levels and could help you avoid having to take extra medication.
- ✓ May contribute to reduced diabetes-associated morbidity and mortality.

You may think you are doing well, but you may not be **doing well enough**

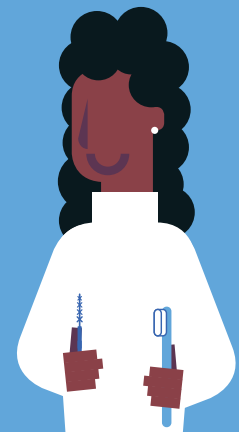
Keep your mouth and body as healthy as possible

Visit both your doctor and dentist on a regular basis



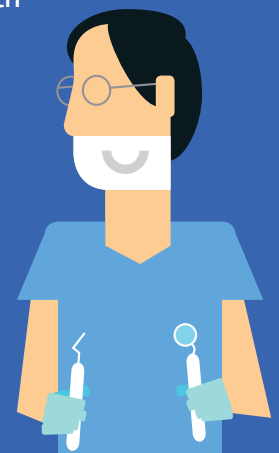
What you should do:

- Inform your dentist about the outcome of your visits to the doctor.
- Provide your dentist with an update of the results of your diabetes control and changes in medication.
- It is important to keep your mouth and body as healthy as possible with regular dental and medical care.
- If your doctor has told you that you have diabetes, you should make an appointment with a dentist.
- You should take extra care while performing your daily oral hygiene routine including a thorough interdental cleaning



What the dentist should do:

- Personalised advice will be provided by your oral-health professional.
- If you have periodontitis and diabetes, you need to be treated for your periodontitis because your diabetes may improve as a result.
- If you do not have gum disease now, you should still get regular dental check-ups as part of managing your diabetes.
- Patients with either diabetes or periodontitis need lifelong oral-care attention.



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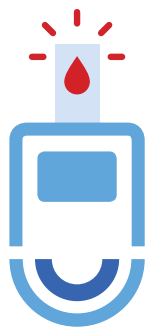
Take care of **your gums**,
control **diabetes**.



visit your doctor
regularly



visit your dentist
regularly



control your
diabetes



clean your teeth
twice a day



watch your
weight



eat healthy foods,
do not smoke

visit:

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