The goals of these quick exercises are to:
(a) Gain experience searching high quality evidence-based resources
(b) Familiarize yourself with some of the types of evidence that you might find.

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**Question 6a:** Answer the following clinical question using the Cochrane Database of Systematic Reviews, PubMed’s Clinical Queries, Dynamed, and the ADA’s Clinical Recommendations. [A description of how to access these resources is in the Module 6 lecture.]

Clinical Question: In children, is fluoride treatment effective at reducing or preventing caries?

**Answer 6b:**

**Cochrane Database of Systematic Reviews:**

Search = fluoride* and caries

Cochrane Topic Title = Topical fluoride (toothpastes, mouthrinses, gels or varnishes) for preventing dental caries in children and adolescents.

Cochrane Conclusion = “The benefits of topical fluorides have been firmly established on a sizeable body of evidence from randomized controlled trials. While the formal examination of sources of heterogeneity between studies has been important in the overall conclusions reached, these should be interpreted with caution. We were unable to reach definite conclusions about any adverse effects that might result from the use of topical fluorides, because data reported in the trials are scarce.”

**PubMed’s Clinical Queries**

Search = dental caries prevention fluorides (look at the Systematic Review section of the Clinical Queries page)

Relevant citations =


3: Walsh T, Worthington HV, Glenny AM, Appelbe P, Marinho VC, Shi X. Fluoride toothpastes of different concentrations for preventing dental caries in children and
PubMed PMID: 20091655.

**Dynamed**

Search = caries

Dynamed Topic = Fluoride for prevention of dental caries

Dynamed Summary:
- topical fluoride (toothpastes, mouthrinses, gels, varnishes) prevent dental caries in children and adolescents (level 1 [likely reliable] evidence)
  - no evidence that one method of topical fluoride is more effective than any other method of topical fluoride
  - addition of topical fluoride (mouthrinses, gels, or varnishes) to fluoride toothpastes further reduces dental caries in children
- water fluoridation reduces dental caries and can cause dental fluorosis
  - American Dental Association interim guidance on fluoride intake for infants and young children recommends AGAINST using fluorinated water in preparing infant formulas
- fluoride supplementation
  - fluoride supplementation not recommended for most infants and toddlers
  - fluoride supplementation dosing if insufficient fluoride in drinking water (< 0.3 ppm)
    - 0.25 mg once daily at ages 6 months to 3 years
    - 0.5 mg once daily at ages 3-6 years (0.25 mg if 0.3-0.6 ppm)
    - 1 mg once daily at ages 6-16 years (0.5 mg if 0.3-0.6 ppm)
    - sodium fluoride 2.2 mg contains fluoride 1 mg
  - fluoride supplements may reduce dental caries in children and adolescents aged 6-16 years (level 2 [mid-level] evidence), but evidence base predates common use of fluoride toothpaste

**ADA Clinical Recommendations**

Search = [http://ebd.ada.org/ClinicalRecommendations.aspx](http://ebd.ada.org/ClinicalRecommendations.aspx)

Topic =
- Evidence-Based Clinical Recommendations on the Prescription of Dietary Fluoride Supplements for Caries Prevention
- Professionally applied topical fluoride: Evidence-based clinical recommendations

ADA Recommendation =

“The panel concluded that dietary fluoride supplements should be prescribed only for children who are at high risk of developing caries and whose primary source of drinking water is deficient in fluoride.”

“The recommendations are stratified by age groups and caries risk and indicate that
periodic fluoride treatments should be considered for both children and adults who are at moderate or high risk of developing caries.”