

Energy or taste: why are teenagers drinking sports drinks?

A survey of sports drinks consumption among adolescents
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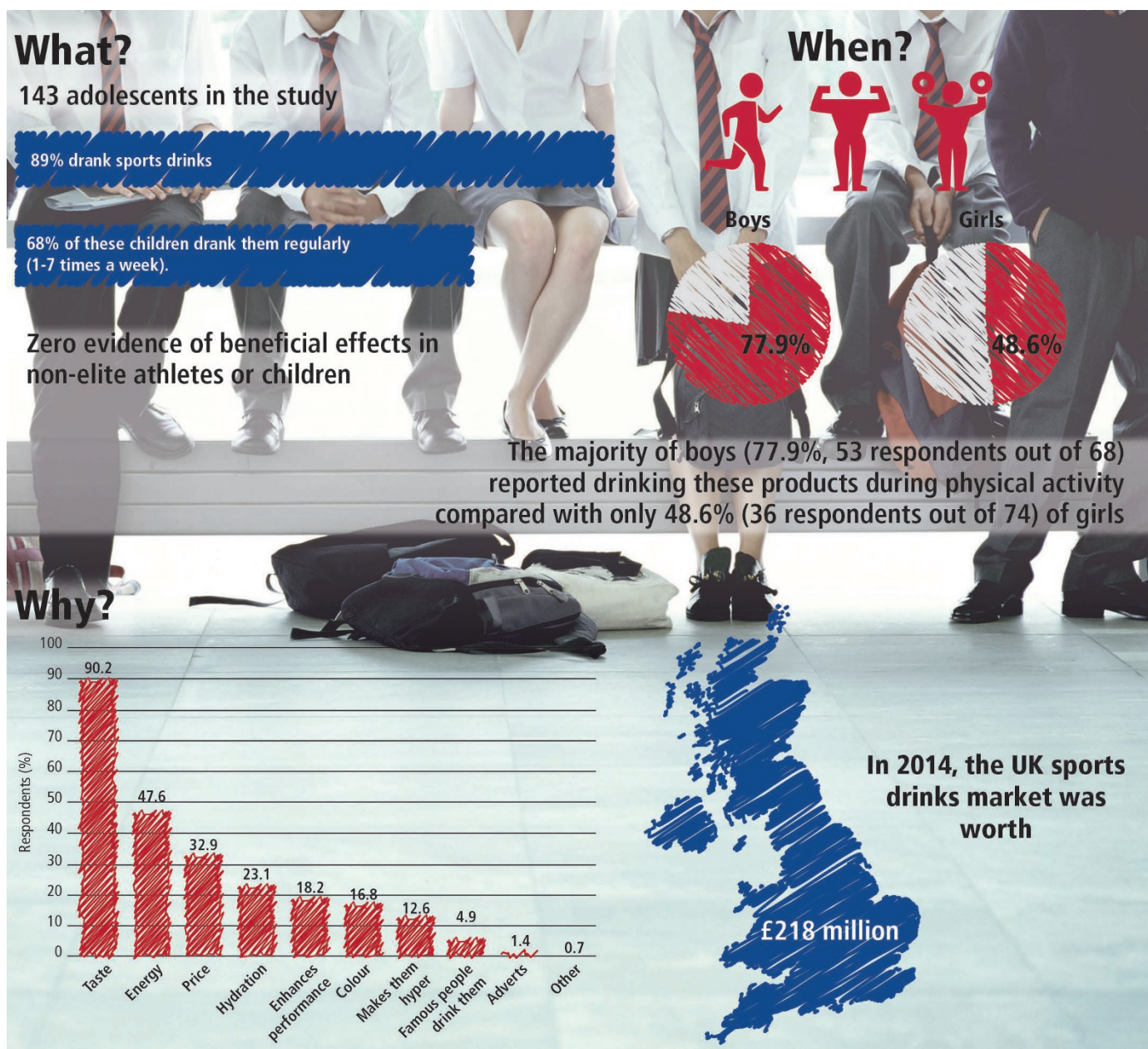
The rise in popularity of sports drinks over the last decade is most likely due to them not only being consumed by athletes, but also, worryingly, by adolescents. Twenty years ago this market was largely dominated by Lucozade, but the emergence of other brands and prominent advertising campaigns means that it is now a widely consumed type of drink, frequently used for non-sporting purposes.

In this article, Broughton *et al.* examine what, why and how much sports drinks are being consumed by adolescents in the Cardiff area. The ‘why’ is most troubling as 90% stated they drank these drinks because of the nice flavour. This poses the question as to whether ‘sports’ drinks are actually produced for sporting reasons. The location of the drinks in

supermarkets – alongside other sugary drinks – supports the idea that they are not necessarily marketed solely to athletes.

Interestingly, there was a difference by gender in the consumption of the drinks during sports with 77.9% of boys and only 48.6% of girls drinking them during physical activity. The authors make it clear that energy drinks were not included in the study as their purpose and ingredients are very different from those of sports drinks.

