How does periodontitis affect diabetes?

A growing body of research suggests that periodontitis (irreversible gum disease) may contribute to the development of new cases of type 2 diabetes and possibly gestational diabetes (a type of diabetes that develops during pregnancy in individuals who did not previously have diabetes).

Can periodontitis increase blood glucose (sugar) levels?

Studies show that even in healthy individuals without diabetes, periodontitis is linked to higher blood glucose levels compared to people with little or no periodontitis. This suggests that gum disease may:

- Increase the risk of developing diabetes in otherwise healthy individuals.
- Make it harder to control blood sugar in people who already have diabetes.

One important study found that individuals with both diabetes and severe periodontitis had worse blood sugar control over a 2-year period compared to those with diabetes but milder periodontitis. This highlights that having both severe periodontitis and diabetes can worsen diabetes symptoms and increase the risk of diabetic complications.

How does periodontitis affect blood glucose levels?

Gum disease starts with plaque biofilm on the teeth. When this is not removed, it leads to inflammation in the gums and the breakdown of tissue and bone that support your teeth. In individuals with periodontitis, and even more so in people with both diabetes and periodontitis, this leads to:

- Inflammation from periodontitis spreading to the bloodstream.
- This inflammation contributes to insulin resistance, making it harder for your body to control blood sugar levels.
- High blood glucose levels then trigger pathways that increase inflammation, making both periodontitis and diabetes worse.
- This creates a vicious cycle, where periodontitis makes it harder to manage diabetes, and poorly controlled diabetes makes periodontitis more severe.

Why managing periodontitis is important for people with and without diabetes

Looking after your gum health is a key part of managing your overall health. By reducing inflammation, treating periodontitis can help improve blood glucose control and lower the risk of diabetic complications (especially those affecting blood vessels such as heart disease, kidney disease, and eye problems). Taking care of your mouth and body together can make a positive difference to your long-term health.

References

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