

Oral health promotion for school children

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Oral Health

- **Oral diseases** affect children's ability to eat and chew, the food they choose, their appearance and the way they communicate.
- **Pain** from teeth and the mouth can compromise children's attention and their ability to work at school.



Dental caries and Fluoride

- Research has shown that fluoride is **most effective in dental caries prevention** when a low level of fluoride is constantly maintained in the oral cavity
- Fluorides can be obtained from fluoridated **drinking-water, salt, milk, mouthrinse** or **toothpaste**, as well as from professionally applied fluorides; or from combinations of fluoridated toothpaste with either of the other fluoride sources

School-based Fluoride Mouth Rinse program



Nursery school, 4-5 yrs



Primary school, 6+ yrs

The method of S-FMR in Japan

- S-FMR has been practiced since the **age of 4-5 years** when the **permanent teeth would start erupting**
- S-FMR has been continued **until graduating from junior high school** when the permanent dentition would be completed
- Nursery/Preschool children **train by rinsing solution with tap water** for a month before start practicing S-FMR
- Fluoride concentration and amount of rinsing solution according to school and frequency a week of rinsing

day nursery & preschool

5/week 0.05 % sodium fluoride (NaF) solution 7 ml

primary school & junior high school

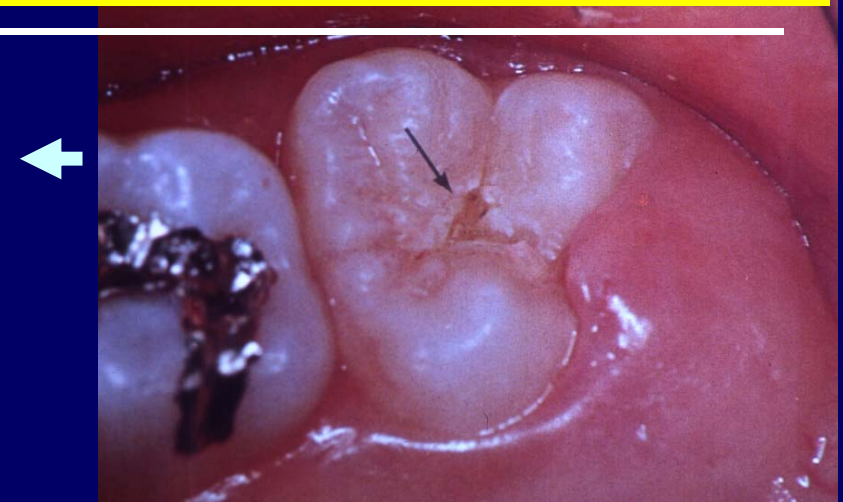
1/week 0.2 % NaF solution 10 ml

Eruption rate of 1st and 2nd molars according to Age

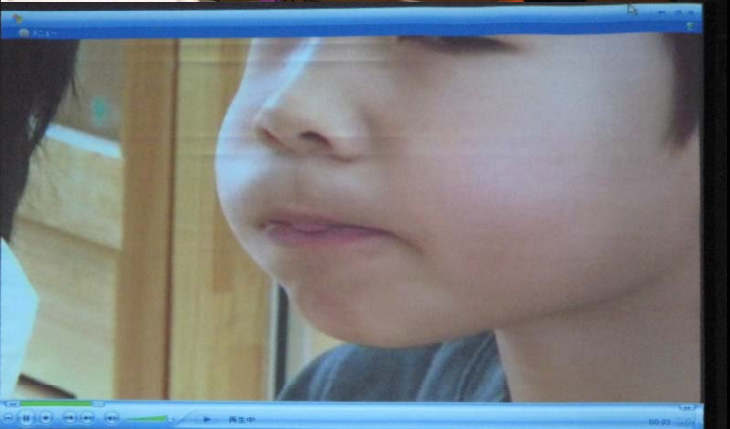
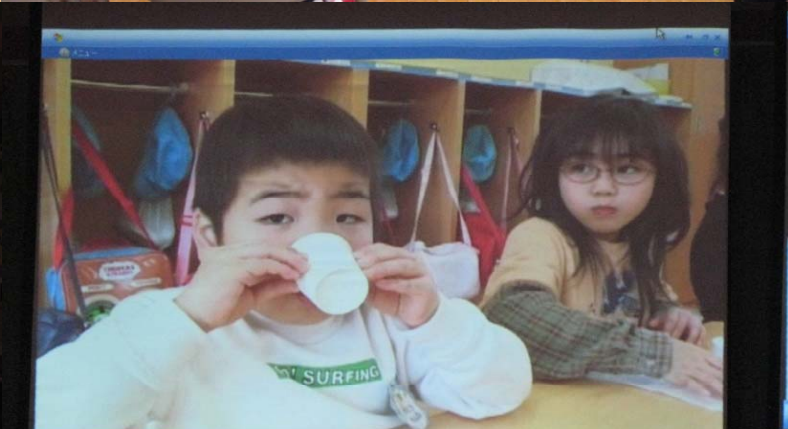
	Age	School	School grade	No. of children	No. of erupted teeth	Rate of eruption
First Molars	4	Nursery	Middle	75	1	0.3 %
	5	Nursery	Elder	111	83	18.7 %
	6	Primary	1 st	97	246	63.4 %

