

Table II. Clinical outcomes from automated toothbrush studies*

Automatic toothbrush tested	Compared to	Subject number	Length	Clinical outcomes	Comments	Reference
Interplak®	Manual	40	6 mos	Significantly lower PI & BOP scores for ATB	Supportive Periodontal Therapy patients	Yukna and Shaklee ³
Sonicare®	Manual	60	12 weeks	Sonic brush superior in PI but devices equal in reducing GI	Sonic brush caused less abrasion than manual.	Tritten and Armitage ⁴
Braun Oral B Plaque Control® (D-5)	Manual	40	6 weeks	ATB significantly better at reducing PI and GI	Brushed twice daily for two minutes	Stolz and Bay ⁵
Braun Oral B Plaque Control® (D-5)	Manual	77	8 mos	ATB removed more plaque but no difference observed in inflammation	Subjects received prophylaxis at baseline.	Van der Weijen et al. ⁶
Braun Oral B Plaque Control® (D-5)	Manual	111	12 mos	No significant differences in plaque but significantly better in BOP reduction for the ATB	No abrasion recorded for either group	Ainamo et al. ⁷
Sonicare®	Manual	51	4 weeks	Sonic had superior PI reduction, but GI reductions were equivalent.	No flossing or rinsing allowed during the study	Johnson and McInnes ⁸
Interplak®	Manual	24	4 weeks	ATB superior in plaque and gingivitis reduction	Included three periods of OI instruction	Killoy et al. ⁹
Braun Oral B 3-D Plaque Remover®	Manual	105	3 mos	Significantly better reductions in PI and GI for the ATB, but equivalent for BI	No soft or hard tissue abrasion in either group	Cronin et al. ¹⁰
Sonicare®	Manual	24	4 week	Sonic brush superior in PI, GI, PD, gram-negative bacteria	Adolescent orthodontic patients with overt gingivitis	Ho and Niederman ¹¹
Interplak®	Philips® Rotadent® Manual	36	2 mos	Manual brush most effective in reducing PI and GI	Adolescent orthodontic patients	Tripeneers et al. ¹² Cross-over study
Interplak®	Rotadent® Braun Oral B Plaque Control® (D-5) Manual	38	16 weeks	Rotadent has superior PI removal but no difference in GI reduction for any of the brushes	Adolescent orthodontic patients	Heintze et al. ¹³ Cross-over study
Sonicare®	Manual	40	3 mos	Sonic brush superior in PI and GI reductions	Adolescent ortho patients; only facial of anteriors evaluated. Study was scheduled for three months but due to 'missed visits' extended until all subjects had been evaluated four times (eight dropouts).	White ¹⁴
Interplak®	Manual	2,966 implants	6 years	ATB significantly better at PI and GI reduction	Evaluations were for up to 24 months on each subject.	Truhlar et al. ¹⁵
Sonicare®	Manual	31	6 mos	Sonic brush had significantly lower PI and BI, but not GI or PD	High level of compliance noted	Wolff et al. ¹⁶
Braun Oral B Ultra Plaque Remover® (D-9)	Sonicare®	72	6 week	Oral B statistically better at GI and CI reductions but both brushes equivalent in GBI and PI	Cross-over study	Isaacs et al. ¹⁹
Sonicare®	Braun Oral B Plaque Remover® (D-7)	116	8 weeks	Equivalency in PI and GI reductions	Compliance was 100% for both brushes and neither device showed gingival irritation or trauma.	Grossman et al. ²⁰
Philips®	Braun Oral B Plaque Remover® (D-7) Manual	75	6 weeks	PI reduction for ATB was significant only at interproximal sites; GI was stable for Philips and increased for Braun and manual	Unusual findings that the investigator can't conclusively explain	Heasman et al. ²¹
Rowenta®	Braun Oral B Ultra Plaque Remover® (D-9)	60	30 day	Equivalency in PI and GBI	No trauma, irritation or discomfort reported	Barnes et al. ²² by either group
Sonicare®	Braun Oral B Plaque Remover® (D-7)	66	6 mos	Sonicare and Braun both reduced PI and GI; Sonicare had better reductions for PBS, PD, PAL	Patients were allowed to floss. The number of regular flossers was equal for each group.	Robinson et al. ²³
Sonicare®	Manual	40	8 weeks	Sonic superior in GI, BP, PD, CAL, GCF flow	Patients were given a map of the mouth and asked to brush for 10 extra seconds in the test sites.	O'Beirne et al. ²⁴

*Table represents published, in-vivo studies that evaluate clinical outcomes