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Letter to the editor

Letter in response to article:

The trends in consumption patterns of toothbrushes and toothpastes in Lebanon

Doumit M; Al Sayah F. The trends in consumption patterns of toothbrushes and toothpastes in Lebanon. East Mediterr Health J. 2018;24(2):216-220. https://doi.org/10.26719/2018.24.2.216.

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Sir,

We commend Drs Doumit and Al Sayah on their short communication entitled "The trends in consumption patterns of toothbrushes and toothpastes in Lebanon" (1). Toothbrushing twice-daily with fluoride toothpaste (FT) is an essential caries-preventive measure that cannot be highlighted enough. The research also provides interesting insights in consumption of oral hygiene products in Lebanon.

We are, however, concerned that certain aspects in the communication require clarification and correction. For instance, the use of the term "fluoride intake" is misleading, since toothpaste should not be swallowed. "Fluoride exposure" would be the preferred term to reflect the topical effect of FT.

Our main concern relates to the repeated reference to "WHO consumption recommendations" that, according to our knowledge, do not exist in this form. The recommendation of "yearly consumption of four toothbrushes and 6 tubes of toothpastes per individual", referenced to WHO TC846 (1994) (2) cannot be found in the report, nor on the WHO website. We are unsure of the source of these recommendations since they are not evidence-based. Should such recommendations appear in unidentified WHO documents then they ought to be reviewed with urgency.

Examining the cited recommendation for toothpaste consumption, the authors' estimation of 170 grams net of toothpaste/tube amounts to 1.02 kilograms/person/year. Translated to brushing twice daily with FT, this recommendation equals 1.4 grams toothpaste per brushing. This is in stark contrast to the often-recommended pea-sized toothpaste amount weighing about 0.25 grams, resulting in an annual use of 182.5 grams FT/person (3). Evidence shows that the quantity of toothpaste used per brushing is not as important as the concentration of available fluoride in the dentifrice (4). However, using large amounts of toothpaste has cost implications for poorer communities who are already challenged to afford FT even when based on an annual consumption of 182.5 grams (3). From a public health perspective, it is unwise to promote unjustified recommendations for using more toothpaste per brushing (5).

Oral health professionals and toothbrush manufacturers often advise to replace toothbrushes every three months, claiming harmful bacterial contamination after longer use and reduced efficacy of plaque removal due to wear of bristles. While there is no evidence of harmful effects of bacterial growth on older toothbrushes if used and stored properly (6), research on the effects of toothbrush wear on plaque removal is inconclusive, though most studies do not find a significant reduction in cleaning capacities of older brushes (7–9). Future emerging evidence may help to define more solid recommendations for replacement of toothbrushes, keeping in mind that the cost of frequent toothbrush replacement might be prohibitive for poor communities (10).

Contrary to the author's conclusions, this study on the trends in consumption patterns of toothbrushes and toothpastes in Lebanon suggests that consumption patterns appear to be appropriate. Preventive efforts in Lebanon would be better targeted to promoting toothbrushing with an adequate and safe amount of effective FT, and towards stepping-up efforts to ensure universal affordability of FT for all population groups.

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Response by Dr Mounir Doumit:

For further clarification, fluoride toothpaste (FT) is delivered now with different concentrations ranging between 450 to 1500 ppm, the said concentration varies in connection with the age of the patient. Since we have a risk of fluorosis and the FT may be swallowed by the children it is preferable in our view to mention “fluoride intake” (1).

“Fluoride exposure” should be used when we are referring to water fluoridation, salt, tablets or drops. The WHO reference provided might have a typographical error when noting the reference. However, the ADA and the PDA (2) always recommend what we provided under our article.

As to the calculation regarding the quantity of FT used by an individual, we are of the view that it is around 680 g per year, not more, and this is an average noted worldwide (1).

In Lebanon the DMFT is considerably high (3) and our recommendation in all our articles is to use correctly the oral personal hygiene and follow a healthy lifestyle by reducing sugar (4–7).

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