AAP Updates Policy Statement on Athletic Participation by Children and Adolescents with Systemic Hypertension

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Literature search described? No

Evidence rating system used? No

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The most common cardiovascular condition in competitive athletes is hypertension. The American Academy of Pediatrics (AAP) updated its policy statement using new recommendations made in the 2005 36th Bethesda Conference guidelines; the 2004 Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents; and the 2003 Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure.

Hypertension guidelines include three categories: prehypertension, stage 1 hypertension, and stage 2 hypertension. Childhood hypertension is defined as blood pressure of at least the 95th percentile for sex, age, and height on at least three occasions. Prehypertension is defined as at least the 90th but less than the 95th percentile, or at least 120/80 mm Hg but less than the 95th percentile. Stage 1 hypertension is defined as the 95th percentile to 5 mm Hg higher than the 99th percentile. Stage 2 hypertension is defined as more than 5 mm Hg higher than the 99th percentile. Blood pressure tables for children can be found at http://www.nhlbi.nih.gov/guidelines/hypertension/child_tbl.pdf.

According to the Fourth Report, once hypertension is confirmed, an evaluation that includes echocardiography, retinal examination, and possible workup for sleep disorders should be performed in addition to a history, a physical examination, and laboratory studies.

Recommendations

Physicians should discuss and encourage lifestyle modifications (e.g., weight management, daily physical activity, healthy diet) at well-child visits, regardless of whether the patient has normal blood pressure, prehypertension, or hypertension. If a patient has prehypertension, it should not restrict his or her eligibility for competitive athletics; however, the patient should have blood pressure measured every six months.

If a patient has stage 1 hypertension without end organ damage, including left ventricular hypertrophy or concomitant heart disease, it should not restrict his or her eligibility for competitive athletics; however, the patient should have blood pressure rechecked in one to two weeks, or sooner if symptomatic, to confirm the hypertension. If the patient is symptomatic, or has left ventricular hypertrophy, concomitant heart disease, or persistently elevated blood pressure on two other occasions, appropriate referral to a pediatric medical subspecialist is warranted.

If a patient has stage 2 hypertension without end organ damage, including left ventricular hypertrophy or concomitant heart disease, he or she should not participate in high-static sports until blood pressure returns to normal after lifestyle modification or drug treatment. High-static sports include bobsledding/luge, field events (e.g., throwing), gymnastics, martial arts,

sailing, sport climbing, water skiing, weight lifting, windsurfing, bodybuilding, downhill skiing, skateboarding, snowboarding, wrestling, boxing, canoeing/kayaking, cycling, decathlons, rowing, speed skating, and triathlons. Symptomatic patients should be evaluated by a pediatric medical subspecialist immediately, and asymptomatic patients should be evaluated within one week.

If a patient has hypertension and another cardiovascular disease, his or her eligibility for competitive athletics should usually be based on the type and severity of the other disease. Physicians should review medication (acetaminophen, antidepressants, decongestants, herbal supplements, immunosuppressants, nonsteroidal anti-inflammatory drugs, oral contraceptives), caffeine, illicit drug, tobacco, alcohol, and stimulant use, because these substances can affect blood pressure.

Although it is usually recommended that patients with hypertension limit their intake of sodium, in some younger athletes, rehydration may require consuming fluids and foods that contain salt. This is to ensure greater water retention and distribution of water to fluid compartments. Physicians should take care to appropriately diagnose and observe patients who are at higher risk of hypertension, including those who are obese or who have spinal cord injuries. ■

Answers to This Issue's CME Quiz

Q1. A
Q2. A, B, C, D
Q3. C
Q4. D
Q5. D
Q6. B, D
Q7. B
Q8. A, C, D
Q9. D
Q10. A, B, C
Q11. A, C