

Protocol of Toothbrushing based on Bioavailability of Fluoride in Toothpaste: A Systematic Review.

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Abstract

The objective of the study is to propose a protocol for the appropriate use of fluorides in dentifrices (Dt), based on its bioavailability in saliva (Bs) and / or plaque (Bp) through a systematic review (SR). SR of the literature from 2005 to 2015 in PubMed, Cochrane and SciELO. Inclusion criteria: clinical studies in vivo, Spanish and English, made only with Dt that measured Bs and Bp. The results were evaluated in relation to: 1) Concentration of fluoride in Dt, 2) Brushing time with Dt, 3) Frequency of brushing, 4) Rinse post-brushing and 5) Amount of Dt on the brush. Twelve (12) studies were selected. 1) Bs increases 241 % when using a 5000 ppm of Dt compared to 1450 ppm. 2) Bs is increased by 55 % by increasing the duration of brushing 40 s to 120 s 3) Bp increases by 68 % when brushing 3 times a day compared to 2 times. 4) Not rinsing or rinsing with <10 ml for <10 s increases Bs to 270 % compared to rinses higher volume / time. 5) By increasing the amount of Dt of 0.5 g to 1.5 g, Bs increases up to 266 %. The use of 1.5 g of Dt \geq 1450 ppm of fluoride for \geq 120 s, 3 times a day is recommended and once brushing is complete avoiding oral rinse with water or non fluoride mouthwash .