Comparison of the Clinical Efficacy in Reducing Dentin Hypersensitivity of a New Dentifrice Containing 8.0% Arginine, Calcium Carbonate, and 1000 ppm Sodium Monofluorophosphate to a Commercially Available Toothpaste Containing 1000 ppm Sodium Monofluorophosphate: An Eight-Week Clinical Trial on Adults in New Delhi, India

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Abstract

- **Objective:** This clinical study evaluated relief from dentin hypersensitivity among subjects who brushed their teeth with a new dentifrice containing 8.0% arginine, calcium carbonate, and 1000 ppm fluoride as sodium monofluorophosphate (MFP) to subjects who brushed with a commercially available dentifrice containing 1000 ppm MFP over an eight-week period.

- **Methods:** Adult subjects from the New Delhi, India area, with two teeth that exhibited dentin hypersensitivity, both to tactile stimulation using the Yeaple Probe and to stimulation using an air blast delivered by a standard dental unit syringe, were screened for study enrollment. Qualifying subjects were randomly assigned one of the study dentifrices and instructed to brush their teeth for one minute, twice daily (morning and evening) with the provided dentifrice. Follow-up examinations for dentin hypersensitivity were conducted after two, four, and eight weeks of product use.

- **Results:** Subjects provided with the new dentifrice containing 8.0% arginine, calcium carbonate, and 1000 ppm MFP exhibited statistically significantly (p < 0.05) greater reductions in dentin hypersensitivity in response to tactile (81.9%, 90.5%, and 116.7%) and air blast (39.5%, 56.7%, and 76.7%) stimuli than subjects assigned the 1000 ppm MFP dentifrice after two, four, and eight weeks, respectively.

- **Conclusion:** The use of a new dentifrice containing 8.0% arginine, calcium carbonate, and 1000 ppm MFP provides superior efficacy in reducing dentin hypersensitivity (p < 0.05) than a control dentifrice containing 1000 ppm MFP alone after two, four, and eight weeks of use.