## TABLE 23-5
### Classification of Cholesterol Levels in Children

| Category | Normal mg/dl | Borderline High mg/dl | Elevated g/dl |
|---|---|---|---|
| Triglycerides | <170 | 170-199 | ≥200 |
| Low-density lipoprotein (LDL) | <110 | 110-120 | ≥130 |
| Non–high-density lipoprotein (HDL) | <120 | 120-144 | ≥145 |
| High-density lipoprotein (HDL)* | >45 | N/A | N/A |

*Borderline low HDL 40–45; Low HDL <40.

*N/A*, Not applicable.

Data adapted from the Expert Panel on Integrated Guidelines for Cardiovascular health and risk reduction in children and adolescents. Daniels SR, Benuck I, Christakis DA, et al: Expert Panel on Integrated Guidelines for Cardiovascular health and risk reduction in children and adolescents: summary report, US Dept of Health and Human services, National Heart, Lung, and Blood Institute, NIH, Bethesda, MD, 2012.

The National Heart, Lung, and Blood Institute published comprehensive guidelines for cardiovascular health and risk reduction in children and adolescents in 2011. In contrast to prior guidelines, the National Heart, Lung, and Blood Institute guidelines now recommend universal screening for all children between the ages of 9 to 11 and again between the ages of 17 to 21. In addition, selective lipid screening continues to be recommended for children over 2 years old who have a family history of dyslipidemia or early heart disease in a first or second degree relative, as well as for those children who have individual coronary risk factors (Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents; and National Heart, Lung, and Blood Institute, 2011) (see Translating the Evidence into Practice box). Although not without controversy, the goal of this new approach is to identify children earlier in order decrease coronary risk factors particularly in the current era of an increased prevalence of obesity in young people (Daniels, 2012; de Ferranti, Daniels, Gillman, et al, 2012; McCrindle, Kwiterovich, McBride, et al, 2012). In addition to abnormal cholesterol levels, known risk factors that correlate with the development CHD include:

- Positive family history of elevated cholesterol and/or early heart disease
- Cigarette smoking
- Obesity