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REVIEW

## Fourth Report on the diagnosis, evaluation, and treatment of high blood pressure in children and adolescents

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In September 2017, the Subcommittee on Screening and Management of High Blood Pressure in Children of the American Academy of Pediatrics published an update to their well-known 2004 document in the journal *Pediatrics*. Their original Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents has been adopted in Brazil to diagnose, evaluate, and treat children and adolescents with high blood pressure.

The new report was written after careful, systematic review of literature and was based on questions used to diagnose, evaluate, and treat high blood pressure in children and adolescents.

The significant changes in these guidelines are as follows: (1) the replacement of the term 'prehypertension' with the term 'elevated blood pressure,' (2) new normative pediatric blood pressure (BP) tables based on normal-weight children, (3) simplified screening table for identifying BPs needing further evaluation, (4) simplified BP classification in adolescents aged  $\geq 13$  years that aligns with the forthcoming American Heart Association and American College of Cardiology adult BP guidelines, (5) limited recommendation to perform screening BP measurements only at preventive care visits, (6) streamlined recommendations on the initial evaluation and management of abnormal BPs, (7) expanded role for ambulatory BP monitoring in the diagnosis and management of pediatric hypertension, (8) revised recommendations on when to perform echocardiography in the evaluation of newly diagnosed hypertensive pediatric patients, and (9) revised definition of left ventricular hypertrophy.

It is important to emphasize that the decision to exclude overweight and obese children from the determination of reference points has led to BP cutoffs that were lower than those in the tables we had been using so far.

This very extensive document also describes in detail how BP should be measured in children. It addresses specific topics involving masked hypertension, white-coat hypertension, and comorbid conditions such as obesity. It also discusses certain secondary causes of high BP for this age group, including cardiovascular, endocrine, and environmental causes; neurofibromatosis; and medications. The document also highlights the importance of a healthy lifestyle.

Because it is an update to norms addressing relevant aspects of the diagnosis, assessment, and management of high BP in children and adolescents, it is essential reading for pediatricians in their daily practice and required reading for physicians in pediatric residency programs.

The new guidelines are freely available online.

## REFERENCES

1. Flynn JT, Kaelber DC, Baker-Smith CM, Blowey D, Carroll AE, Daniels SR, et al.; SUBCOMMITTEE ON SCREENING AND MANAGEMENT OF HIGH BLOOD PRESSURE IN CHILDREN. Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents. *Pediatrics*. 2017;140(3):e20171904.

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