

Dental Flossing and Cardiovascular Disease

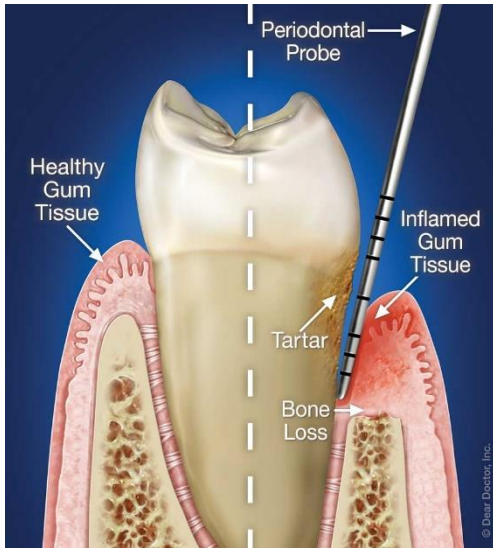
We live in an age where there is always an opportunity for the pharmaceutical industry to make an expensive new drug to treat a condition that is often to a degree, preventable with a low-cost intervention. Celebrities and the wealthy flock to use injectable drugs, intended to treat diabetes, to offset avoidable weight gain. It is our excessive consumption of highly processed and diabetogenic foods that is the underlying problem.



Every now and then comes a revelation that something simple and accessible to everyone, can have a genuine impact on the likelihood that you may suffer from a common illness. Recent research articles that have been presented at the American Heart Association's scientific meetings are attracting great interest. The latest publications await peer review to check the findings but the possibility that simply taking a little more care of our teeth may significantly reduce the risk of stroke and atrial fibrillation, is very exciting.

Atherosclerosis is the gradual build up of firm plaques of fats and cholesterol and calcium on the walls of our blood vessels. Apart from blocking the efficient flow of blood to our organs, the surface of the plaque may eventually rupture, exposing the contents and causing the formation of blood clots. The artery may block completely at that point and depending on its site have a range of consequences. A blocked coronary artery may lead to a heart attack and death. Also, a clot may fragment and travel from one site to another. A fragment of a clot arising in the arteries of the neck may travel to the brain and cause an "embolic" stroke.

For some years there have been increasing numbers of reports that link poor dental hygiene to increased cardiovascular risk. Our teeth are affected by food residues and the bacteria that inhabit the spaces between the teeth and the gums. A build up a hard substance called tartar is a calcified film of saliva and other fluids which we produce as a defence against the bacteria.



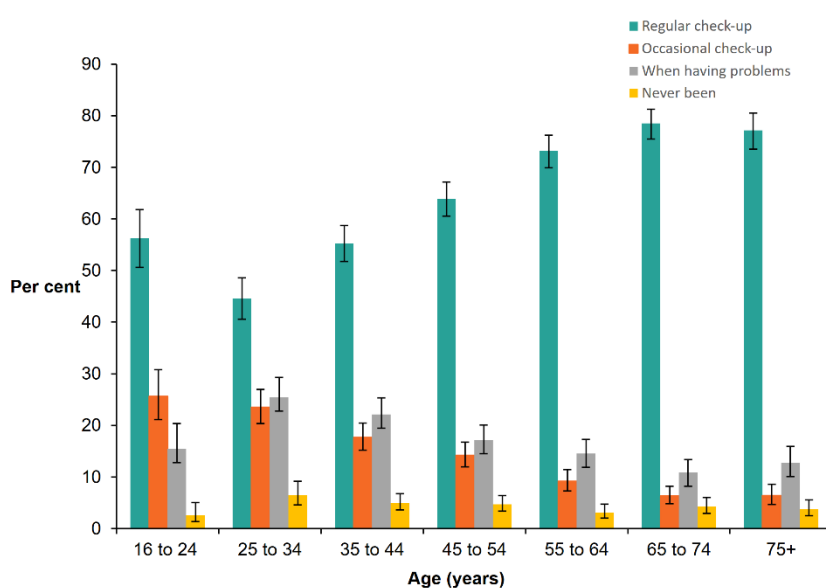
Unfortunately, in the presence of large numbers of bacteria from trapped food residues, it becomes what is called a “biofilm”. The inhabitants of this film begin to cause inflammation known as periodontitis

Periodontitis is associated with local tissue damage to the teeth and nearby bone of the jaw, as well as various systemic diseases that include diabetes and cardiovascular disease, brain degeneration and cancers.



Far more unpleasant pictures are available, but I have no wish to deter our readers. Apart from being uncomfortable and leading to occasional bleeding, there are more remote consequences. The association of periodontitis and arterial disease is not necessarily the cause but the mechanism by which this may occur is being proposed. Bacteria may enter our blood stream and travel elsewhere to cause inflammation. Our local defences may be activated and send inflammatory messages to other tissues in our body, along with specialised inflammatory cells called myelocytes. The presence of inflammatory cells and substances in the blood stream may be the factors that accelerate cholesterol plaque growth and eventual rupture with devastating consequences.

