



Perio & Diabetes

Information for media



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.



Information for media

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 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 heart disease, chronic kidney disease, and retinopathy – than people who have diabetes alone.

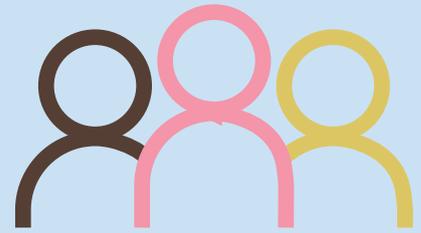
The media have a key role to play in increasing awareness among policymakers, health authorities, and the public of the association between severe gum disease, systemic inflammation, and non-communicable diseases such as diabetes.

Communicating the facts about the healthcare costs involved in periodontal diseases and diabetes and the savings implied by prevention and treatment is also important.

The fundamental message is that early diagnosis, prevention, and the co-management of both conditions – with doctors and dentists working together – can make a huge difference.

The EFP encourages and is ready to support media outlets in the dissemination of comprehensive, easy-to-understand, and high-quality information about the links between gum disease and diabetes.

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.

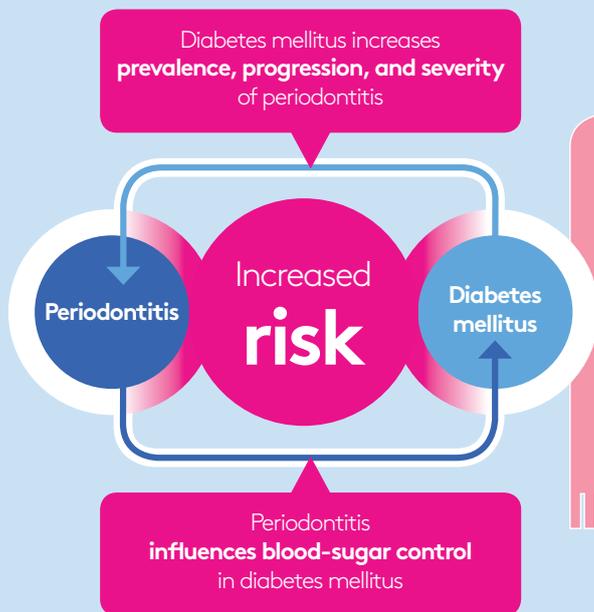
Early diagnosis and prevention of both conditions can make a huge difference!



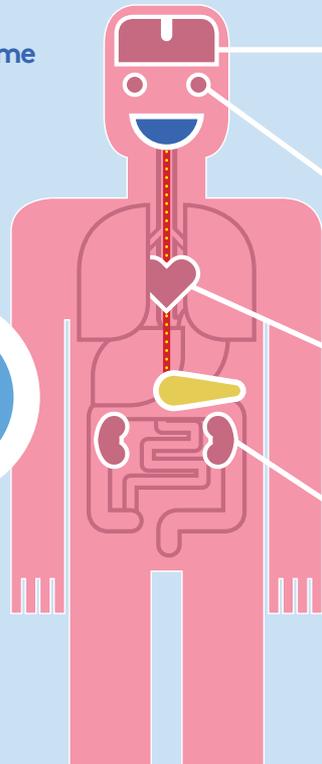
Periodontal therapy significantly reduces HbA1c and glycaemia.

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

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



Complications of diabetes



Stroke

Higher rate of cerebrovascular complications.

Retinopathy

Increased risk for larger retinal venular diameter and general diabetes-associated retinopathy.

Cardiovascular complications

Increased risk for coronary heart disease and dying from a heart attack (22% in 10 years.).

Kidney failure and macroalbuminuria

Increased all-cause mortality risk (41% in 10 years).

