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## **Mechanical devices versus antimicrobial rinses in plaque and gingivitis reduction.**

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### **Abstract**

The effectiveness of mechanical oral cleaning and oral antimicrobial rinses was compared for gingivitis and bacterial plaque control in 158 subjects. Teeth were brushed ad lib throughout; four of the five groups used either an interdental cleaner, dental floss, an essential oil mouthwash or a cetylpyridinium mouthwash. Gingival bleeding (EIBI), visual inflammation (VGI), and tooth plaque coverage were evaluated at zero, six and 12 weeks of product use. After six weeks, bleeding reduction was 42% greater for the interdental cleaner and 21% greater for the dental floss than for the control. All groups showed a further decrease after 12 weeks, but only the 49% reduction of the interdental cleaner was significantly greater than the control. The rinses showed no more reduction in bleeding sites than the control throughout the study. VGI scores were no different from the control for any of the groups. However, the EIBI proved much more sensitive than the visual method finding three times as many inflamed sites. Plaque was reduced by both antimicrobial rinses 27% more than the control over 12 weeks; the interdental cleaner and dental floss groups showed no significant incremental plaque reductions. The results suggest antimicrobial rinses reduce plaque on visible tooth surfaces, but do not penetrate sufficiently between teeth to affect interdental plaque and thus interdental inflammation. However, by disturbing interdental plaque, both dental floss and the interdental cleaner have little effect on visible tooth surface plaque accumulation, yet produce a significant reduction in gingival inflammation.