From this *in vitro* study it was concluded that frequent calibration of DIAGNOdent™ should be performed in order to obtain comparable data for longitudinal monitoring.

Key words: infrared; laser; fluorescence; calibration; DIAGNOdent™

Perceived oral health: changes over 5 years in one Swedish age-cohort

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Objective: The purpose of this study was to investigate if a change in the social gradients in perceived oral health occurred over a 5-year period, 1992–1997, using a cohort population from two Swedish counties. *Methods:* In 1992, a cross-sectional mail questionnaire was sent to all 50-year-old persons in two counties in Sweden, Örebro and Östergötland, and altogether there were 8888 persons. In 1997, the same population was sent a new questionnaire. The cohort, comprising the same respondents from 1992 and 1997, was of 5363 persons. An index of perceived oral health was constructed out of three questionnaire variables: satisfaction with teeth, chewing ability and the number of remaining teeth. This index value was set as a dependent variable in a regression model. Reports of toothache were investigated in a separate logistic regression model. *Results:* There were obvious social gradients in the perceived oral health index both in 1992 and in 1997. Marital status, foreign birth, education and occupation were all substantially related to the perceived oral health. The change in perceived oral health was analysed. Almost half of the cohort (47.4%) showed no change at all. Those with increased and those with decreased health were rather evenly distributed on both sides, with 22.0% with better health in 1997 and 30.6% with worse health. Gender and education were related to toothache experience. Conclusion: Changes have been moderate in the perceived oral health in this cohort, despite the rather drastic changes in the remuneration of dental care during this study time. However, this also means that the social differences remain, despite the official goals of increased equity.

Lactobacillus species in supragingival plaque in subjects with hyposalivation

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The aim was to analyse frequency and proportion of *Lactobacillus* species in supragingival plaque in subjects with hyposalivation and the *Lactobacillus* species ability to ferment sucrose, mannitol, sorbitol and xylitol. *Material and methods:* Ten subjects treated with radiation therapy (RT), 10 subjects with primary Sjögren's syndrome (pSS), and matched controls were included. Supragingival plaque was collected interproximally 12–13 and 15–16 and analysed using cultivation technique. *Lactobacillus* colonies were randomly selected and stored at −70°C. The *Lactobacillus* strains fermentation pattern was analysed using basal medium with 1% of respective carbohydrate/sugar alcohol added. *Results:* Lactobacilli were more frequent at site 15–16 than at site 12–13. Lactobacilli were about twice as frequent in the pSS and RT groups than in their respective control group. For those harbouring lactobacilli, the proportion of the total count at site 15–16 was 13 ± 27% for the RT group and 0.003 ± 0.003% for their controls, 3.2 ± 5.8% for the pSS group and 0.06 ± 0.2% for their controls. We have further analysed 28 of 114 collected *Lactobacillus* strains. All strains gave a pH <6.0 and at 95% a pH <5.5 at sucrose fermentation. Mannitol could be fermented by 82% of the strains, sorbitol by 75% and xylitol by 64%. A pH <5.5 was obtained for 82% of the strains with mannitol, 75% with sorbitol and 32% with xylitol. *Conclusion:* Subjects with hyposalivation have a marked increase in lactobacilli. Of the strains analysed this far 95% gave a pH <5.5 at sucrose-fermentation. A pH <5.5 was obtained for 82% of the strains with mannitol, 75% with sorbitol and 32% with xylitol. As those sugar substitutes are included in tooth pastes, chewing gums and salivastimulating tablets and sprays, it is likely that the lactobacilli are further promoted in subjects with hyposalivation.