



Fluoride Gels

Brief Summary

Description and use:

Fluoride gel is a prescribed high-concentrated topical agent (1-2%) intended either for professional applications in plastic/disposal trays 2-4 times per year or self-applied with aid of a toothbrush once or twice per week. The formulations are based on sodium fluoride, acidulated phosphate fluoride or amine fluoride. The gels are flavored but contain no abrasive cleaning agents or preservatives.

Effectiveness:

There is good evidence from systematic reviews that fluoride gels can reduce caries increment by 21-28% in children and adolescents. There is little and conflicting reports on the use of self-applied F-gel in the primary dentition and there is insufficient evidence to address whether or not there is difference in the efficacy of NaF vs. APF gels.

Safety:

Fluoride gels are safe when used according to instructions. Fluoride gels are however not recommended for children younger than six years; for those, fluoride varnish that contains a smaller quantity of fluoride is preferred.

Cost Effectiveness:

The number needed to treat (NNT), indicating the number of patients that need to be treated with fluoride gel in order to prevent one decayed missed or filled surface is estimated to NNT=3 in high-caries population. A model estimating lifelong dental treatment costs have suggested a favorable outcome following home application of fluoride gels.



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Recommendations:

Professional or self-applied fluoride gels should be considered as a topical fluoride option to increase fluoride exposure to individuals older than six years and assessed with increased caries risk.