

How to Improve Your Pre-Participation Sports Physical Exam, Part I

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Many of us who were involved in high school athletics have interesting memories of the pre-season physical exams we were forced to endure. As chiropractors who are involved in high school athletics, our experiences may still echo those memories. After all, in many cases, those of us who administer sports participation exams (PPEs) are still doing so under the same conditions we experienced ourselves: a large number of potential athletes, usually in a station format, in a large area that is usually noisy, not very private, chaotic, and too bright for ophthalmoscopic exams, or all of the above. The exams that are listed on the standard forms provided for us comprise, at best, a very brief screening exam. The historical information given to us on the permission forms for these exams is often sketchy, incomplete, and filled out by the kids instead of the parents.

The traditional goal of PPEs are simply to prepare the athlete for safe participation in athletics, and to uncover any life threatening conditions the child may have. This would seem to make the currently practiced screenings adequate. However, there are two things which the physician must keep in mind: For 80 percent of all children and adolescents, the PPE is the only contact with a health care provider. Secondly, if the PPE can be made more sport-specific, the physician may be able to provide an opportunity to prevent future sports injury.

Responsibilities

These two premises create a dual requirement for the physician administering these examinations: (1) every effort should be made to make any general screening examination as thorough as possible (within the parameters of a station examination format); and (2) the examination should be designed so that sport-specific musculoskeletal analysis can be included. This week's article will present some basic ideas to help with the first requirement. The design of sport-specific musculoskeletal exams will be discussed in part II of this article.

Kibler has defined five modern-day goals for the PPE:

1. provide an objective sport-specific musculoskeletal profile of athletic fitness
2. delineate negative information that prohibits, modifies, or delays participation
3. delineate positive information to decrease injury risk and increase performance
4. provide a reproducible record for subsequent exams
5. provide a base for sport-specific conditioning

To accomplish these goals, the first step is to institute a general screening examination that is not only as thorough as possible under the station format, but also to take steps to eliminate some of the pitfalls that can render such a screening less than adequate. Here are some hints and suggestions.

Facility Considerations

As the facilities of the station exams often present challenges to the performance of a good PPE, if you can access the facility in advance, modifications can be made. You might want to insure some privacy for abdominal and hernia exams by obtaining screens or barriers to create a separate section. If there are smaller rooms off to the side of a large facility, they should be reserved for auscultation (a quiet area), and ophthalmoscopic exams (a room that can be darkened). If separate rooms are unavailable, every effort should be made to create such conditions.

Personnel Considerations

If you are in charge of obtaining personnel to staff the stations, it is important to remember that, while a physician is not necessary at every station, all personnel should be professionally capable of whatever is required at each station. In addition, at a minimum, the summary station (see below) must have a physician, while the initial history check station (see below) should at least have someone skilled in history taking. It is also very important that the staff for the station exams meet ahead of time to review exactly what is to be assessed at each station. This eliminates areas of omission and overlap in the examination.

The Initial Station -- History "Spot-Check"

Most PPE subjects are asked to have their parents fill out a brief history form prior to the examination. This form usually includes an extremely abbreviated systems' review and immunization information. Some PPE systems augment this with a symptom survey form for the exam subject that follows a review-of-systems format. The problems with these forms include: being written in either overly vague or overly medical terms; forms filled out by students instead of parents; forms filled out inaccurately because the athlete (or the parents) fear exclusion from sports participation. The first station of the PPE can provide a way to minimize some of these problems. This station is designated as the history "spot-check" station because that is exactly what personnel at this station do. They peruse the completed form and ask several quick questions which highlight the risk information most important for the sport PPE. These questions should be phrased differently than the written questions, as they will often elicit a different response.

In PPEs for football, it is important to check previous head trauma history and possibly knee and back injuries. In cross-country, a more important emphasis might be on questions related to cardiovascular status and previous hamstring injury. With female gymnasts, some questions relating to eating disorder identification would be essential. To prevent a traffic bottleneck at this station, it should be staffed with several people, and care should be taken to indeed spot-check in a sport-specific manner, rather than repeat an entire medical history.

The Summary Station

The fragmentation of information obtained from traditionally constructed station PPEs has also caused problems in identifying at-risk athletes. The summary station is therefore instituted to help consolidate the bits and pieces of medical information into an overall picture of the potential athlete's health. This station must be staffed by physicians, since differential diagnostic skill and clinical judgment regarding referral are essential skills at this station. The athlete delivers the form to this final station in the sequence. The form is reviewed for clinically related information, and

conditional clearances (requiring referral for further workup prior to clearance for participation) are given if necessary. This approach helps to insure that physicians are not merely signing a form with no attempt to clinically correlate the information obtained from the different exam stations.

This summarizes some suggestions which may help to improve the general health screening during PPEs. The second part of this article, examining ways to create sport-specific pre-participation exams, will appear in the April 8th issue.

References

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