

## **Guidelines for the use of fluorides EFCD**

(Professor Jan Ekstrand, March 2009)

To be successful in the use of fluoride in caries treatment and prevention the fluoride program must be based on the knowledge of optimal safety and evidence based efficacy.

Based on recent literature reviews (ref 1, 2 and 3) the following statements can be made on the efficacy of various fluoride products and programs. The results from these reviews are based on studies judged as having high-grade to moderate-grade evidence and were based on approximately 1000 articles. The results revealed that a large number of clinical studies had insufficient scientific evidence. It is important to emphasize that “insufficient evidence” does not indicate that the method or program had no clinical effect. However, if the scientific documentation shows that a method has no effect; its use should be questioned. Based on the reviews the following conclusion can currently be made:

Fluoride intake at intervals throughout the day is an important factor in limiting the prevalence and severity of dental caries in erupted teeth and, therefore, the widespread use of water fluoridation and fluoridated toothpaste has provided effective in caries prevention. Fluoride toothpaste dominates the toothpaste market and the fluoride concentration in the paste range from 250 to 2500 PPM (0.025 – 0.25 % F). Scientific evidence shows that F toothpaste has a strong preventive dose dependent effect both in children and adults, that is, 0.15 % F has better effect than 0.10 % F toothpaste.

In the literature there is limited evidence that mouth rinsing with fluoride daily, weekly, or once every two weeks has any significant effect in children and adolescents beyond that achieved by the daily use of F toothpaste. There are some studies that suggest that daily mouth rinsing with fluoride prevents root caries in older people.

The preventive effect of fluoride supplements or tablets on primary teeth or permanent teeth cannot be scientifically assessed, nor can the preventive effect of adding fluoride to milk or salt.

Fluoride Varnish has shown to give a preventive effect on caries when the treatment is performed two times a year in children and adolescents in combination with the daily use of fluoride toothpaste.

### **References:**

1. Marinho VCC, Higgins JPT, Logan S, Sheiham A. Fluoride toothpastes for preventing dental caries in children and adolescents. Cochrane Database of Systematic Reviews 2003, Issue 1. Art. No: CD002278. DOI: 10.1002/14651858.CD002278

2. Marinho VCC, Higgins JPT, Sheiham A, Logan S. Combinations of topical fluoride (toothpastes, mouthrinses, gels, varnishes) versus single topical fluoride for preventing dental caries in children and adolescents. *Cochrane Database of Systematic Reviews* 2004, Issue 1. Art. No.: CD002781. DOI: 10.1002/14651858.CD002781.pub2
3. Prevention of Dental Caries: A Systematic Review; The Swedish Council on Technology Assessment in Health Care. ISBN 991-87890-81-X report no : 161, 2002.