Study finds using electric toothbrushes significantly improves children's dental health

November 13 2023

Turesky Modified Quigley-Hein Plaque Index (TMQHPI) % change from baseline for oscillating–rotating (O–R) and manual brush in 3- to 10-year-old children. *Change from baseline endpoints for both treatments statistically significant P International Journal of Paediatric Dentistry (2023). DOI: 10.1111/ipd.13130
It may be time to go electric when it comes to kids brushing their teeth, according to new research by the Hebrew University-Hadassah Faculty of Dental Medicine.

According to a new randomized, controlled trial published in the *International Journal of Paediatric Dentistry*, oscillating-rotating (O-R) electric toothbrushes were significantly more effective than manual toothbrushes in reducing plaque and gingivitis in young children (ages 3-10). Gingivitis is a common form of gum disease that can lead to tooth loss and other serious conditions.

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%.

"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," says Prof. Avi Zini, DMD, dean of Hebrew University-Hadassah Faculty of Dental Medicine. "As long as children use their electric toothbrushes according to manufacturer's instructions, the results should be very beneficial for their oral health."

In the study, researchers followed two groups for four weeks: three- to six-year-old children whose parents brushed their primary teeth, and seven- to 10-year 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. Additionally, whole mouth gingivitis among children ages 7–10 was reduced by 14% and back of the mouth gingivitis reduction was 18.8%.


Provided by Hebrew University of Jerusalem