

## Gum Health and Plaque Removal

in vivo study

# A study to assess the effects of Philips Sonicare AirFloss Pro, when used with antimicrobial rinse, on gum health and plaque removal

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### Objectives

To compare the effects of four home use oral hygiene regimens on gum health and plaque reduction

### Methodology

Two-hundred eighty seven healthy adults (mean age 35.7 years, 184 female/103 male) were enrolled in this ethics-committee approved parallel, examiner-blinded clinical trial. Eligible subjects were non-smokers, aged 18–65 years, who were routine manual toothbrush users and self-reported as irregular, at most, in performing interdental cleaning. Enrolled participants had a minimum average plaque score of 0.5 per Rustogi Modified Navy Plaque Index following 2–6 hours plaque accumulation, and a minimum of 10 sites  $\geq 1$  per Gingival Bleeding Index. All enrolled subjects were dispensed study products per randomization, either an ADA reference manual toothbrush alone twice daily, or an ADA reference manual toothbrush in addition to once daily use of string floss or Sonicare AirFloss Pro with rinse (either Philips Sonicare BreathRx or Listerine Cool Mint) dispensed to the interproximal space via the device. Subjects were instructed on product use technique and were to utilize the prescribed regimen for the following 28 days. Subjects returned to clinic at an interim time point of 14 days, and finally at 28 days for efficacy and safety evaluations following the 2–6 hour plaque accumulation period. Efficacy measures included gingival inflammation (MGI), gingival bleeding (GBI) and surface plaque (MPI). Safety was assessed per subject report and intraoral examination. Study products were collected from study participants at Day 28 and they were dismissed from study.

### Results

For Gingival Inflammation (MGI) at Day 28, the overall percent reduction for the manual toothbrush treatment group was 1.09%. For string floss, it was 11.41% and for AirFloss Pro plus mouth rinse it was 9.03%.

For Gingival Bleeding (GBI) at Day 28, the overall percent reduction for the manual toothbrush treatment group was 4.02%. For string floss it was 43.31%, and for AirFloss Pro plus mouth rinse it was 38.63%

For plaque reduction (MPI) at Day 28, the overall percent reduction for the manual toothbrush treatment group was 5.71%. For string floss it was 26.47%, and for AirFloss Pro plus mouth rinse it was 23.18%.

There were four reported safety events that were deemed mild in severity and resolved.

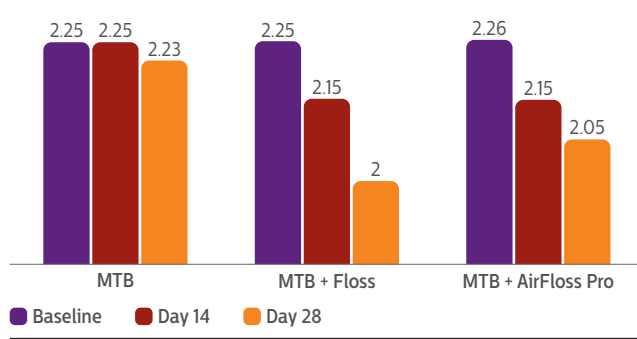
### Conclusions

The use of an interproximal cleaning regimen as an adjunct to manual toothbrushing improves gum health and reduces plaque significantly better than manual toothbrushing alone.

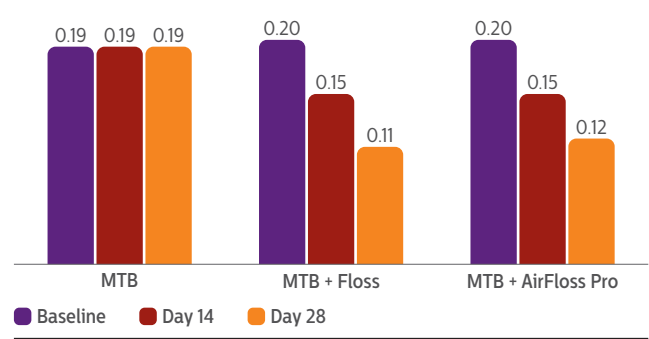
Among the adjunct interproximal cleaning regimens, Sonicare AirFloss Pro used with mouth rinse (either Philips Sonicare BreathRx or Listerine Cool Mint) dispensed to the interproximal space was shown to be as effective as string floss in improving gum health and removing interdental plaque for all efficacy measures (MGI, GBI, MPI).

All study products were safe for use.

**LS Means, Modified Gingival Index, Overall,  
Baseline, Day 14 and Day 28**



**LS Means, Gingival Bleeding Index Overall,  
Baseline, Day 14 and Day 28**



**LS Means, Modified Plaque Index Overall,  
Baseline, Day 14 and Day 28**

