



Gentleness
in vivo study

Comparison of Sonicare FlexCare power toothbrush and a manual toothbrush on dentin hypersensitivity

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Objective

To investigate the effects of the Sonicare FlexCare power toothbrush and Oral-B P-40® manual toothbrush on dentin sensitivity.

Methodology

Forty-five healthy subjects, aged 24-63 years were enrolled in an IRB-approved randomized, parallel-design study to assess dentin sensitivity after four and eight weeks of use with Sonicare FlexCare or Oral-B P-40 manual toothbrush. In order to qualify for enrollment, subjects were required to have dentin sensitivity on the facial surface of at least one tooth and up to two teeth in different quadrants at screening and baseline on the same teeth. Sensitivity was assessed using evaporative and tactile stimulation and defined as experiencing discomfort using a Visual Analogue Scale (VAS) of 0-100 mm. Subjects returned to the research center at four and eight weeks for repeat assessments on sensitive teeth. At two and six weeks, subjects were contacted by phone for compliance checks and to answer study-related questions. The primary endpoint was the reduction in dentin sensitivity following eight weeks of product use.

Results

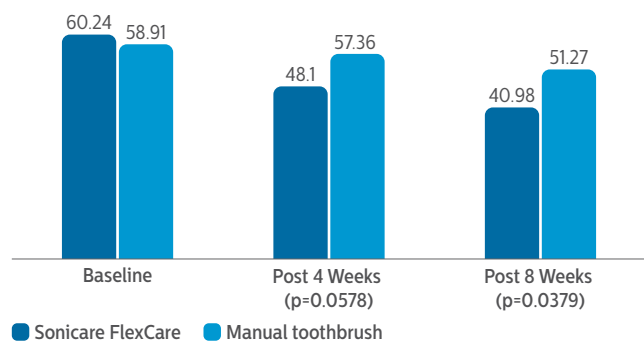
Forty-three subjects completed the study. The table provides a summary of the Global, Evaporative and Tactile VAS sensitivity mean scores measured at each of the three study examination visits. There was a statistically significant difference in the longitudinal VAS assessments of sensitivity for FlexCare post four and eight weeks of product use. Similar differences were observed for the manual toothbrush users except the evaporative stimulus scores, which were not significantly different post four weeks. Although no statistically significant difference was observed between groups when sensitivity was assessed after tactile stimulation at either time point, there was a statistically significant difference between FlexCare and a manual toothbrush following four weeks ($p=0.0578$) and eight weeks ($p=0.0379$) of product use after evaporative stimulation.

Conclusion

Philips Sonicare FlexCare showed significant reduction in pain associated with dentin hypersensitivity compared to a manual toothbrush following eight weeks of product use.

Examinations	Treatments	VAS Scores (Mean)		
		Global	Evaporative	Tactile
Screening	FlexCare	56.9	60.86	NA
	Manual	56.41	57.82	NA
Baseline	FlexCare	NA	60.24	53.57
	Manual	NA	58.91	54.98
4 Week	FlexCare	45.33	48.1	41.67
	Manual	50.09	57.36	36.57
8 Week	FlexCare	38.1	40.98	33.52
	Manual	45.64	51.27	34.57

Evaporative Stimulus VAS Score



Global Assessment of Sensitivity

VAS Score

