

# Hyperglycemia may cause caries but not periodontal disease

14 August 2017



"In conclusion, long-term hyperglycemia naturally induces dental caries but not PD in type 1 and type 2 diabetic rodents," the authors write.

One author disclosed financial ties to Astellas Pharma.

**More information:** [Abstract/Full Text](#)  
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(HealthDay)—For rodents with diabetes, periodontal inflammation may be derived from dental caries rather than periodontal disease (PD), according to a study published online Aug. 9 in *Diabetes*.

Yutaka Nakahara, from Setsunan University in Osaka, Japan, and colleagues prevented carious inflammation with [fluoride](#) administration in diabetic animal models to confirm the presence of PD. Tap water alone or with fluoride was given to F344 rats injected with alloxan (type 1 diabetes model) and *db/db* mice (type 2 diabetes model).

The researchers found that the cariostatic effect of fluoride was seen in the diabetic animal models. In addition to preventing [dental caries](#), fluoride treatment attenuated periodontal inflammation. Periodontitis was nonexistent in the periodontal tissue surrounding the normal molars with fluoride treatment; in the teeth that were enveloped with persistent periodontitis, the caries-forming process was clearly observed.

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