

Why Treating Oral Infections Matters?

The link between oral infections and diabetes

A well-established body of research shows a two-way relationship between oral infections — gum disease and infected or root-canal-treated teeth — and diabetes. Here's a short summary of what the science shows.

Gum disease and diabetes: a two-way street

Diabetes increases both the risk and severity of gum disease (periodontitis), and periodontitis in turn makes blood sugar harder to control. Chronic gum infection raises inflammatory markers such as CRP and IL-6, which promote insulin resistance — creating a cycle where each condition can worsen the other.

Root canal infections behave the same way

Periapical lesions — infections at a tooth's root tip, whether the tooth is untreated or root-canal treated — are significantly more common in people with type 2 diabetes and tend to heal more poorly after treatment. This mirrors what's seen with gum disease and points to the same mechanism: chronic, low-grade oral infection adding to the body's overall inflammatory and glycemic burden.

What the research shows

1. Treating gum disease measurably improves blood sugar control

Umezaki, Y. in sod., Frontiers in Clinical Diabetes and Healthcare, 2025 (sistematični pregled in metaanaliza)

Across pooled studies, non-surgical periodontal treatment (scaling and root planing) lowered HbA1c by an average of 0.72 percentage points at 3 months; adding antibiotics increased this to 0.96 points.

That's a clinically meaningful improvement — comparable to the effect of adding a second glucose-lowering medication — from a dental intervention alone.

2. Root-tip infections are more common, and heal worse, in diabetics

Segura-Egea et al. (2005); Gupta et al. (2020), International Endodontic Journal

Diabetic patients showed apical periodontitis (root-tip infection) in 81% of relevant teeth versus 58% in non-diabetics. A later meta-analysis of root canal outcomes found meaningfully lower healing rates in patients with diabetes, especially with poorly controlled blood sugar.

Poor glycemic control appears to impair the body's ability to resolve periapical infection — and unresolved infection may add back to the inflammatory load that makes blood sugar harder to manage.

A direct, one-way causal effect of tooth infections on diabetes hasn't been proven, and researchers are still untangling how much each direction contributes. But the evidence for a real, clinically relevant connection is strong enough that treating gum disease and infected or failing root canals promptly is part of managing diabetes well — not just a dental issue.

What you can do

- If you have diabetes, tell your dentist — it changes healing expectations and follow-up needs.
- Treat gum disease and root canal infections promptly; don't wait for pain, since diabetic nerve changes can mask symptoms.
- Keep blood sugar as well controlled as possible — it directly affects how well your mouth heals.
- Get dental check-ups at least twice a year if you have diabetes, even without symptoms.
- Report bleeding gums, loose teeth, or persistent bad breath early.

Sources

- Umezaki, Y. et al. (2025). The role of periodontal treatment on the reduction of hemoglobin A1c, comparing with existing medication therapy: A systematic review and meta-analysis. *Frontiers in Clinical Diabetes and Healthcare*.
- Segura-Egea, J. J. et al. (2005). High prevalence of apical periodontitis amongst type 2 diabetic patients. *International Endodontic Journal*, 38(8), 564–569.
- Gupta, A. et al. (2020). Diabetes mellitus and the healing of periapical lesions in root filled teeth: A systematic review and meta-analysis. *International Endodontic Journal*.

This leaflet is for patient education only and does not replace advice from your dentist or physician.

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