Evidence of associations between both diseases

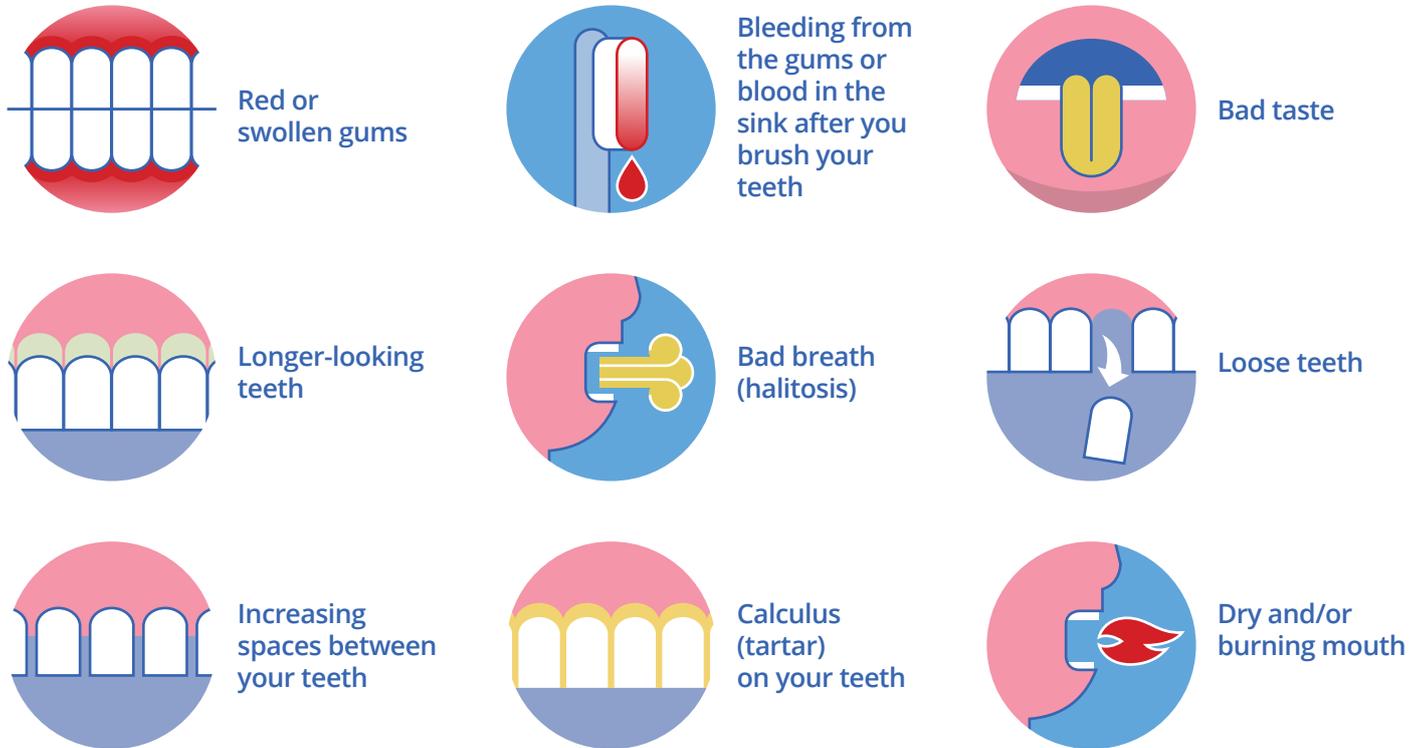
Impact of diabetes on periodontitis

- ✓ 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



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.

Further reading:

“An update of the evidence on the potential impact of periodontal therapy on diabetes outcomes,” by Phoebus Madianos and Panagiotis Koromantzos. *Journal of Clinical Periodontology*. Volume 45, issue 2, pp188-195. Published in February 2018.

<https://www.onlinelibrary.wiley.com/doi/10.1111/jcpe.12836>

“An update on the evidence for pathogenic mechanisms that may link periodontitis and diabetes,” by David Polak and Lior Shapira. *Journal of Clinical Periodontology*. Volume 45, issue 2, pp150-166. Published in February 2018.

<https://www.onlinelibrary.wiley.com/doi/10.1111/jcpe.12803>

“A systematic review and meta-analysis of epidemiologic observational evidence on the effect of periodontitis on diabetes - an update of the EFP/AAP review” by Filippo Graziani et al. *Journal of Clinical Periodontology*. Volume 45, issue 2, pp167-187. Published in February 2018.

<https://www.onlinelibrary.wiley.com/doi/10.1111/jcpe.12837>

“Scientific evidence on the links between periodontal diseases and diabetes: consensus report and guidelines of the joint workshop on periodontal diseases and diabetes by the IDF and the EFP,” by Mariano Sanz et al. *Journal of Clinical Periodontology*. Volume 45, issue 2, pp138-149. Published in February 2018.

<https://www.onlinelibrary.wiley.com/doi/10.1111/jcpe.12808>

International Diabetes Federation, *IDF Diabetes Atlas*, Eighth Edition 2017

<http://diabetesatlas.org/resources/2017-atlas.html>

Perio & Diabetes website

<http://www.efp.org/publications/projects/perioanddiabetes/index.html>

EFP dossier on periodontal disease. Updated in June 2018.

http://www.efp.org/publications/EFP_Dossier_on_Periodontal_Disease_2018.pdf

EFP institutional brochure: *Periodontal health for a better life*. Updated in June 2018.

<http://www.efp.org/aboutefp/institutionalBrochure2018.pdf>

EFP Manifesto: Perio and General Health. Updated in 2017.

http://www.efp.org/efp-manifesto/EFP_manifesto_full_version_2016.pdf

EFP News, biannual bulletin.

<http://www.efp.org/publications/newsletters/index.html>

EFP's YouTube channel.

<https://www.youtube.com/user/PerioWorkshop>

FDI Annual report 2017.

https://www.fdiworlddental.org/sites/default/files/media/resources/2017-fdi_annual_report.pdf

Journal of Clinical Periodontology, EFP official scientific publication. Published monthly.

Impact factor: 4.046

<https://onlinelibrary.wiley.com/journal/1600051x>

JCP Digest, research summary, 12 issues per year.

<http://www.efp.org/publications/jcp-digest/index.php>

Perio Focus green paper. Published in June 2018.

<http://www.efp.org/publications/perio-focus-green-paper.pdf>

Perio Insight, quarterly magazine.

<http://www.efp.org/publications/perioinsight/index.html>

Proceedings of World Workshop 2017 on the classification of periodontal and peri-implant diseases and conditions. *Journal of Clinical Periodontology*. Volume 45, issue S20. Published in June 2018.

<https://www.onlinelibrary.wiley.com/toc/1600051x/2018/45/S20>

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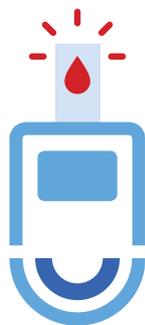
Take care of **your gums**,
control **diabetes**.



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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