

# Role of fluoride varnish in preventing early childhood caries

**Author: Marija Novoselska**  
**Coauthor: Suzana K'rmzova**

*Faculty of Medical Sciences, Dental Medicine, University "Goce Delcev" – Stip*

*Mentor: ass. Prof Sanja Naskova*  
*Comentor: dr. Sandra Atanasova*

**Introduction:** Dental caries is one of the most common childhood diseases worldwide. Although dental caries can be arrested and potentially even reversed in its early stages, it's often not self-limiting and progresses without proper care until the tooth is destroyed, affecting the quality of life. Fluoride varnish which is one of the most important materials to prevent ECC is easy to apply and well tolerated by children.



**Aim:** The main outcome of our investigation was prevention of early childhood caries following application of fluoride varnish and unavoidable fluoride exposure.

**Material and Methods:** Out of 190 articles originally identified, 17 articles met the inclusion criteria and these studies were assessed independently for methodology and performance.



**Conclusion:** The results showed that fluoride varnishes have been used at concentrations of 1% and 5% in the prevention of ECC. The preventive fraction was influenced by the frequency of application, the duration of study and sample size.

**Results:** Analysis of literature revealed that basically two concentrations of fluoride varnishes have been used: 1% and 5%. Children without any fluoride varnish treatments had a mean dmfs (decay missing filled score) score of 23,6. There was no decreased in dmfs for children who received only two applications of varnish and only a slight increase for those who receive three applications. Children who received four or more applications of fluoride varnish over a two-year period had a mean dmfs of 15, which was 35% lower than children who had no treatments.