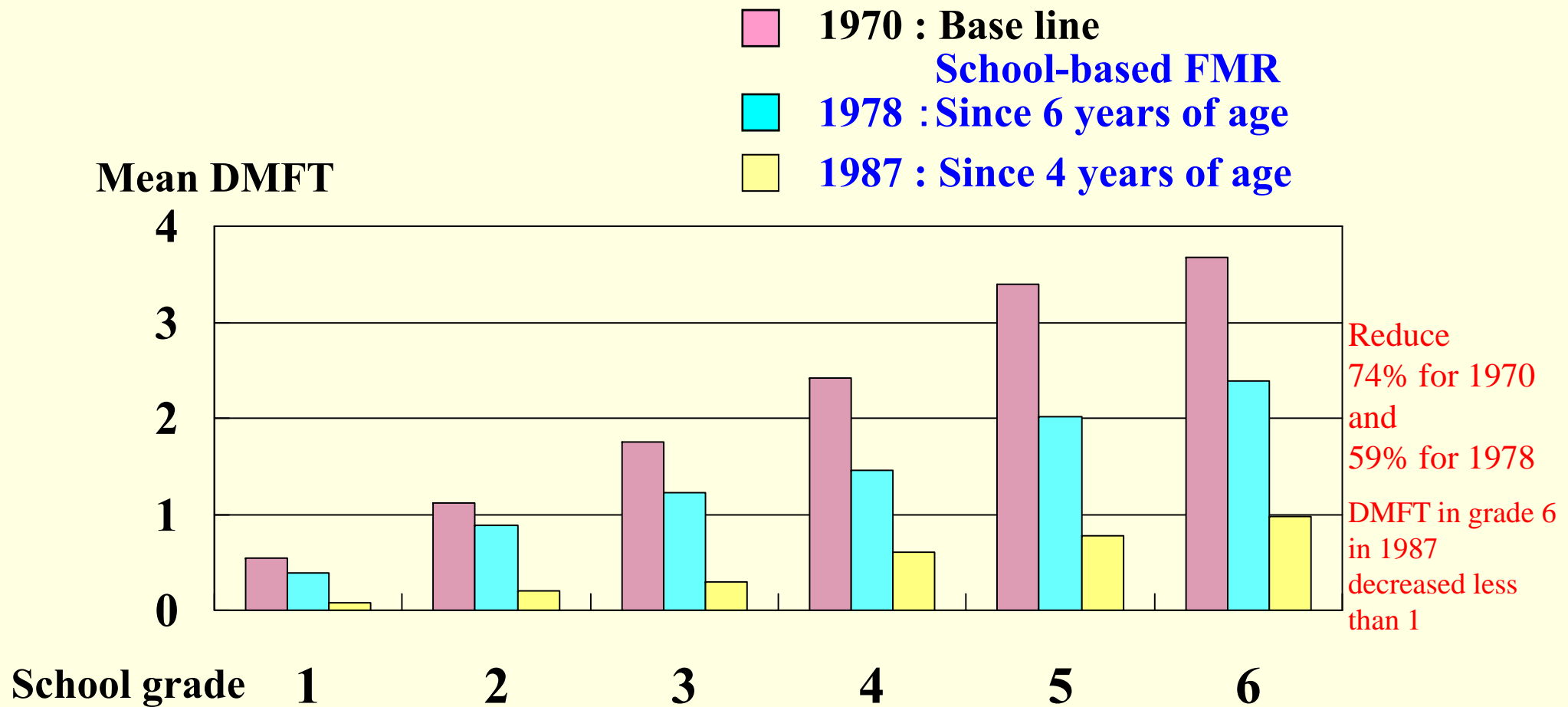
FMR shall be implemented aged <6 to have more effectiveness

