

Parents' interpretation of instructions to control fluoride toothpaste application

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Purpose: This study determined average amounts of fluoridated toothpaste applied by parents to a child's toothbrush in response to instructions to limit the quantity to a "smear" or "pea-sized" amount.

Methods: Fifty parents of children (12-71 months), sampled from a university-based pediatric dentistry clinic, participated. The majority of children (83%) were covered by Medicaid insurance; 16% had private insurance. Parents were presented with 3 identical, pre-weighed child's toothbrushes, one at a time, and asked to apply the amount of toothpaste instructed. With the first toothbrush, all were asked to demonstrate the amount of toothpaste they typically use with their child. The order of instructions was balanced such that half were asked next to apply a "smear" and then a "pea" and vice versa. The toothbrushes were bagged and weighed at a later time. Last, participants were shown amounts of toothpaste corresponding to a smear and a pea (0.125 g and 0.25 g, respectively) and asked to recommend alternate labels for each. Comparisons between these established amounts and the amount applied by parents were analyzed using a t-test ($P < .05$).

Results: The mean quantity applied in response to "smear" was 0.214 g (SD = 0.187 g) vs. 0.125 g ($P = .002$); the mean quantity in response to "pea" was 0.299 g (SD = 0.210 g) vs. 0.25 g ($P = .10$). Parents' "typical" amount weighed on average 0.334 g (SD = 0.237 g).

Conclusions: Most parents do not use the amount of fluoridated toothpaste recommended for young children and verbal instructions to limit the amount are ineffective. Education by demonstration of "smear" and "pea-sized" amounts of fluoridated toothpaste is recommended.

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