

## Gum disease four times as common in rheumatoid arthritis patients

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Gum disease is not only four times as common among patients with the autoimmune disease rheumatoid arthritis as it is among their healthy peers, but it also tends to be more severe, indicates a small study published online in the *Annals of the Rheumatic Diseases*.

The researchers base their findings on 91 adults with confirmed rheumatoid arthritis (RA) and a comparison group of 93 healthy people, matched for age and sex.

All participants were non-smokers, as smoking is a known risk factor for rheumatoid arthritis. And it is strongly associated with the production of antibodies, indicative of a systemic reaction to a person's own proteins (ACPAs), and which often predates the development of rheumatoid arthritis by several years.

And none had been treated with arthritis drugs known as disease modifying drugs, or DMARD, for short.

Disease activity was quantified using a specific score and by measuring levels of [inflammatory markers](#). And the extent of [gum disease](#) was assessed by quizzing participants on their symptoms.

These included swollen and [bleeding gums](#), sensitive teeth, loose teeth, and a history of [tooth loss](#) caused by gum disease. How far the gum had receded from the surface of the tooth, known as pocketing, was also measured using a probe.

Almost two thirds of patients (just under 65%) with rheumatoid arthritis had evidence of gum disease, compared with just over one in four (28%) of their healthy peers.

Overall, patients with rheumatoid arthritis were four times as likely to have gum disease. And their gum disease also tended to be more severe.

The depth of pocketing was also significantly greater among those with rheumatoid arthritis and especially among those who tested positive for ACPA, compared with those in the healthy comparison group.

Those who tested positive for ACPA had had their rheumatoid arthritis for longer, had higher levels of disease activity, and higher levels of inflammatory markers than those who tested negative.

*Porphyromonas gingivalis* is one of the main bacteria behind gum disease, and it is also the only organism known to produce an enzyme capable of generating ACPA in gum tissue.

Even those with rheumatoid arthritis, but without serious gum disease, as measured by pocketing, had symptoms, such as bleeding and swollen gums and sensitive teeth, but tooth loss was seen only in those with serious gum disease.

But mild gum disease in patients with rheumatoid arthritis may become more serious, and include testing positive for ACPA, suggest the authors. Published research indicates that ACPA antibody levels increase the longer a person has had rheumatoid arthritis.

"[Gum disease] is more common and severe in [rheumatoid arthritis](#) patients than in healthy controls...and could be a potential environmental trigger in the [development] and also in the maintenance of systemic inflammation in [the disease]," they conclude.

Provided by British Medical Journal

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