

Fluorides

- International consensus that the widespread use of fluoride has been a major factor in the overall decline in the prevalence and severity of dental caries in developed countries.¹
- Most recent expert consensus in Australia – ARCPOH Guidelines published in ADJ 2006.²
 - ♦ Substantial and continuing evidence of the efficacy of fluoride in caries prevention
 - ♦ Water fluoridation and daily use of fluoride toothpaste – baseline recommendations
 - ♦ Other fluorides recommended on individual needs basis
- Despite significant reduction in caries in children – only some improvement has carried through to adulthood – high levels of caries exist among some groups. eg. low socio-economic groups, indigenous, rural and remote.
- Fluoride inhibits demineralisation by lowering the critical pH for enamel dissolution. Fluoride enhances remineralisation by lowering energy needed to reform apatite.
- Calcium Fluoride globules form on tooth surface and in plaque – acts as a fluoride reservoir. Remineralised areas are more resistant to demineralisation.
- Product recommendations should be based on individual needs:
 - ♦ Age
 - ♦ Fluoride exposure (water fluoridation, water filters, toothpaste, fluoride products)
 - ♦ Caries risk (Diet, OH, medical history, medications, orthodontic tx)
 - ♦ Behaviour (Lifestyle, patient/parent preference)
 - ♦ Product availability (Form, Fluoride type, Concentration)
- Fluoride efficacy directly related to frequency and concentration.

Toothpastes:

- Sodium fluoride and MFP comparable efficacy.
- 400-500ppm – Children under 6 years (eg. My First Colgate, Sparkling Mint Gel; 2-6 years)
- 1000-1450ppm Standard concentration in supermarkets (eg. Colgate Total; Colgate Sparkling Mint Gel 6+ years)
- 5000ppm – High risk – pharmacy and dental practices only (NeutraFluor 5000 Plus, NeutraFluor 5000 Sensitive)

Rinses:

- Neutral and APF comparable clinical efficacy
 - ♦ Daily: NeutraFluor 220 Alcohol-free
 - ♦ Weekly: NeutraFluor 900
- Indications – moderate to high caries risk, increased caries susceptibility (ie. Ortho tx)

Caution – Not for children under 7 years. Avoid APF in patients with porcelain, composite and GIC restorations and patients with xerostomia or erosion.

Gels:

- Neutral and APF comparable clinical efficacy
- In-surgery: Tray application or Paint on

Varnish: Duraphat

- In-surgery treatment only: Spot application for high risk caries or dentine hypersensitivity
- 22,600 ppm sodium fluoride. Should be used for people who have elevated risk of developing caries, including children under the age of 10. Dosage instructions should be followed.

References

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