

## **Blood pressure in children and adolescents – when is high too high?**

Unlike adults, in whom the definition and severity of hypertension are defined by straightforward threshold values based on the risk of outcomes, children require a separate threshold of blood pressure (BP) normality at each stage of physical maturity because of the normal age and height-related rise in BP throughout childhood.

Childhood hypertension is defined as systolic or diastolic BP  $\geq$ 95th centile for age, height, and gender in the normative BP charts formulated by the most recent report of the Task Force on the diagnosis, evaluation and treatment of high blood pressure in children and adolescents.

The rather cumbersome definition of childhood hypertension first requires determination of height centile, followed by interpretation of a dense table of BP values with a separate threshold for each combination of gender, age, and height. A simple set (table) of mnemonic formulae has been developed to estimate the 95th centile in both boys and girls:

### **Systemic hypertension (= 95th centile)**

#### **Systolic BP (1–17y)**

$$100 + (\text{age in years} \times 2)$$

#### **Diastolic BP**

$$1-10y: 60 + (\text{age in years} \times 2)$$

$$11-17y: 70 + \text{age in years}$$