



Perio & Diabetes

Recommendations for medical professionals and pharmacists



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 medical-healthcare professionals and pharmacists

Periodontal 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 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 periodontal disease.

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 some severe medical complications – including cardiovascular disease, chronic kidney disease, and retinopathy – than people who have diabetes alone.

Periodontitis is a chronic non-communicable disease (NCD) that shares social determinants and risk factors with the other major NCDs of diabetes, hypertension, heart disease, and cancer.

Physicians and other medical professionals are encouraged to follow the IDF/EFP “4Rs” guidelines

(Recommend, Request, Refer, Recall). These guidelines include: providing oral-health education to all patients with diabetes, informing them of the negative impact of periodontitis on their overall health and their diabetes management, letting them know how periodontitis increases risks of diabetes complications and mortality, and explaining how successful periodontal therapy can have a positive impact on their health and well-being.

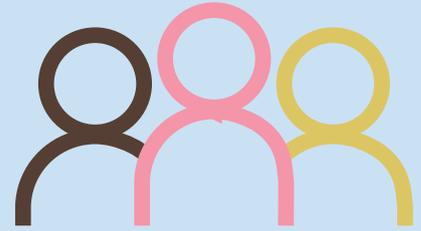
Physicians should always ask their patients about prior diagnosis of periodontal disease and about any signs or symptoms of periodontitis. They should ensure that the required periodontal care and maintenance are provided, referring patients to dentists where appropriate.

All patients with newly diagnosed diabetes mellitus should receive a periodontal examination. Patients with diabetes have an increased risk of oral fungal infections and should be informed about this and treated if required.

Physicians and dentists should collaborate in managing diabetes before any oral interventions or oral surgery.

Annual periodontal check-ups for people with diabetes are strongly recommended.

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

750

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

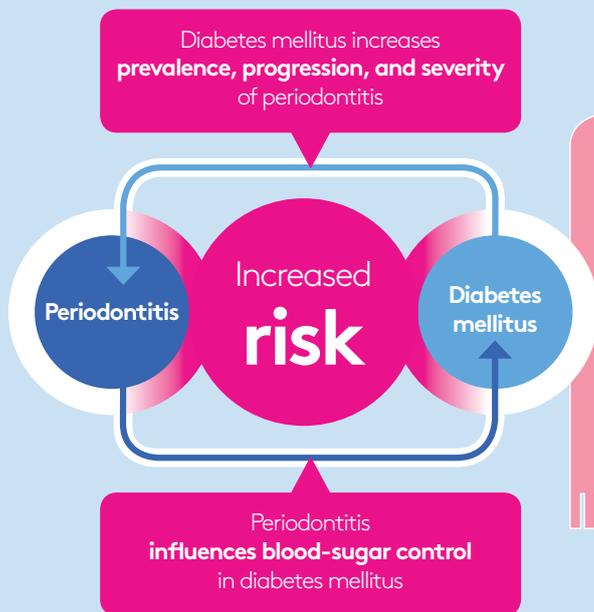
- ✓ Periodontal diseases, i.e. gingivitis and periodontitis, are the most prevalent inflammatory diseases of mankind.
- ✓ If untreated, periodontitis causes tooth loss.
- ✓ If left untreated, people with periodontitis have poorer nutrition, speech, and self-confidence and a lower quality of life.
- ✓ 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.

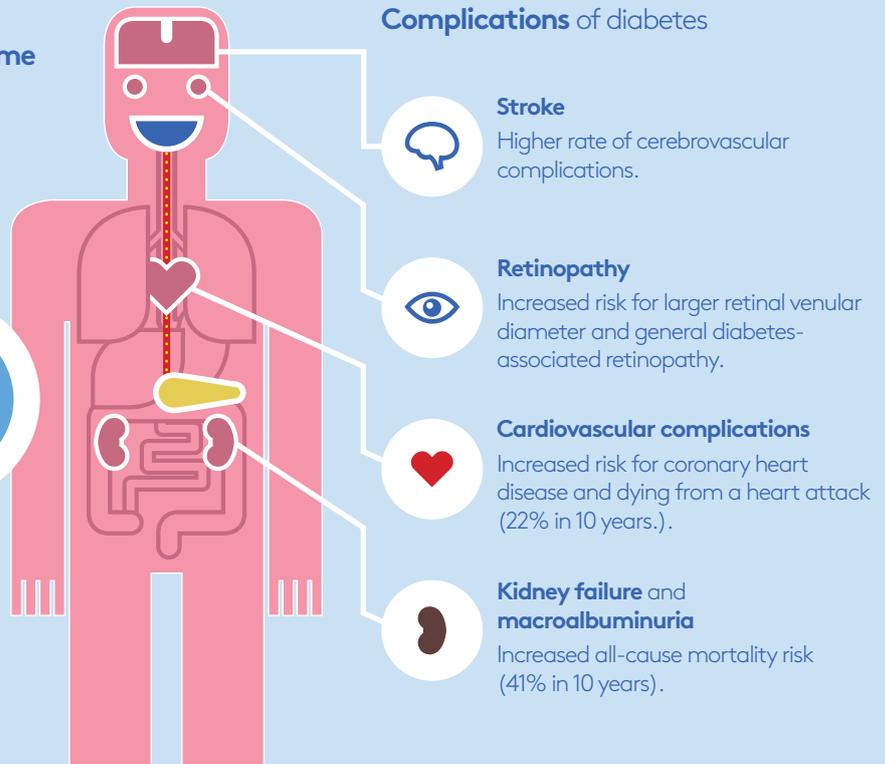
Inform your patients!