Teeth have high susceptibility to dental caries for several years after eruption.







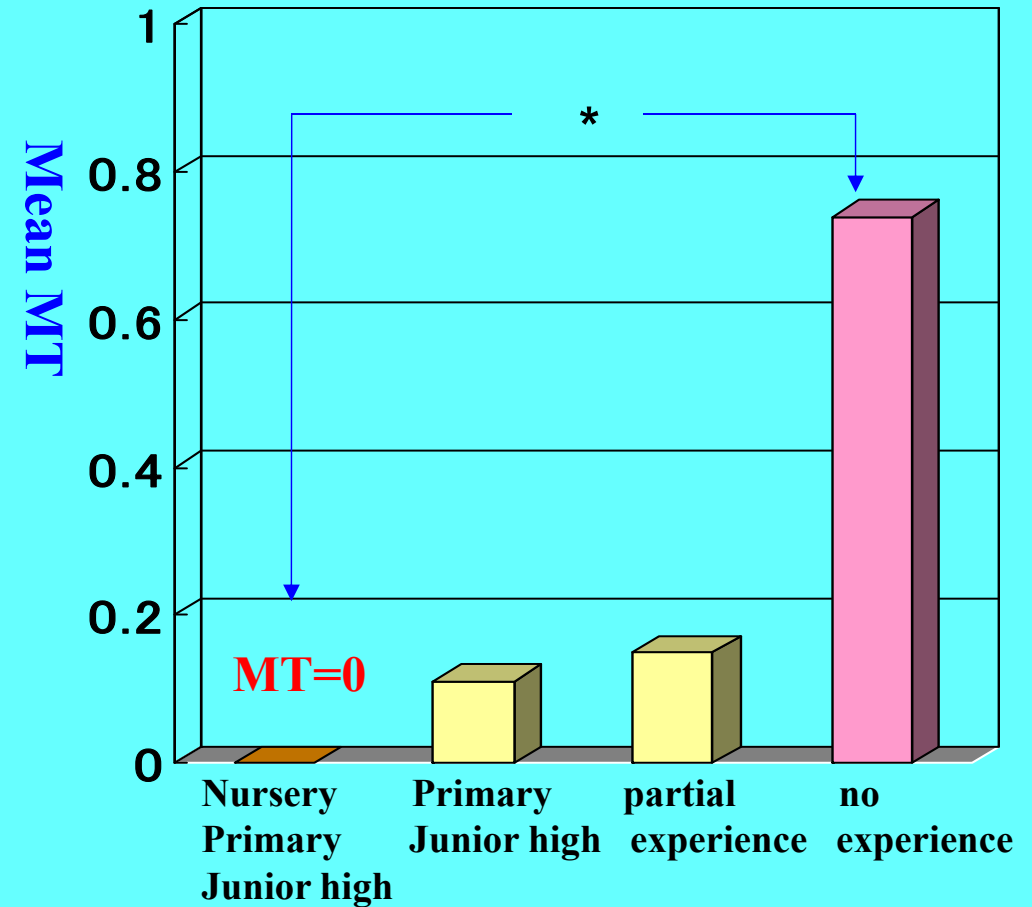
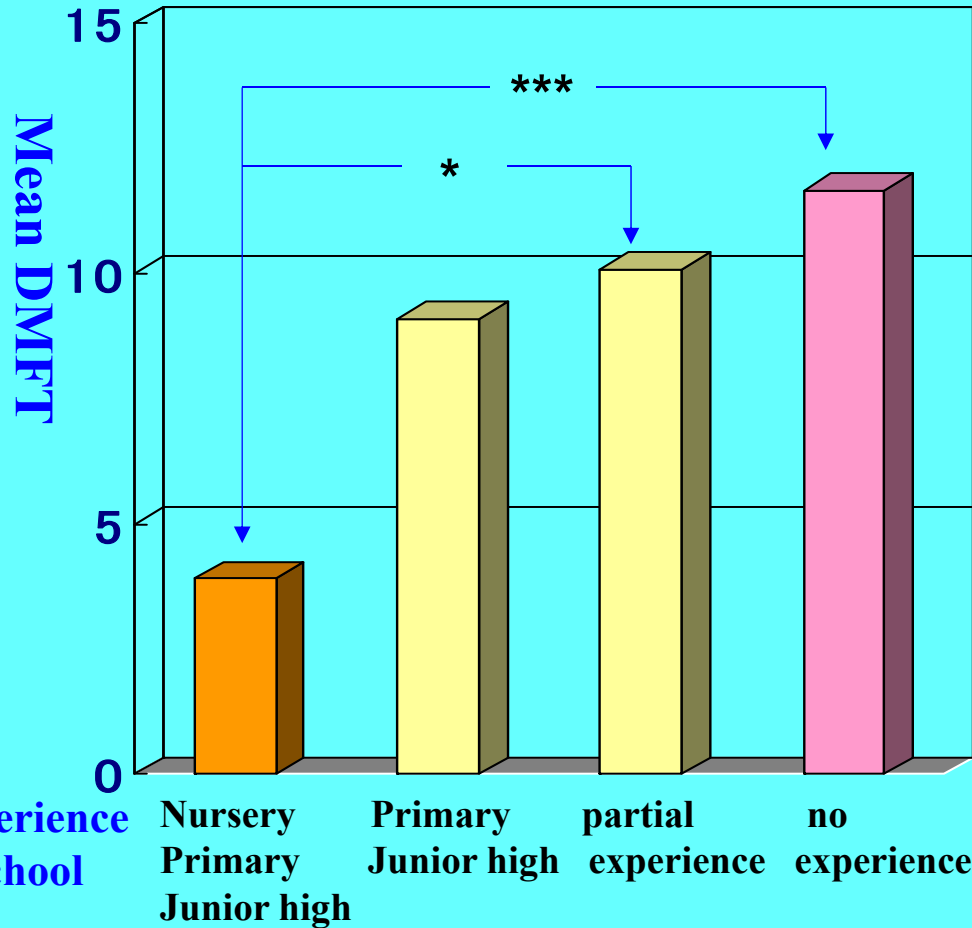


