

◀ Researchers then selected 50 items which fell into these categories, 25 of which were GF and 25 of which contained gluten (19/25 baked goods, 4/25 ready meals, 2/25 breakfast cereals).¹

Nutritional label analysis was performed with like-for-like products (sugar/100 g, carbohydrates/100 g and kcal/100 g). Perhaps surprisingly, the authors found, on average, the GF products were higher in all three categories, collectively containing 1.3 times more sugar per 100 g (1 g/100 g vs 14 g/100 g).¹ The study mentions that the majority of GF products marketed to consumers are categorised as baked goods and sweet treats, which inevitably contain high levels of sugar. A key finding was that only two foods containing gluten had a higher sugar content per 100 g than their counterparts in the 25 comparisons. Yet, it was noted that the GF

products were often labelled with emotive language, propagating consumers' belief of superiority, as well as being more expensive and smaller in portion.

A large proportion of the UK population is now adopting this diet. Inevitably, these patients will be consuming foods with higher sugar content regularly and are likely unaware of the increased sugar amounts, potentially contributing to a higher prevalence of dental decay. It emphasises the need for the dental team to be well informed of different nutritional trends to be able to adequately inform patients of potential oral health implications.

The study also raises the need for appropriate dietary guidelines; although dietary advice is commonplace in practice, current recommendations are based on the Eatwell Guide for NHS professionals, a set of

guidelines formulated around a standardised diet,³ which does not take into account any dietary modifications, such as GF, keto or vegan. Ascertaining dietary preferences during history-taking may thus be useful to further tailor advice and determine if patients are following diets for appropriate reasons.

References

1. Rothburn N, Fairchild R, Morgan M. Gluten-free foods: a 'health halo' too far for oral health? *Br Dent J* 2022; DOI: 10.1038/s41415-022-4424-2.
2. Roe B, Levy A S, Derby B M. The Impact of Health Claims on Consumer Search and Product Evaluation Outcomes: Results from FDA Experimental Data. *J Public Policy Market* 1999; **18**: 89–105.
3. Public Health England. The Eatwell Guide. 2016. Available at <https://www.gov.uk/government/publications/the-eatwell-guide> (accessed August 2022).

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RESEARCH INSIGHTS

How far can droplets spread following an aerosol generating procedure in the dental setting?

Detection of dental fomites using topical fluorescein. *Br Dent J* 2022; <http://doi.org/10.1038/s41415-022-4403-7>



COVID-19 can spread through surface contamination, aerosols and droplets, which renders thorough surface disinfection of paramount significance for a dental environment. However, droplets are transparent and often have microscopic size, which makes it difficult or impossible to detect in clinical practice without additional methods.

Given that there was ambiguity around fallow time between patients and the difficulty

to measure aerosols in clinical environments, the researchers used fluorescein dye to stain dental irrigants. They performed a series of aerosol generating procedures on a dental manikin under high-volume suction. Subsequently, they viewed droplets and fomite spread around the dental chair, with and without an ultraviolet (UV) light, and documented it with use of photography. This aimed to provide a better understanding of the spread of dental droplets.

Observations under normal light showed minimal or no droplet spread around the manikin, but were visible on face and teeth. However, UV light use allowed detection of fluorescein on the operator, chairs, handpieces, splatter on the floor and on the instrument tray, which was surprising and educational for the staff members.

In conclusion, the COVID-19 pandemic instigated the generation of a large amount of research on aerosols in dental practice. Apart from good ventilation, it is also important to identify surface contamination with droplets as a potential way of spread. Fluorescein facilitates the detection of droplet spread and helps clinical staff to see high-risk areas that require thorough cleaning. Clinical-grade fluorescein is cheap and readily available, which means that this model could easily be used in clinical practice to determine spread within individual clinics and could be used to train the dental team, highlighting areas which require cleaning between patients and can be easily missed with fluid contamination without use of fluorescein.

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