



CONSIDERATIONS RE: USE OF FLUORIDES IN CARIES PREVENTION

Introduction

The Canadian Dental Association supports the appropriate use of fluorides in dentistry as one of the most successful preventive health measures in the history of health care. Over 50 years of extensive research throughout the world has consistently demonstrated the safety and effectiveness of fluorides in the prevention of dental caries.

Fluorides are found naturally throughout the world. They are present to some extent in all food and water so that all humans ingest some fluoride on a daily basis. In addition, fluorides are used by communities as a public health measure to adjust the concentration of fluoride in drinking water to an optimum level (water fluoridation); by the individuals in the form of toothpastes, rinses, lozenges, chewable tablets, drops; and by the dental profession in the professional application of gels, foams and varnishes.

The availability of fluorides from a variety of sources must be taken into account before embarking on a specific course of fluoride delivery to either populations or individual patients. This is particularly important for children under the age of six, where exposure to more fluoride than is required to simply prevent dental caries can cause dental fluorosis. Provided that the total daily intake of fluoride is carefully monitored, fluoride is considered to be a most important health measure in maintaining oral health for all Canadians.

CDA recognizes the need to monitor the scientific literature with respect to levels of exposure to fluoride and general health to ensure the continued safe and effective use of fluorides in dentistry.

Water Fluoridation

CDA supports fluoridation of municipal drinking water (at minimum levels required for efficacy as recommended by the Federal-Provincial Subcommittee on Drinking Water) as a safe, effective and economical means of preventing dental caries in all age groups. Fluoride levels in the water supplies should be monitored and adjusted to ensure consistency in concentrations and avoid fluctuations.

Communities considering water fluoridation are encouraged to review their individual circumstances carefully and in detail, giving attention to any available data on the dental health of community members, the size of the group not likely exposed to adequate

fluoride from other sources, the minimum level of fluoride required to be beneficial, and any other information which would be helpful in making the required value judgment.

CDA recognizes and supports the need for continued research to determine optimal water fluoridation levels that can continue to provide protection from dental caries while reducing potential to contribute to fluorosis.

Fluoridated Toothpastes and Mouth Rinses

CDA recognizes and supports the use of fluoridated toothpastes and mouth rinses in the prevention of dental caries.

Fluoridated toothpaste should be used twice per day with a minimum amount of water used to rinse the mouth after brushing. As excessive swallowing of toothpaste by young children may result in dental fluorosis, children under 6 years of age should be supervised during brushing and only use a small amount (e.g. pea-sized portion) of toothpaste. Children under 3 years of age should have their teeth brushed by an adult using only a smear of toothpaste.

Fluoride mouth rinses are an effective preventive measure for at risk individuals and should be used according to the specific needs of the individual. Fluoride mouth rinsing is not recommended for children under 6 years of age.

Professional Topical Applications of Fluoride Gels, Foams and Varnishes

CDA recognizes and supports the professional topical applications of fluoride gels, foams and varnishes in the prevention of dental caries for individuals at risk.

Fluoride Supplements

Fluoride supplements, in the form of chewable tablets, lozenges or drops, are only required for *high dental caries risk* patients and may be unnecessary if the patient is receiving adequate fluoride from other sources.

CDA suggests the following guidance in the use of fluoride supplements:

- Before prescribing fluoride supplements, a thorough clinical examination, dental caries risk assessment and informed consent with patients/caregivers are required.
- The Canadian Consensus Conference on the Appropriate Use of Fluoride Supplements for the Prevention of Dental Caries in Children, held in November 1997 suggested that high caries risk individuals or groups may include those who do not brush their teeth (or have them brushed) with a fluoridated dentifrice twice a day or those who are assessed as susceptible to high caries activity because of community or family history, etc.
- The estimations of fluoride exposure from all sources should include the use of fluoridated dentifrice and all home and child care water sources. Dentists should be aware of the water fluoride content in their area. This information is available

- from public health agencies. The possible impact of fluoride reducing factors within the home such as the use of unfluoridated bottled water or some reverse osmosis devices should be taken into account.
- Lozenges or chewable tablets are the preferred forms of fluoride supplementation. Drops may be required for individual patients with special needs.
 - The use of fluoride supplements before the eruption of the first permanent tooth is generally not recommended. When, on an individual basis, the benefit of supplemental fluoride outweighs the risk of dental fluorosis, practitioners may elect to use these supplements at appropriate dosages on young children. In doing so, **the total daily fluoride intake from all sources should not exceed 0.05-0.07 mg F / kg body weight** in order to minimize the risk of dental fluorosis.
 - Following the eruption of the first permanent tooth and the associated decrease in the risk of dental fluorosis at this stage of development, fluoride supplementation in the form of lozenges or chewable tablets may be used to deliver an intra-oral fluoride dose.

Fluoride Exposure from Multiple

CDA recognizes the availability of fluoride from a variety of sources and the increasing prevalence of dental fluorosis within communities. For this reason, CDA recommends:

- Patients and the parents of young children are encouraged to give attention to their circumstances and to be aware of their own potential exposure to fluoride (in drinking water from their own wells, for example).
- Provincial health departments should help to inform both patients and health professionals concerning the fluoridation status of naturally fluoridated drinking water in communities and areas.
- Parents should supervise the tooth brushing of young children and educate them to use only a pea-sized amount of fluoridated toothpaste on their toothpaste and to minimize swallowing.
- Dentists and patients should review a patient's potential exposure to fluoride whenever treatment includes an option for additional exposure.