

By David L. Marshall, M.D., and Jack Stevens, M.D.



Giving Sports Screenings More Muscle

Preparticipation Evaluation Forms Offer a Comprehensive View of Student Athlete Health, but is not Meant as Replacement for Regular Pediatric Office Exams

Fall athletic programs are ramping up for millions of students throughout the country. In Georgia, nearly 1.5 million students are preparing for competition—and presports physicals will play an essential part in that preparation.^{1, 2}

Today, evaluation tools are available to deliver more useful screenings. In Georgia, physicians use the preparticipation physical evaluation (PPE), a standardized, comprehensive health form used by more than 400 schools across the state.

David L. Marshall, M.D., Medical Director of the Children's Sports Medicine program, and Jack Stevens, M.D., Director of Preventive Cardiology at the Children's Sibley Heart Center, presented research in 2003 to the Georgia High School Association (GHSA) that demonstrated that health forms used at that time by schools statewide to clear student athletes varied so widely, many were almost useless in providing a real sense of the students' fitness ability to participate in sports.³ The result was the GHSA's unanimous endorsement of the PPE.

"Four years ago, Georgia was rated third in the country for sudden cardiac death among high school athletes," Dr. Marshall said. "Some of those may have been heat-related deaths but we also had to assume the athletic screening process was not good enough to signal potential problems."

Dr. Stevens applauds the inclusion of cardiac-related

questions in the PPE. He said the simple cardiac questions can alert physicians to significant problems.

We are looking for symptoms that might suggest an underlying structural or functional cardiac defect or predisposition to arrhythmia," Dr. Stevens said. The most common underlying cardiac defect leading to sudden death is hypertrophic cardiomyopathy, an abnormal thickening of the ventricular septum.

"The PPE is designed to help the examiner uncover a family history of heart disease, as well as identify symptoms or physical findings requiring more cardiac testing. Other techniques such as echocardiograms or exercise testing may be used to provide an appropriate diagnosis, which may help prevent sudden cardiac death."

And while the Georgia PPE offers a much more comprehensive idea of a student's health during athletic screenings, Drs.

Marshall and Stevens think sports preparticipation screening should occur in the pediatrician's office.

"It is surprising how many families count the presports screening as their annual trip to the doctor," Dr. Marshall said. "However, regular trips to the pediatrician simply cannot be replaced. A family's doctor knows the child's medical and family history and can take the time to address other issues with the child that will not be included in a mass screening."

Dr. Stevens agrees. "The best person to really deal with cardiac and other issues is the primary care physician (PCP)," he said. "That physician knows the child, his family and his record. They know about issues such as birth history, breathing problems such as asthma or allergies, past injuries and more." He adds that while there are valid arguments for examination by specific experts—trainers, orthopaedists and cardiologists, for example—at a mass presports screening, a pediatrician or family practitioner who knows the child's history is best.

Dr. Marshall said a relationship between the PCP and student becomes even more critical as the child athlete becomes older.

"In discussions earlier in the child's life, we may address seatbelt and bike helmet use," he said. "As the child matures, regular discussions may include breast cancer and breast exams with female athletes and the importance of testicular exams with male students. Both genders need straight talk about STDs, alcohol, drug use and pregnancy. Physicians need to be sure they allow adequate time to conduct the screening exam and then tackle those other important issues as well."

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- Georgia Department of Education, Enrollment by Grade Level (PK-12) Full-time Equivalent (FTE) Data Collection System, Fiscal Year 2008, Count 3 2008 (FTE 2008-3)
- 2. Represents grades 1-12 only.
- 3. That research was originally conducted by pediatric resident Laurie Weiser, M.D. Dr. Weiser and Dr. Stevens presented her findings to the Georgia chapter of the American Association of Pediatrics. Drs. Marshall and Stevens presented to the GHSA on behalf of the AAP.