

Adjunctive effects of a dietary supplement comprising dried whole fruit, vegetable and berry juice concentrates on clinical outcomes of treatment of periodontitis

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ABSTRACT

Periodontitis is a prevalent chronic inflammatory disease, a major cause of tooth loss and associates with systemic morbidity and mortality. Biologically, it associates with reduced local and systemic antioxidant defences and elevated levels of oxidative stress secondary to a hyper-inflammatory neutrophil host response to plaque bacteria. This randomised, placebo-controlled, double-blind trial, aimed to assess whether adjunctive benefit could be detected with Juice Plus+® supplementation during and after standard non-surgical periodontal therapy. Primary outcomes were reduction in periodontal pocket depth (PPD) and gain in connective tissue attachment level (CAL) to teeth, 2-months post-therapy. Test interventions were fruit/vegetable (FV, n=16) and FV/berry (FVB, n=15) verses placebo (PL, n=17). Statistical analysis employed 2-tailed ANCOVA (baseline PPD and CAL as covariates) and interim data on 48 never smokers are reported. Non-surgical therapy produced significant improvements in PPD (FV = 0.86±0.4mm; FVB = 0.88±0.4mm; PL = 0.81±0.5mm) and for CAL (p<0.0001). Despite such large improvements, additional benefit was seen for PPD with FV (p<0.03) and FVB (p<0.04) supplementation verses PL, and a trend towards additional gains in CAL with FV (p=0.07). Thus, adjunctive Juice Plus+® may offer additional therapeutic benefit to standard non-surgical periodontal therapy. Support NSA (TN, USA)