

# On fluoride toothpaste – knowledge, attitudes and behaviour

## Akademisk avhandling

som för avläggande av odontologie doktorsexamen vid Sahlgrenska Akademien vid Göteborgs universitet kommer att offentligen försvaras i hörsal Arvid Carlsson, Academicum, Medicinargatan 3, Göteborg, fredag den 22 november 2013 kl. 9.00  
av

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Avhandlingen baseras på följande fyra delarbeten:

- I. Jensen O, Gabre P, Moberg Sköld U, Birkhed D. Fluoride toothpaste and toothbrushing; knowledge, attitudes and behaviour among Swedish adolescents and adults. *Swed Dent J* 2011;35:203-13.
- II. Jensen O, Gabre P, Moberg Sköld U, Birkhed D. Is the use of fluoride toothpaste optimal? Knowledge, attitudes and behaviour concerning fluoride toothpaste and toothbrushing in different age groups in Sweden. *Community Dent Oral Epidemiol* 2012;40:175-84.
- III. Jensen O, Gabre P, Moberg Sköld U, Birkhed D, Povlsen L. "I take for granted that patients know" – oral health professionals' strategies, considerations and methods when teaching patients how to use fluoride toothpaste. *Int J Dent Hyg* 2013 Jul 11. doi: 10.1111/idh.12041. [Epub ahead of print].
- IV. Jensen O, Moberg Sköld U, Birkhed D, Gabre P. Self-reported Changes in Using Fluoride Toothpaste among Older Adults in Sweden – an Intervention Study. Manuscript.



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## Abstract

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**Objective:** This thesis focuses on people's knowledge of, attitudes to, and behaviour regarding the use of fluoride toothpaste when brushing. The aims were: a) to investigate the fluoride toothpaste-related knowledge, attitudes and behaviour among adolescents, adults, older adults and the elderly in the population, b) to explore oral health professionals' knowledge, attitudes and behaviour regarding fluoride toothpaste, and their strategies for teaching patients how to use fluoride toothpaste, and c) to evaluate whether an intervention had a positive effect on fluoride toothpaste-related knowledge and behaviour among older adults. **Design:** Both qualitative (Papers I and III) and quantitative (Papers II and IV) research methods were used. Paper I was based on 15 individual in-depth interviews with participants from three age groups: 15 to 16, 30 to 35 and 60 to 65 years old. Paper II was a randomised cross-section study, based on a questionnaire sent to 3200 individuals from four age groups: 15 to 16, 31 to 35, 61 to 65 and 76 to 80 years old. Paper III was based on five focus group interviews with a total of 23 oral health professionals. Paper IV was a longitudinal study where 68 individuals in a municipality in the western part of Sweden received an intervention, while 151 individuals in another municipality in the eastern part of Sweden served as controls. Both the intervention and the control groups answered the same questionnaire used in Study II. In Papers I and III the interviews were analysed using qualitative content analysis. **Results:** In Paper I participants described toothbrushing with fluoride toothpaste as a priority, despite a lack of knowledge about how to use toothpaste effectively and its positive effect on oral health. In Paper II the majority of the 2023 participants stated that they brushed twice a day, but only 10,8% of them showed to have good toothpaste behaviour, identified as: brushing twice a day, using 1 cm of toothpaste or more, brushing for two minutes or longer and using only a handful of water when rinsing. In Paper III oral health professionals described health promotion and having the patients' best interests at heart, as their driving forces. The focus of the oral health information and instruction was toothbrushing technique and plaque control, and very little attention was paid to how to use fluoride toothpaste. Oral health professionals took for granted that adults already knew about fluoride in toothpaste and the best way to use it. In Paper IV the intervention seemed to be effective in improving the use of fluoride toothpaste when brushing among older adults. **Conclusion:** The state of knowledge and behaviour concerning the use of fluoride toothpaste need to be improved both in the population as a whole and among oral health professionals.

**Key words:** Attitudes, Behaviour, Dental Caries, Fluoride Toothpaste, Intervention, Knowledge, Oral Health, Prevention, Promotion

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