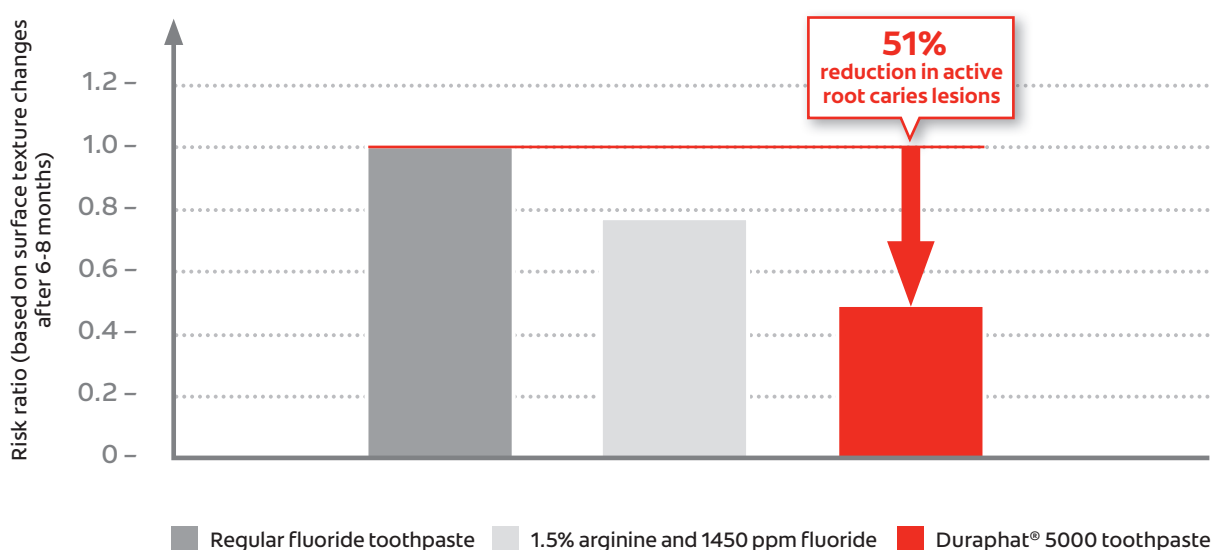


## Systematic Review Shows That Duraphat® 5000 ppm Fluoride Toothpaste Provides 51% More Inactivation of Root Caries

### RESULTS



- Meta analysis confirms with **high level of evidence the effectiveness of Colgate Duraphat® 5000 toothpaste in the inactivation of root caries** (represented in the graph)
- Meta analysis on other non-invasive caries treatment agents (quarterly professionally applied SDF solution, CHX varnish) show effectiveness with low level of evidence in reduction of root caries initiation.

### CLINICAL REVIEW ESSENTIALS

- **34 publications included with 28 non-invasive caries treatment agents**
- **10'136 participants** at the age of 20 – 101
- **Meta-analysis on 17 publications with 4'270 participants**
- Performed at the Department of Operative Dentistry, Periodontology and Preventive Dentistry, **RWTH Aachen University, Aachen, Germany**
- **Published in 2015 in the Journal of Dental Research by Wierichs RJ, Meyer-Lueckel H: Systematic Review on non-invasive Treatment of Root Caries Lesions. J Dent Res 94 (2015), 261-271**

### IMPLICATION FOR PRACTICE

This systematic review provides strong evidence that regular brushing with **Duraphat® 5000 toothpaste is effective in inactivating root caries**. This non-invasive treatment is especially **beneficial for elderly people with increased risk of root caries** to prevent from invasive treatment.

## SUPPLEMENTARY REVIEW INFORMATION



### PRODUCTS UNDER INVESTIGATION

**Control group:** Placebo varnish or regular toothpaste with 1'100 to 1'450 ppm fluoride or regular toothpaste and fluoride rinse (250 ppm)

**Test group:** Duraphat® 5000 ppm Fluoride toothpaste (with 5000 ppm fluoride from sodium fluoride) and 27 other chemical agents (including dentifrices, rinses, varnishes, solutions, gels and ozone applications)



### STUDY PARTICIPANTS

10'136 participants aged 20 – 101 years with exposed root surfaces with or without root caries lesions were included in the review.



### METHODS

DMFRS/DFRS (decayed, missing, filled root surfaces), surface texture (hard, soft) and/or root caries index (RCI) were compared between the studies.



### TRIAL PROCEDURE

1. 3 databases (PubMed, EMBASE and Cochrane Central Registry of Controlled Trials) were screened for clinical studies investigating root caries initiation (development) and root caries activation.
2. Independent review of all relevant articles published between 1947 and 2014.
3. Meta-analysis was performed only for treatment agents with similar interventions and outcome measures investigated in more than 1 study (on toothpaste: 5000 ppm Fluoride (F) or 1.5% arginine plus 1450 ppm F, on rinse: 225 -900 ppm F, on varnish: SDF or CHX and on fluoride toothpaste & rinse (AmF/SnF)).
4. Risk ratios were calculated for changes in surface texture in a random effects model (root caries progression). Mean differences were calculated for DMFRS (root caries initiation).
5. Grading of evidence was performed according to the GRADE network levels.



### CONCLUSION

Meta analysis reveals that regular use of Colgate Duraphat 5000 toothpaste and quarterly professionally applied CHX and SDF varnish are effective in decreasing progression and initiation of root caries lesions to prevent from invasive caries treatment.

Further publications with this product:

- Srinivasan et al. 2014: Community Dent Oral Epidemiol 2014; 42; 333–340
- Ekstrand et al. 2013: Caries Res 2013;47:391–398
- Al Mulla et al. 2010: Acta Odontologica Scandinavica, 2010; 68: 323–328
- Nordström et al. 2010: Caries Res 2010;44:323–331
- Bizhang et al. 2009: BMC Research Notes 2009, 2:147
- Ekstrand et al. 2008: Gerodontology 2008;25: 67–75
- Schirrmeiser et al. 2007: Am J Dent 2007;20:212-216
- Tavss et al. 2003: Am J Dent 2003; 16: 369-374
- Baysan et al. 2001: Caries Res 2001;35:41–46
- Stanley et al. 2000: Angle Orthod 2000; 70 (6):424-430

Further information on this product:

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