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

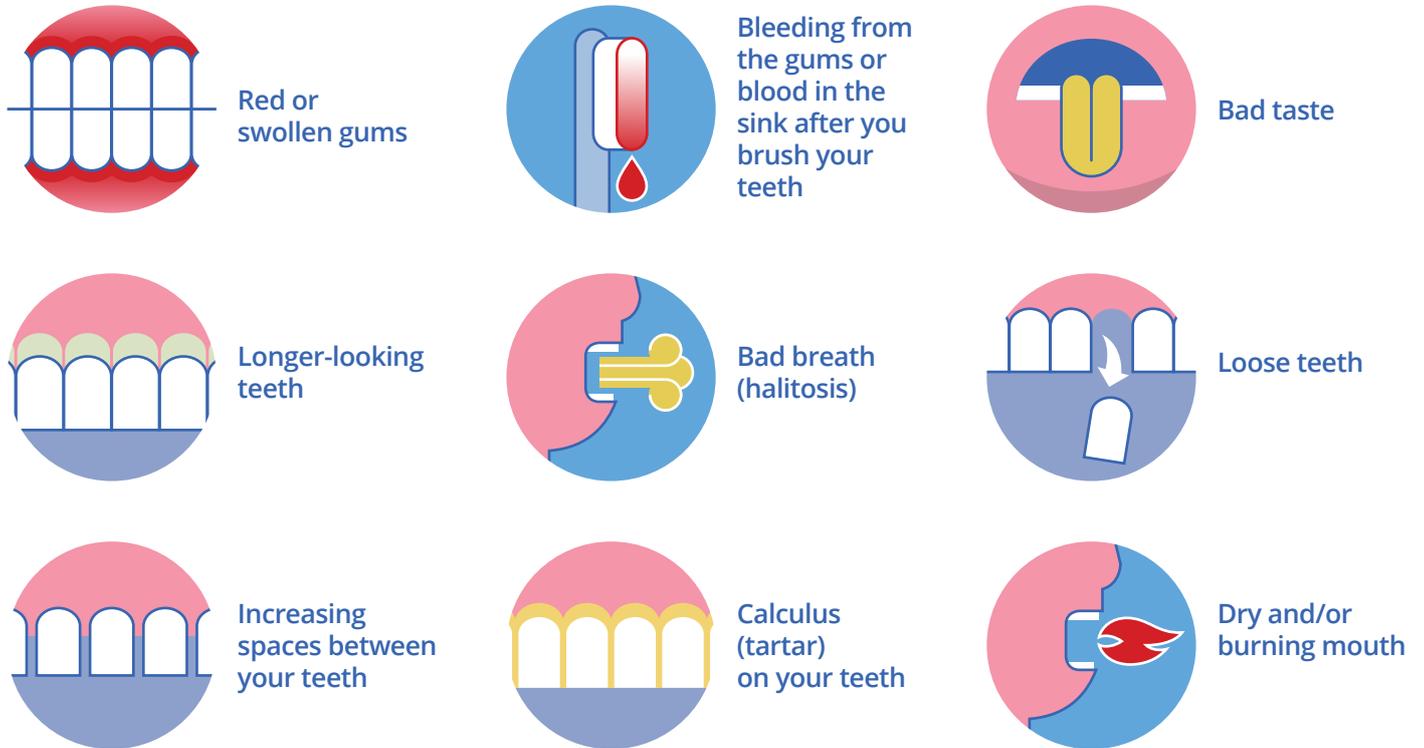
Impact of diabetes on periodontitis

- ✓ 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

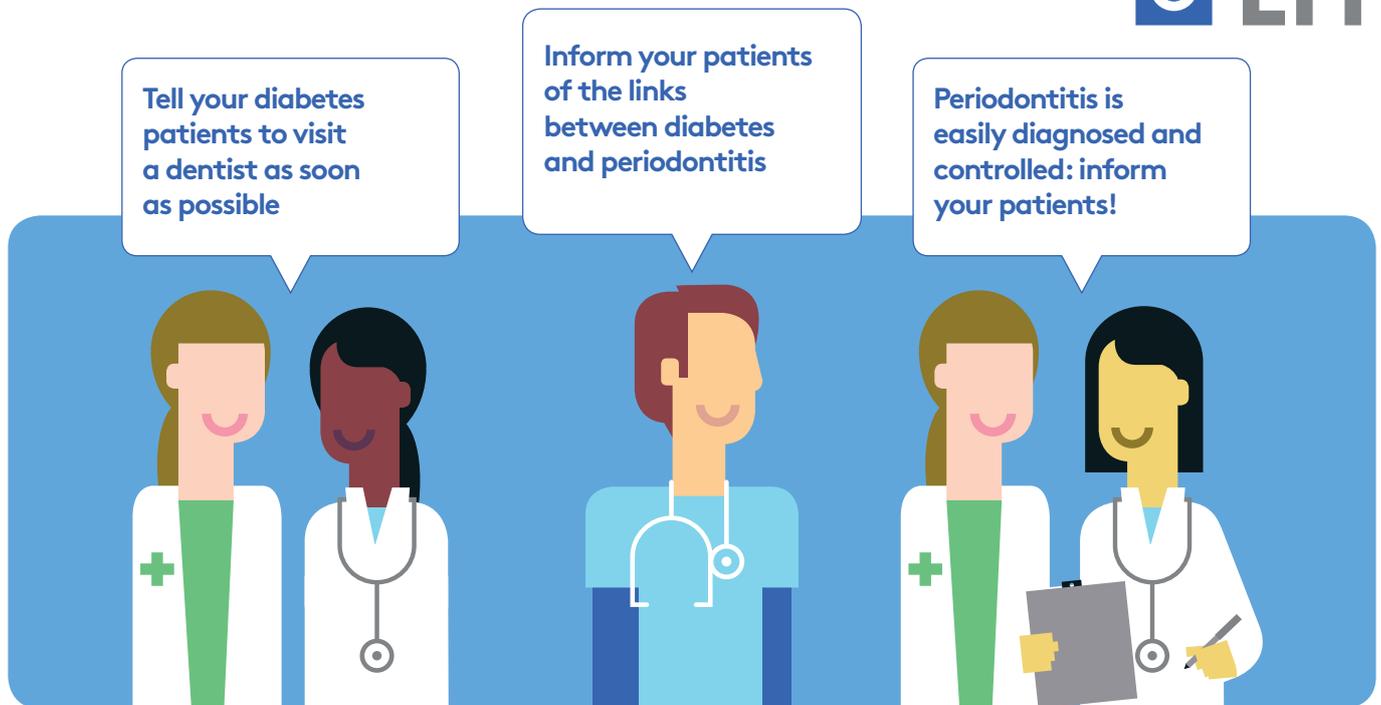


Annual periodontal check-ups are recommended for people with diabetes



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.



What you should do:

- Oral-health education, including instructions on brushing teeth and gums and on interdental cleaning, should be provided.
- All patients with diabetes should be informed about the negative impact of periodontitis on their health, diabetes management, and increased rates of complications and mortality.
- Patients should be educated about the positive impact that successful periodontal therapy can have on their health and well-being.
- Physicians should ask about prior diagnosis of periodontal disease.
- Patients should be asked about any signs or symptoms of periodontitis.
- Investigating and considering the presence of periodontal disease should be an integral part of a diabetes-care visit.
- Physicians should ensure that the required periodontal care and maintenance are provided.
- A prompt evaluation should be recommended, and the patient should be referred to a dentist.
- All patients with newly diagnosed diabetes mellitus should receive a periodontal examination as a part of the continuing management of their diabetes.
- Patients with extensive tooth loss should pursue dental rehabilitation to restore adequate mastication for a better diet.
- If dry mouth or burning mouth are an issue, patients should be given advice by their dentist.
- Patients with diabetes have an increased risk of oral fungal infections and should be informed about this and treated if needed.
- There should be a joint collaboration between physicians and dentists in managing diabetes prior to oral interventions or oral surgery.

The EFP thanks Sunstar for its support
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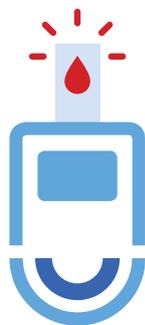
Take care of **your gums**,
control **diabetes**.



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

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