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STUDIES SHOW IGNORING ORAL HEALTH CAN HAVE SERIOUS IMPACTS ON THE REST OF THE BODY

Previously unknown health risks for Australians – that gum disease suffered by one in three Australian adults¹ could increase the risk of serious cardiovascular events, Type 2 diabetes and adverse pregnancy outcomes – are now coming to light following decades of dental and medical studies.

For Dental Health Week (2-8 August) this week, the Australian Dental Association (ADA) wants to alert Australians to the very close links between what goes on in their mouths and the far-reaching effects on the rest of the body.

The latest research across a range of studies² has shown that people with advanced gum disease (periodontitis) have a much higher risk of a heart attack than people without it. (See Background at end of release for more.)

In another study³ conducted recently by Prof Joerg Eberhard, an oral health scientist and Chair of Lifespan Oral Health at the University of Sydney's School of Dentistry, it was found that not brushing your teeth caused systemic inflammation which could prompt serious cardiac events.

"We asked a cohort of healthy young people with no cardiovascular risk factors, to not brush the same quadrant of their mouths, that's seven teeth, for three weeks, to see what effect it would have on their health," explained Prof. Eberhard.

"After three weeks we measured the inflammation in that quadrant of the mouth and we found the inflammation caused by not brushing there, had reached other parts of their body.

"But as soon as they started brushing that quadrant again, C-reactive protein, a risk marker for heart attacks, went down to normal levels. It's another clear and concerning link between mouth health and whole of body health."

Extensive research over decades has found that the main conditions that link the mouth with the rest of the body are cardiovascular, Type 2 diabetes and adverse pregnancy outcomes⁴.

Studies are also being conducted into the effects of periodontitis on pregnant women. Some early data suggests that if the gum disease is treated, the risk of having a premature baby declines.

The ADA's Oral Health Promoter and dentist Dr Mikaela Chinotti said: "These serious health conditions and events can be significantly reduced if people regularly look after their mouths.

"That means brushing twice a day with a small amount of fluoridated toothpaste, flossing daily, eating a diet low in sugar and seeing your dentist regularly for checkups. These typically include a scale and clean which is vital for removing the bacteria that build up and start the process of periodontitis and inflammation."

Another recent international study⁵ by a group of cardiologists and dentists showed that treatment for gum disease reduced blood pressure (BP) normally only achieved through medications, because high BP can come about due to a loss of elasticity in blood vessels and this loss can be caused by inflammation from gum disease.

Lifestyle also plays a big role in oral health: in a three year study⁶ of people from Queensland with poor oral health including gum disease, Prof. Eberhard and colleagues found that by adopting better teeth brushing techniques, going regularly to the dentist and adopting a healthier diet all led to reduced systemic markers which are predictors for a heart attack.

The ADA's Dr Chinotti explained that periodontitis signs can be difficult to spot and may include bleeding from the gums and very little or no pain, and without treatment, the condition can worsen over time until affected teeth may finally become loose.

Risk factors include older age, smoking, drinking alcohol above recommended levels, the presence of diabetes and poor oral health practices.

"While periodontitis damage can't be reversed, you can stop its progression by seeing a dental practitioner for treatment, including professional cleaning of the teeth above and below the gums which the patient cannot access, which halts the disease and reduces inflammation."

More advanced cases may need surgical treatment performed by a specialist periodontist under a local anaesthetic to access difficult to reach areas under the gums.

"Regular dental visits are the best way to keep on top of your oral health and detect and manage conditions such as periodontitis, in their earliest stages of development.

"This is in addition to those other oral health basics that add up to only about six minutes a day but which protect the health of your whole body and not just your mouth.

"For too long mouth health has been separated from body health. It's time to put the mouth back in the body.

"The ADA hopes that by making this mouth and whole-of-body relationship more widely known to Australians, they'll understand oral health is an integral part of general health."

To interview Dr Chinotti or Prof. Eberhard, call Australian Dental Association Federal Media Advisor Jenny Barlass 0484 869 086.

References:

1. <https://sci-hub.do/downloads/2020-06-26//73/10.1111@adj.12765.pdf>
2. <https://www.frontiersin.org/articles/10.3389/fcvm.2021.621626/full>
3. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0055265>
4. (i) <https://doi.org/10.1902/jop.2014.140248>.
(ii) <https://doi.org/10.1902/jop.2005.76.11-S.2144>.
5. <https://pubmed.ncbi.nlm.nih.gov/31504461/6>.
6. <https://www.sciencedirect.com/science/article/pii/S030057122100107X>

Background for media with comments from Prof. Eberhard:

***Heart attack risk relating to reference 2:** in this study the authors investigated whether the number of teeth, a very good marker of periodontal disease, is correlated to atherosclerotic cardiovascular diseases (ACD) and all-cause mortality (ACM). The risk for ACD ranged from 1.7-3 times and for ACM from 1.7-2.3 times. If you adjust for common risk factors like smoking, low socio-economic background, the risk is around 1.2 for these conditions.

“So if you have 200 people who have all the same common risk factors like physical inactivity, obesity and smoking, but 100 of them have lost teeth, compared to 17 in the latter group who will have a cardiovascular event or die because of their poorer oral health.”

***The link between mouth and rest of body health:**

“The reason the oral cavity is linked to overall health is because bacteria build up on tooth surfaces inaccessible to normal oral hygiene practices, and the gums react with inflammation aimed to eliminate the bacteria.

“The inflammation weakens the gum barriers, and the toxic products reach the blood stream where they induce further responses such as in the liver. So gum disease adds to the general burden of inflammation within the body which contribute to the onset of chronic conditions including heart disease and /or diabetes.”