

## Will your mouthwash kill you?

January 28 2014, by Dr Chris Hope



Once in a while, I come across a news story that catches my professional eye. On a lazy Sunday morning I was treated to a news story that got my full attention because it contained some rather shocking headlines.

- 'Mouthwashes can raise risk of heart attack and strokes'
- 'Using mouthwash is a 'disaster' for health, increasing the risk of heart attacks and strokes'
- 'Increases the risk of dying from stroke by ten per cent'



This particular story had everything needed to raise my already <u>high</u> <u>blood pressure</u> to even greater levels than the deadly mouthwash I had foolishly inflicted upon myself an hour earlier!

## **Rational scientist**

So with a deep concern for my own imminent death and the mortal danger my wife also subjects herself to on a daily basis, I considered pouring these toxic products down the sink immediately. But, as a rational scientist and oral microbiologist I first took it upon myself to read the research paper this news report was supposed to be based upon (*Free Radical Biology and Medicine*, 2013, 55: 93-100).

The paper showed that using Corsodyl mouthwash containing 0.2% chlorhexidine reduced physiological levels of nitrite whilst increasing nitrate. In the circulatory system, nitrite causes vasodilation (expansion) of the blood vessels, which in turn causes a lowering of <u>blood pressure</u>.

The proposed mechanism for this was that the mouthwash reduced the number of 'friendly' bacteria in the mouth capable of reducing dietary nitrate (bad!) to nitrite (good).

Although the core findings of the paper appear credible, the extrapolation that a reduction in the number of bacteria present in the oral cavity was directly responsible for a rise in blood pressure is perhaps less clear.

Nevertheless, the news story conflagrates this to 'mouthwashes can raise risk of <u>heart attack</u> and strokes' and claims that they are 'dangerous'. Such one-sided reporting on health issues makes me angry.

What the news report fails to mention are the well-established links between excess dental plaque and tooth decay, periodontal disease and



even systemic conditions including cardiovascular disease and preterm birth. The authors of the paper, quite rightly, saw fit to state this in their introduction – but the <u>news story</u> ignored this counterpoint since it would make their headlines less dramatic.

## Health benefits

I hope this particular newspaper doesn't get hold of another little known fact; brushing your teeth, or even eating a hard apple, can force oral bacteria into your bloodstream. But this does NOT mean that brushing your teeth or eating apples is bad for you by any stretch of the imagination.

The well-established health benefits of maintaining good oral hygiene, or consuming apples, far outweigh the often tenuously linked and minimal impact, negatives effects they might also entrain.

Perhaps the best advice for reducing your blood pressure would be to avoid believing everything you read – especially in the tabloids.

## Provided by University of Liverpool

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