



## Plaque Removal

in vivo study

# Comparison of plaque removal by Sonicare For Kids and a manual toothbrush in children aged 4–7 years in a professionally applied toothbrushing study

Pelka M, DeLaurenti M, Master A, Jenkins W, Strate J, Wei J, Schmitt P. International J Pediatric Dent. 2009; 19:s1

### Objective

To compare the plaque removal efficacy of Philips Sonicare For Kids at “high” and “low” settings and Oral-B Stages 3® manual toothbrushes in a professionally applied brushing session simulating one and two minutes of brushing time in children aged 4–7 years.

### Methodology

Sixty-eight healthy children (38 females, 30 males; mean age 5.3 years) participated in an IRB-approved single-blind, randomized, split-mouth-design study. Informed consent/assent (with parent) was obtained. Subjects were screened for eligibility (Turesky-Modified Quigley-Hein Plaque Index (TPI) >1.8). Eligible subjects were randomized to Sonicare For Kids “high,” Sonicare For Kids “low” and a manual toothbrush by quadrant and were brushed accordingly by clinical hygienists. TPI was scored at one- and two-minute interval equivalents by quadrant by a blinded examiner. Safety was assessed in oral soft tissue examinations. For statistical analysis, MANOVA for a split-mouth-design was applied and P-values were adjusted using the Dunnett-Hsu adjustment.

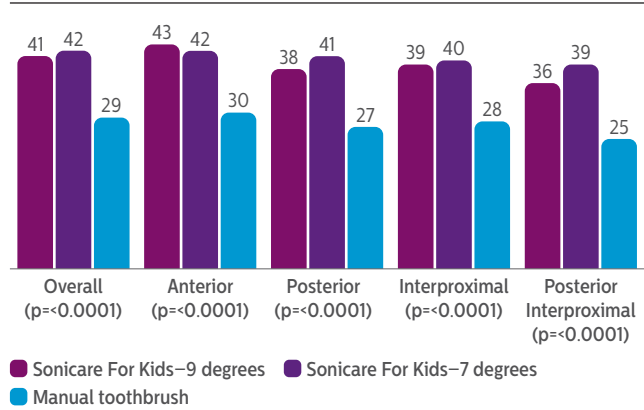
### Results

Sonicare For Kids (in “high” and “low” settings) removed significantly more plaque than a manual toothbrush from the dentition overall ( $p < 0.0001$ ) as well as in hard-to-reach areas, i.e., the posterior teeth ( $p < 0.0001$ ) and the interproximal spaces ( $p < 0.0001$ ) at one- and two-minute brushing intervals in children aged 4–7 years with professionally applied brushing sessions. Both toothbrushes were safe to use.

### Conclusion

Sonicare For Kids was found to remove significantly more plaque than Oral-B Stages 3 manual toothbrush in children aged 4–7 years with professionally applied brushing. It is also proven safe and gentle on oral tissues.

**Adjusted Mean Percent Plaque Reduction, Squirt Prototype 7 and 9 Degrees vs. Manual Toothbrush, 1-Minute Equivalent**  
% of Plaque Reduction



**Adjusted Mean Percent Plaque Reduction, Squirt Prototype 7 and 9 Degrees vs. Manual Toothbrush, 2-Minute Equivalent**  
% of Plaque Reduction

