

Plaque Biofilm Disruption

in vitro study

Comparison of interproximal plaque removal efficacy of two power toothbrushes using in vitro oral biofilms

Hope CK, Wilson M. *Am J Dent* 2002;15:7B-11B

Objective	To compare, in vitro, the interproximal plaque removal beyond the bristles of two power toothbrushes.
Methodology	A dental plaque model in which a multispecies biofilm was grown on hydroxyapatite discs was used to evaluate the ability of Sonicare Elite and Oral-B 3D® to remove biofilm without bristle contact. The dental plaque model was located interproximally at a distance of approximately 2 mm from the bristles and exposed to the fluid dynamic activity generated by the brushes with the motors either activated or inactivated for 5 seconds.
Results	In the activated state, both brushes removed a significantly higher percentage of plaque biofilm compared to the inactive brushes. The percentage of plaque bacteria removed by Sonicare Elite (32.2%) beyond the bristles was significantly greater than that removed by Oral-B 3D (9.5%), ($p < 0.05$).
Conclusion	Sonicare Elite removed significantly more dental plaque biofilm 2–3 mm beyond the reach of the bristles than Oral-B 3D.