Mean DMFT (Caries experience) by school grade in 1970,1978,1987- Yahiko Primary School –

(Sakai et al. 1988)

Mean DMFT and mean MT of adult women according to experience of FMR in childhood

87 women : mean age of 31.6 years old



No. of women	23	9	13	42
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*: P<0.05 *** P<0.001 by Scheffe test

(Yoshihara et al. 2004)

Preschool children perform fluoride mouth rinsing safely and efficiently?

4 and 5 year-old Japanese
children swallow solution while
rinsing?

How much retained?



Table 1
Amount of fluoride retained by age group

<i>Group (Mean age)</i>	<i>N</i>	<i>Amount of fluoride retained Mean(SD)</i>	<i>Percentage of administered dose</i>
<i>Younger group (4yr.10mon.)</i>	260	0.19mg (0.09)	12.0%
<i>Older group (5yr.4mon.)</i>	509	0.17mg (0.09)	10.7%

**Amount of fluoride contained in one or
two cups of tea (about 200 ml)**

about 0.2 mg



Summary

- **No child swallowed** all the solution and the amount of fluoride retained in the mouth were within **safe** and recommended limits.
- The caries prevalence **decreased** dramatically comparing with that of students practicing S-FMR after entering primary school.
- The effectiveness obtained through S-FMR **continued** until the age of adult.
- The **well administered and supervised** S-FMR program can clearly have a place in oral care even for very young children when other forms of fluoride are not available.
- School based program under supervision of a teacher would **increase** success possibilities.

Thank you for your attention

Salamat

Xin cảm ơn

Terima kasih

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謝謝

고마웠습니다

ありがとうございました