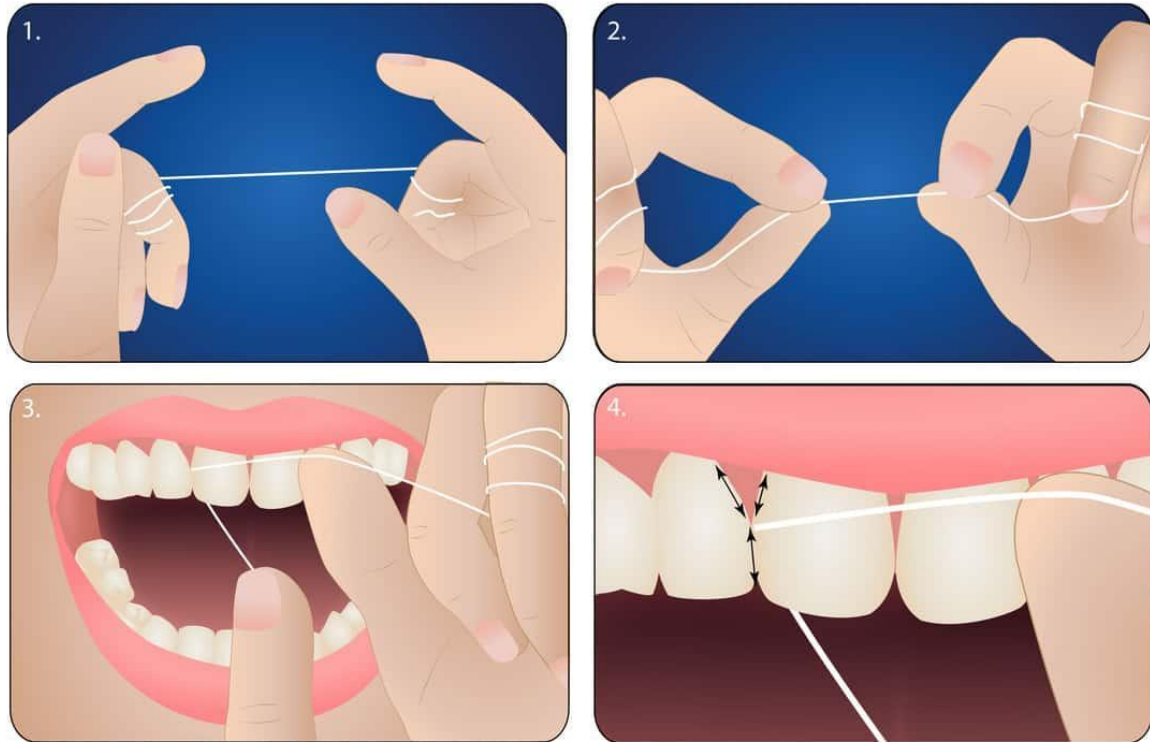
The CoViD lockdown and the progressive decline in NHS dental services, contributes to the increasing numbers of people missing simple dental checks and trips to dental hygienists in the UK.



The proportion of those who reported they attended the dentist for a regular check-up was lowest among those aged 25 to 34 years (45%).

Faced with the increasing costs of living and the demands of caring for families, the younger populations are potentially going to at greater risk later in life.

Simply removing food residues with dental floss and other inter-dental brushes, as well as regular standard brushing and mouth hygiene washes to reduce the numbers of bacteria, are proving to be effective at reducing the risk of heart attack and stroke and heart rhythm disorders such as atrial fibrillation.



Overall, flossing at least once per week was associated with a 22% lower risk of ischemic stroke, a 44% lower risk of cardioembolic stroke and a 12% lower risk of AFib. Flossing more often appeared to lead to more significant risk reductions. It's all pretty simple, so if you are not already doing it, maybe it is time to give it a thought.

Dr Peter Smith

Sources:

[Atherosclerosis Risk in Communities \(ARIC\) Study | NHLBI, NIH](#)

[Improved oral hygiene care attenuates the cardiovascular risk of oral health disease: a population-based study from Korea - PubMed](#)

[The Association Between Periodontal Disease and Cardiovascular Disease: Insights From Imaging, Observational, and Genetic Data | JACC: Advances](#)

[Microbial and metabolomic analysis of gingival crevicular fluid in general chronic periodontitis patients: lessons for a predictive, preventive, and personalized medical approach | EPMA Journal](#)

[Adult oral health survey 2021: service use and barriers to accessing care - GOV.UK](#)