Screening for High Cholesterol in Children

NEW UNIVERSAL SCREENING GUIDELINES released:
http://pediatrics.aappublications.org/site/misc/2009-2107.pdf

The Pediatric CV Risk Reduction Initiative now recommends ***universal screening for high cholesterol in all children between 9 to 11 years of age*** *and for high-risk children 2 to 9 years of age:*

1) Parent or Grandparent < 55 years old with: Coronary artery disease by angiography, myocardial infarction, angina, peripheral vascular disease, stroke, sudden cardiac death
2) Parent with: Tchol > 240 mg/dl
3) No family history available, especially if child smokes, has high blood pressure, obesity, high fat diet
4) Child has diabetes, hypertension, BMI $\geq$ 95th%ile or smokes cigarettes
5) Child has a high risk medical condition (chronic renal disease, transplant recipient, Kawasaki with aneurysms)

Screening should start with: a non-fasting non-HDL-Cholesterol = Total Cholesterol – HDL-Cholesterol .

- < 120 mg/dl is acceptable.
- 120 to 144 mg/dl requires a repeat in a few weeks.
- > 145 mg/dl requires a fasting complete lipid profile.

Tips on obtaining an accurate Fasting Complete Lipid Profile:

- Draw after a 12-hour fast.
- Do not obtain during acute illness.
- Use a lab that follows CDC standardization guidelines.
- Most labs calculate LDL = TChol - HDL - (TG/5). LDL is not accurate if TG > 400 mg/dl. A direct LDL test must be requested.

Therapy based on fasting LDL-cholesterol levels:

- Diet and exercise for all children.
- After 3 to 6 months, if lifestyle changes are ineffective, drug therapy for children over 10 years of age for:
  - LDL > 190
  - LDL >160 & positive family history of early CAD or $\geq$2 other CV risk factors in the child.
  - LDL > 130 with diabetes, chronic kidney disease, heart transplant, post-Kawasaki's Syndrome with coronary aneurysm.[2]
  - TG $\geq$ 200-499 mg/dL

When to consider referral for abnormalities in other lipids:

- Multple levels of TChol >200, LDL >130, TG >125, HDL <40 mg/dl
- Isolated TChol >240, LDL >160, TG >250 (fasting), HDL <35.

The CCHMC Lipid Center can:

- Rule out secondary dyslipidemia and perform advanced lipid testing.
- Evaluate diet with computer analysis of 3-day diet records.
- Initiate therapeutic lifestyle changes including consultation with dieticians, behavioral psychologists with expertise in therapeutic lifestyle changes and exercise physiologists.

Cincinnati Children's Hospital Medical Center Lipid Clinic Referral Number: 513-636-0135

Cincinnati Children's®