Lipid Screening Guidelines[1]

The American Heart Association (AHA), the American Academy of Pediatrics (AAP), and the Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents recommends obtaining a **fasting lipid profile** in the following patients who are at risk starting at age 24 months:

1. Premature coronary artery disease (i.e. CAD) at or below age 55 in parents, grandparents, aunts, or uncles
2. Family history of hypercholesterolemia (parent with total cholesterol >240mg/dl)
3. Children who have other cardiovascular disease (CVD) risk factors
4. Children for whom family history is unavailable
5. Children who are overweight and have SBP or DBP 90th-94th percentile
6. All children with SBP or DBP >95th percentile

The physician may elect to screen the child for high blood cholesterol levels if one or more of the following risk factors are observed:

1. Sedentary lifestyle
2. Obesity
3. Diabetes
4. Nephrotic syndrome
5. Certain medications associated with hyperlipidemia
6. Smoking or excessive alcohol intake

In general, drug therapy to lower blood cholesterol levels is reserved for those aged 10 years or older who have (while on a strict diet):

1. LDL cholesterol levels persistently >190 mg/dl

   - OR -

2. LDL cholesterol levels >160 mg/dl and either strong family history of premature CAD or ≥2 CVD risk factors (e.g., low HDL, smoking, high blood pressure, obesity, or diabetes)

- Children who require drug therapy to lower blood cholesterol levels should be treated by physicians experienced in the management or lipid disorders in children.

National Cholesterol Education Panel NCEP Guidelines Children ages 2-19 years

Fasting Lipid Profile	Acceptable	Borderline	High
Total Cholesterol (mg/dl)	<170	170-199	≥200
LDL Cholesterol (mg/dl)	<110[2]	110-129	≥130
Intervention (based on LDL levels)	• Repeat lipid screen within 5 years	• Provide Step-one Diet* and counseling • Reevaluate status in 1 year	• Do clinical evaluation (history, physical exam, labs) • Evaluate for: 1. Secondary causes 2. Familial dislipidemias 3. Provide Step-One*, then Step-Two** diet 4. Reevaluate in 3 months • Set goal LDL-cholesterol: Minimal: < 130 mg/dl Ideal: < 110 mg/dl[2] • Long term follow-up
HDL Cholesterol (mg/dl)	• <35 is a risk factor		
Triglycerides	• >150 mg/dl is a risk factor (AHA recommendation) • Triglyceride levels >200 mg/dl, which are related to obesity, respond to weight reduction. • If fasting triglyceride levels are >400 mg/dl, LDL cholesterol CANNOT be calculated.		

*Step One Diet	**Step Two Diet
• Reduce intake of saturated fats & dietary cholesterol	• Saturated fat intake should be <**7%** of total calories • Dietary cholesterol to <**200 mg/dl** • Specific plan that ensures a balanced intake of calories, vitamins, minerals • Consultation of registered dietitian

[1] AAP Committee on Nutrition. "Cholesterol in Childhood." *Pediatrics* 1998; 101, 1: 141-147.

[2] According to the AHA's "3rd Report on the Detection, Evaluation and Treatment of High Cholesterol in Adults" (*Circulation* 2002), the optimal level of LDL cholesterol in adults is <100 mg/dl.