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Bad teeth raises pre-term birth risk

Danny Kingsley

ABC Science Online

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Pregnant women with periodontal disease have a much higher chance of having a pre-term baby, but a new American study has found that a simple clean can reverse that statistic.

The study looked at 366 pregnant women who had periodontitis in Alabama. Those who were treated with scaling and root planing before they reached the 35-week stage of their pregnancy reduced their chance of having a premature baby by 84%.



Dentist treating periodontal disease (NASA)

"What this tells us is that scaling and root planing may significantly reduce a mother's chance of having a pre-term birth," said Dr Marjorie Jeffcoat, currently dean of the School of Dental Medicine at [University of Pennsylvania](#), but who conducted the research while at the [University of Alabama](#).

Periodontal disease, or periodontitis, is a serious gum infection that destroys attachment fibres and the supporting bone that holds teeth in the mouth. As the teeth move from the gums, allowing plaque to build up and cause infection.

Root scaling and planing is a thorough, deep-cleaning process concentrating on the spaces between the teeth and gums and the scraping away of plaque, also known as 'debridement'.

About 10 to 15% of the Australian population has periodontitis, said Dr Rod Marshall, a periodontist and senior lecturer at the [University of Queensland](#) in Brisbane. "It is probably the most common infection in man," he said.

The reason why it is not a major public health issue is the slow chronic nature of the disease for most people, he said. In very advanced stages, sufferers start losing teeth.

The reason why it is not recognised as a major public health issue is the slow chronic nature of the disease for most people, he said. In very advanced stages, sufferers start losing teeth.

Periodontal infections cause a faster-than-normal increase in the levels of prostaglandin and tumour necrosis factor molecules that induce labour, causing premature delivery. A baby is classified as a pre-term baby if born before 37 completed weeks of pregnancy. Pre-term babies are at higher risk

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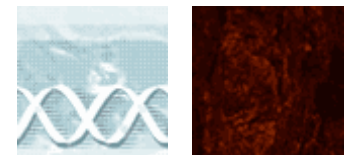
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of mental retardation, cerebral palsy, lung and gastrointestinal problems, and vision and hearing loss.

The women were recruited from a large study of 3,000 pregnant women who were between 21 and 25 weeks of gestation, who had at least three sites of clinical periodontal attachment loss greater than, or equal to, 3 mm. On average, the women were aged 22 at delivery.

The research is published in the current issue of the *Journal of Periodontology*.

There are some issues that need to be considered with the study, warned Marshall. The study was conducted in Alabama, which has a high African-American population, and there is a strong possibility the incidence of pre-term births are higher there. "It is difficult to extrapolate the link with periodontal disease," said Marshall.

This is not the first research to look at the use of dental treatment to reduce the risk of pre-term deliveries, he said. A large study completed last year established that treating periodontal disease in pregnant women greatly improved the outcome for the baby.

The connection between periodontal disease and early delivery is not surprising, Marshall said. The total amount of ulceration when all the teeth are added up would be the equivalent of the whole inner surface of a forearm being ulcerated. "You would expect some systemic effect from that," he said.

The levels of pre-term deliveries overall is lower in Australia with about 6% of babies born prematurely, he added.

Surprisingly, those women who supplemented their scaling and root planing with an antibiotic treatment of metronidazole had a *higher* incidence of early delivery than those who were given a placebo. Jeffcoat suggested that more research needs to be conducted to determine the reason for the decrease in efficacy.

But Marshall thinks there is a simple explanation. The ineffectiveness of the antibiotic is probably because the inflammation is the patient's body responding to the plaque. "Treatment reduces inflammation," said Marshall. "There are no bugs to kill."

Women considering falling pregnant should visit their dentist for a check up and clean, said Marshall.

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