Screening for lipid disorders in children and adolescents: systematic evidence review for the U.S. Preventive Services Task Force


Record Status
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Citation

Authors' objectives
Context. Dyslipidemias, disorders of lipid metabolism, are important risk factors for coronary heart disease (CHD). Identification of children with dyslipidemias could lead to interventions aimed at decreasing their risk of CHD as adults. Objective. To determine the strengths and limits of evidence about the effectiveness of selecting, testing, and managing children and adolescents with dyslipidemia in the course of routine primary care. Screening children and adolescents has the potential to identify three groups with dyslipidemia: those with 1) undiagnosed monogenic dyslipidemia, 2) undiagnosed secondary dyslipidemia, and 3) idiopathic dyslipidemia (polygenic, risk factor associated, or multifactorial). Key questions examined a chain of evidence about the accuracy and feasibility of screening children in various settings, tracking of lipid levels through childhood to adulthood, role of risk factors in selecting children for screening, effectiveness of interventions for children identified with dyslipidemia, and adverse effects of screening and interventions.

Authors' conclusions
Normal values for lipids for children and adolescents are currently defined according to population levels (percentiles). Tracking of lipid levels in children is variable, although evidence is stronger for TC and LDL than for HDL and TG. Screening using family history misses substantial numbers of children with elevated lipids. Most trials of drug interventions demonstrate improvement, but these trials were performed in selected groups of children. Several key questions could not be addressed because of lack of studies, including the effectiveness of screening on adult CHD or lipid outcomes, optimal ages and intervals for screening children, cost-effectiveness of screening, or the effects of treatment of lipids in childhood on adult CHD outcomes.

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