

# **Draft WHO Guideline: Sugars intake for adults and children.**

## **Comments from the European Association of Dental Public Health (EADPH)**

The European Association of Dental Public Health (EADPH) welcomes the draft guideline on Sugars Intake for Adults and Children that the WHO has put on public consultation. The EADPH is strongly interested in this issue due to the established links between sugar consumption and dental caries. This is a very important public health issue and it was pleasing to see that this was recognized in the report as research evidence related to dental caries was very frequently used.

As a general comment, we have been very impressed by the meticulous background work and thorough level of analysis that the WHO report contains. In addition, this report comes at a time where the available evidence has been considerably consolidated through the publication of well-informed and properly conducted systematic review on the issue.

We would further like to highlight a few relevant points:

1. Dental caries is a public health problem. It is a highly prevalent oral disease that has considerable impact on the daily life of people and also poses a significant burden on societies. Untreated caries in permanent teeth was the most prevalent condition evaluated for the entire Global Burden of Disease (GBD) 2010 Study with a global prevalence of 35% for all ages combined, while caries in deciduous teeth was the 10<sup>th</sup> most prevalent condition as it affected 9% of all children globally. Oral diseases accounted for 15 million Disability Adjusted Life Years, which can be translated as being responsible of 224 years lost per 100,000 people. Furthermore, the burden of untreated dental caries has increased by approximately 20% in the last 20 years (Marcenes et al, 2013).
2. The causal link between excessive sugar consumption and caries cannot be disputed as the former as a necessary precondition for the latter. Simply put, dental caries cannot exist without sugar intake. Obviously, there are other factors that can affect this association, with the use of fluorides being a protective factor. However, there is considerable research evidence to clearly indicate that the relationship between sugar intake and dental caries remains even when the protective effect of fluoride is taken into account; see for example, Rugg-Gunn et al, 1984; Masson et al, 2010; Slade et al, 2013.
3. Based primarily on the informative and comprehensive systematic review on

caries and sugar intake (Moynihan and Kelly, 2014), the draft guideline affirms the recommendation that intake of free sugars should not exceed 10% of total energy, while it makes a conditional recommendation that this could be reduced to not more than 5% of total energy. We view this as the key issue that needs to be determined by understanding and interpreting existing evidence and hope that this public consultation exercise will highlight this. The 10% of total energy threshold is consistently backed by all relevant studies (classified as of “moderate quality” evidence in the aforementioned systematic review). For the 5% threshold, there are only three studies (classified as of “low quality” due to their ecological design) but they all indicate higher caries for higher sugar intake. We expect that the WHO guidance should be determined by the findings of this systematic review and should also take into account the epidemiological characteristics and public health importance of dental caries.

4. While most research has focused on child populations, the vast majority of dental caries occurs now in adults. In line with the Moynihan and Kelly (2014) systematic review, the report acknowledges the progressive nature of dental caries and recognizes that “being free of cavities at age 12 years does not mean being caries-free for life”. This has been clearly highlighted by longitudinal data with high incidence of dental caries in adults even in groups with relatively lower caries experience in childhood (Broadbent et al, 2008). With the ageing structure of our populations and the increased retention of natural teeth throughout adulthood, this trend is not going to be reversed unless there is some relevant public health action.
5. In most epidemiological studies, dental caries is recorded only if it affects the dentine and results in cavitation. However, the disease is initiated much earlier and recent trends in oral epidemiology have moved towards also recording early stages of the disease, i.e. enamel caries (Ismail et al, 2007). This is an important development from the public health perspective as it may help identifying population groups at higher risk for dental caries. Intervening in those population groups and arresting further progress of dental caries is essential to minimize the currently excessive burden of the disease. However, looking at the whole distribution of caries experience and also considering enamel caries has profound implications for the volume of sugar intake that can be considered in the draft guideline. In such a case, the 10% of total energy threshold is most probably quite inappropriate as it reflects the association when considering only caries into dentine.
6. Consequently, the EADPH suggests that the main recommendation of the WHO guideline is that the intake of free sugars should not exceed 5% of total energy. We have shown that this would better reflect the public health priorities, take account of trends for increased prevalence and burden of dental caries among adults and also consider the recent developments about measuring early stages of the disease.

7. Finally, while the draft guideline focuses on the volume of intake of free sugars, it is important to consider both the volume and the frequency of sugar consumption. While the former is the logical primary focus, the latter presents relevant information that can also be more easily communicated with the public as well as health professionals. Future guidelines should also consider addressing the issue of frequency of sugar consumption. On an issue of consistency and accuracy, the whole guideline text refers to free sugars intake and therefore it makes sense to align the title accordingly to refer to free sugars intake (rather than sugars intake).

## References

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