Cardiovascular Preparticipation Screening of Competitive Athletes: Addendum

An Addendum to a Statement for Health Professionals From the Sudden Death Committee (Council on Clinical Cardiology) and the Congenital Cardiac Defects Committee (Council on Cardiovascular Disease in the Young), American Heart Association

Writing Group
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In 1996 the American Heart Association published a scientific statement on screening for cardiovascular abnormalities in young athletes participating in organized sports programs in US high schools and colleges. “Cardiovascular Preparticipation Screening of Competitive Athletes” (Circulation. 1996;94:850–856) served as a critique of current and past screening practices and offered several specific recommendations for future screening endeavors, including the content of history and physical examination questionnaires, the nature and qualifications of designated examiners, and the timing of preparticipation examinations. This statement has become a well-known guideline endorsed by other medical and exercise science organizations.

However, the recommendation for timing of preparticipation evaluations has become the source of some discussion. In the original statement, the writing group recommended that “both a history and a physical examination be performed before participation in organized . . . collegiate sports. Screening should then be repeated every 2 years. In intervening years an interim history should be obtained.”

In July 1997 the National Collegiate Athletic Association (NCAA) Committee on Competitive Safeguards and Medical Aspects of Sports expressed concern about this recommendation. First, the NCAA questioned whether there were substantive scientific data to support the AHA viewpoint. Second, a full preparticipation physical examination routinely performed every 2 years is in fact now a customary practice for the majority of US colleges and universities. The NCAA believed that, lacking medical evidence to support the recommendation, such a change in protocol would place a considerable burden on the annual screening process for the 300,000 NCAA athletes. The NCAA argued that although some member institutions would probably be able to comply (or in fact already do so) with the recommendation, most colleges and universities would find it difficult in light of economic restraints and the availability of facilities, personnel, and time.

Confronted with this argument, the writing group considered whether there was any clear advantage to preparticipation screening for the detection of important cardiovascular disease in college-aged athletes every 2 years and concluded that the NCAA’s concerns were valid. The writing group determined that there was scant scientific evidence to show definitively that a routine second examination after 2 years of college competition would identify more athletes with cardiovascular abnormalities (except possibly those with systemic hypertension), given that the initial evaluation was negative for cardiovascular disease.

Therefore, the writing group believes that it is prudent to recognize the concerns raised by the NCAA. The writing group offers this amendment to the original recommendation for timing of preparticipation evaluations in collegiate athletes: For collegiate athletes, the American Heart Association recommends that a comprehensive personal and family history be obtained and that a physical examination be performed by a qualified examiner in the first year upon entering the institution and before beginning training and competition. In each of the subsequent 3 to 4 years, an interim history and a blood pressure measurement should be obtained. Important changes in medical status or abnormalities detected during interim annual histories may constitute evidence that another physical examination and possible further testing should be performed.

Of note, the original AHA recommendations for preparticipation screening of high school athletes at 2-year intervals remain unchanged.

Key Words: AHA Medical/Scientific Statements exercise sudden death

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Circulation. 1998;97:2294
doi: 10.1161/01.CIR.97.22.2294

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