The mere fact that sports drinks are frequently consumed socially amongst groups of adolescents does not bode well for their future health. It is fair to assume that the high levels of sugars and acids will not only contribute to an increase in dental caries and erosion but also to general



health problems, such as diabetes and heart disease, in frequent sports drinks consumers. It is, however, promising that in the UK schools are banned from selling sugary drinks, including sports drinks. The authors suggest that because many of the children who dental health professionals treat will be consumers of sports drinks, they must take this under consideration when giving dental health advice.

By Jonathan Coe



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<http://bit.ly/BDJYouTube>

Author Q&A

with Ruth Fairchild, David Broughton and Maria Morgan

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What drove you to research this topic?

Popularity of sports drinks amongst children has grown exponentially. Yet the evidence clearly shows they are only intended for elite athletes to improve performance and provide hydration for those taking part in endurance sport. However, there was evidence to suggest that sports drinks were being consumed by the general population during physical activity and socially. These sports drinks are high in sugar and are acidic, and product marketing ignores the potential harmful effects of dental caries and erosion.

Did anything surprise you in the results?

We were particularly surprised at the reasons given for drinking sports drinks, with 90% (129/143) saying it was because of their 'nice taste'. We were also surprised at the frequency and context for drinking them, which appear to be unrelated to taking part in sport:

- Approximately half of the respondents (48%, 69) drank sports drinks more than once a week and for social reasons (50%, 71)
- Whilst only 18% (26) claimed to drink them because of the perceived performance enhancing effect.

This study has featured widely on the news and in social media – how important is this exposure for dental research?

We are pleased that this research has had such a wide impact, because it is getting the dental public health messages of the relationship between sugar and dental caries and acids and dental erosion to a wider audience. Websites and Twitter pages across the world have picked it up, from the *BMJ* blogs page to Australia's *Woman's Weekly*!

In public health we often talk about making 'informed choices'; this research has shown that young people are unaware of the purpose of sports drinks because they are drinking them regularly and socially. We hope this media and Internet exposure goes some way to redress this balance.

Expert view

Professor Ian Needleman Centre for Oral Health and Performance UCL Eastman Dental Institute London UK

Energy or taste: why are teenagers drinking sports drinks?



This paper from the Cardiff group is important as it is a well-designed snapshot of sports drink use by adolescents. Sports drinks are typically used to supply carbohydrates during physical activity or for hydration.¹ As the authors of this paper point out, whilst performance in some elite sports may be improved by such supplements, there is little evidence of a benefit for recreational sport. The researchers took pains to involve their target group (12-14-year-olds) in the design of the study through a focus group and to represent the socioeconomic spectrum in those assessed. Furthermore, almost 90% of questionnaires were returned.

The findings are stark: nearly 90% used sports drinks with half drinking more than once per week. More than three quarters of boys and almost half of girls cited physical activity as the situation in which they used sports drinks although less than half cited energy or hydration as the reason for use: taste was the overwhelming reason for consumption.

Why should we be concerned? Sports drinks for energy replacement typically contain more than 30 g sugar which is more than the daily total recommended sugar intake for this group.² The risks to health from weight gain are substantial³ and even worse in disadvantaged groups. There is a clear link between these drinks and dental caries⁴ which creates even greater social disadvantage and effect on life quality. Whilst many products are also acidic, the evidence for dental erosion is less clear⁵ although suggestive of a role. The irony is clear; sports drinks in this adolescent population are more likely to achieve harms than performance benefits.

As the authors point out, the solutions are multi-agency including engagement with industry, schools, parents and carers, sport and leisure organisations, levers such as the sugar tax and through health promotion by dental professionals. The message is clear: these products could harm adolescent health and are unlikely to offer benefits. Few need energy supplementation unless in high-level endurance sport and plain water is best for rehydration. ■

1. Needleman I, Ashley P, Fine P, Haddad F, Loosemore M, de Medici A, Donos N, Newton T, van Someren K, Moazzez R, Jaques R, Hunter G, Khan K, Shimmin M, Brewer J, Meehan L, Mills S & Porter S. Consensus statement: Oral health and elite sport performance. *Br J Sports Med* 2015; **49**: 3–6.
2. Change4Life. Let's get sugar smart. Available at www.nhs.uk/change4life-beta/campaigns/sugar-smart/home (accessed August 2016).
3. Public Health England. Sugar reduction: The evidence for action. October 2015. London: Public Health England. Available online at www.gov.uk/government/uploads/system/uploads/attachment_data/file/470179/Sugar_reduction_The_evidence_for_action.pdf (accessed August 2016).
4. Moynihan PJ, Kelly SA. Effect on caries of restricting sugars intake: systematic review to inform WHO guidelines. *J Dent Res* 2014; **93**: 8–18.
5. Salas MM, Nascimento GG, Vargas-Ferreira F, Tarquinio SB, Huysmans MC & Demarco FF. Diet influenced tooth-erosion prevalence in children and adolescents: Results of a meta-analysis and meta-regression. *J Dent* 2015; **43**: 865–875.