

Children's dental health significantly improved using electric toothbrushes

According to new research conducted by the Hebrew University-Hadassah Faculty of Dental Medicine, oscillating-rotating (O-R) electric toothbrushes were significantly more effective than manual toothbrushes in reducing plaque and gingivitis in young children (ages 3–10).¹

Dental cavities and gingivitis tend to be widespread problems for young children, affecting up to 74% of those aged nine months to six years. The likelihood of developing a first cavity increases with age, with more than 50% of five-year-old children reporting cavities. Studies also show the prevalence of gingivitis in children to be as high as 91%.

Professor Avi Zini, DMD, dean of Hebrew University-Hadassah Faculty of Dental Medicine said: 'Young children love to use electric toothbrushes, yet most studies

have only focused on whether electric or manual toothbrushes are better for reducing the dental plaque that causes cavities and gingivitis in adults. As long as children use their electric toothbrushes according to manufacturers' instructions, the results should be very beneficial for their oral health.'

In the study, researchers followed two groups for four weeks: 3–6-year-old children whose parents brushed their primary teeth, and 7–10-year-old children who brushed their own primary and permanent teeth. Each group used either an Oral-B Kids O-R electric toothbrush or a Paro Junior manual toothbrush.

While brushing with either toothbrush reduced plaque and gingivitis, children had significantly better results with the electric toothbrushes.

After the four-week trial:

- More than half the children ages 3–6 (55.7%) experienced greater whole mouth plaque reduction and 34.3% greater back of the mouth plaque reduction
- The vast majority of children ages 7–10 (94.5%) had greater whole mouth plaque reduction and 108.4% greater back of the mouth plaque reduction
- Whole mouth gingivitis among children ages 7–10 was reduced by 14% and back of the mouth gingivitis reduction was 18.8%.

References

1. Davidovich E, Ccahuana-Vasquez R A, Grender J, Timm H, Gonen H, Zini A. A 4-week randomized controlled trial evaluating plaque and gingivitis effects of an electric toothbrush in a paediatric population. *Int J Paediatr Dent* 2023; doi: 10.1111/ipd.13130. ✦

Outstanding achievements in the British Fluoridation Society essay prize



Yaqoub Imran, undergraduate prize winner

In a showcase of intellect and dedication, the winners of the 2023 British Fluoridation Society (BFS) Essay Prize have been announced, highlighting remarkable contributions from each category: Undergraduate, Postgraduate, and Dental Care Professional.

Participants were challenged to explore the theme, 'Water fluoridation is seen as a success in cities such as Birmingham and Newcastle. How would you ensure that such success is replicated throughout the rest of the United Kingdom?'

The three winners and their prizes were: Yaqoub Imran (Undergraduate)



Ryan Grocock, postgraduate prize winner

essay prize: £500, Ryan Grocock (Postgraduate) essay prize: £1,000 and Lauren Stockham (Dental Care Professional) essay prize: £1,000.

BFS chair Barry Cockcroft CBE led the judging panel and expressed enthusiasm about the competition's inaugural year, stating: 'The response exceeded our expectations in both quantity and quality of entries. Witnessing the depth of engagement from entrants reaffirms that the topic of water fluoridation is thriving with promising initiatives on the horizon. It's truly inspiring to see the younger generation invest the time and effort to



Lauren Stockham, DCP prize winner

craft compelling essays of up to 3,000 words.'

BFS secretary and panel member Ray Lowry echoed this sentiment, emphasising the impressive standard of entries. 'The deliberation process took considerable time due to the quality displayed in each submission. Our heartfelt congratulations go to the well-deserving winners. This recognition underscores the merit of their contributions. We eagerly anticipate sharing their winning essays and remain optimistic about the potential developments for the issue, the Society, and these gifted colleagues.' ✦