Letters to the Editor

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LETTERS

HYPERTENSION SCREENING

Sir, we have read the suggestion of Sproat and co-workers,¹ that dentists could participate in screening for hypertension, with great interest. In the Netherlands, high blood pressure screening in the dental office was also proposed, 20 years ago.² In a subsequent survey among 259 dentists, it was shown that if there was a financial remuneration for the procedure, 40% of the respondents replied with a definite yes, while another 40% indicated that they might take part. Without fee, only 16% said they would definitely participate and 34% said they might.³

The more recently graduated, the more willing the dentist was to participate in hypertension screening. The size of the practice also influenced the willingness to participate. Half of the dentists with a small practice (<500 patients) refused even when they were financially compensated *versus* only 15% of those with a larger practice (>2,000 patients).³ In view of these Dutch results, it is interesting to explore the current opinion of UK dentists on these issues, since they may affect the implementation of high blood pressure screening in the dental office.

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2. Abraham-Inpijn L, Gortzak R A T. Screening for hypertension by the dentist. *Ned Tijdschr Geneesk* 1989; **133**: 604-606
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MOUTHWASH CONTROVERSIES

Sir, in the current controversial discussion regarding the carcinogenic effects

of alcohol-containing mouthwashes, the article by Werner and Seymour (*BDJ* 2009; **207**: E19; summary *BDJ* 2009; **207**: 488-489), along with the review on oral cancer by Warnakulasuriya (*BDJ* 2009; **207**: 471-475) and related commentary (*BDJ* 2009; **207**: 461), can be seen as a highlight in well-balanced and independent scientific discourse.¹⁻⁴ I fully agree with the conclusion to advise against the regular use of alcohol-containing oral products for reasons of precautionary public health protection, especially as sufficient alcohol-free alternatives are available.

Both articles^{1,3} discussed the perplexing inconsistencies among the review articles, which used the same original studies as their basis. Perhaps these inconsistencies are not so surprising if we refer to the conflicts of interest or financial disclosure of the articles, however. The McCullough and Farah article,⁵ which stated a cautious position, came from academia with no declared conflicts of interest. In contrast, the recent review by La Vecchia,⁶ which provided a negative outcome, was conducted with 'partial unconditioned support' from Johnson and Johnson Consumer (the current maker of Listerine-brand mouthwash). Especially interesting is the re-analysis by Cole *et al.*⁷ of the NCI dataset published by Winn *et al.*⁸ while the original study concluded that there is a significantly increased risk of oral cancer associated with the regular use of mouthwash, the re-analysis found this association unlikely. Cole *et al.*'s study was financially supported by Warner-Lambert Company (the former maker of Listerine). As detected previously,⁹ industry-supported reviews on ethanol

sions than the corresponding independent studies.

Besides the industry bias issue, there is a considerable amount of knowledge on mechanistic evidence and quantitative risk assessment that was only briefly mentioned in the articles. While I agree that the risk of oral cancer from mouthwash use is difficult to quantify,¹ it is not completely impossible. We have recently shown that the use of alcohol-containing mouthwashes may lead to acetaldehyde concentrations in the oral cavity of up to 105 µM, which exceeds levels that have been shown *in vitro* to form DNA adducts and cause sister chromatid exchanges. A twice-daily use of alcohol-containing mouthwashes leads to a low but quantifiable lifetime cancer risk of 3E-6.¹⁰ The acetaldehyde burden may be increased by the cumulative exposure from a considerable number of other sources, which do not only include alcohol but also nutrition, flavourings, tobacco, and environmental exposures. The local carcinogenic effects of acetaldehyde in light of the cumulative exposure may be the molecular explanation for the link between mouthwash use and oral cancer detected in some of the epidemiological studies. It is notable that the International Agency for Research on Cancer recently upgraded acetaldehyde associated with alcohol consumption to group 1, with oesophagus, head, and neck as tumour sites with sufficient evidence for carcinogenicity in humans.¹¹ Nevertheless, I agree with the editorial comment⁴ that the controversy around alcohol mouthwashes should not overshadow the far greater significance of alcohol drinking itself.

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