Hyperglycemia may cause caries but not periodontal disease
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"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 (subscription may be required)

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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.