

Different Formats for Performing Sports Physicals

All “sports physicals” are not created equal. Timing, available personnel, and a community’s socio-economics, traditions and standards all determine how middle and high school athletes are cleared to participate in sports:

The "assembly-line" or "locker room" physical-

A single provider screens a large number of athletes, occasionally in a medical office, but often in the school locker room or cafeteria. Although sometimes necessary, the assembly-line physical should be avoided when at all possible, as it allows little time to thoroughly review the athlete's medical history and offers no privacy for the physical exam or a private discussion of the athlete’s history or questions.

The "station-based" examination-

This is the most appropriate format when performing a mass sports physical at a school or clinic. On the downside, it requires multiple volunteers, ideally a mix of medical assistants, nurses, physical therapists, athletic trainers, primary care providers and, if possible, a sports medicine physician and a cardiologist. Athletes proceed through a series of stations for height and weight measurements, blood pressure reading, visual acuity, general exam, cardiovascular exam, orthopedic screening, and review of history and final clearance. Ideally an additional station focused on risks and behaviors can focus on mental health, sexual health and substance abuse issues but these topics can be sensitive in the non-medical environment and are not always included for that reason.

The "office-based" examination-

This type of exam allows privacy for history taking, examination, and discussion of any specific concerns, anticipatory guidance and health maintenance (including immunizations), as well as more (but not always sufficient) time. Ideally, the exam is conducted in the athlete’s medical home where he or she is an established patient with a well-known medical history and this could be combined with and qualify for a well child examination. The main disadvantage of the office-based sports physical is that the examining provider may not be familiar with the recommended protocol for the cardiovascular examination, or uncomfortable with a basic musculoskeletal exam.

MURMUR EVALUATION – Auscultation should be performed sitting, supine and squatting in a quiet room using the diaphragm and bell of a stethoscope.

Auscultation finding of: Rules out:

1. S1 heard easily; not holosystolic, soft, low-pitched VSD and mitral regurgitation
2. Normal S2 Tetralogy, ASD and pulmonary hypertension
3. No ejection or mid-systolic click Aortic stenosis and pulmonary stenosis
4. Continuous diastolic murmur absent Patent ductus arteriosus
5. No early diastolic murmur Aortic insufficiency
6. Normal femoral pulses Coarctation
(Equivalent to brachial pulses in strength and arrival)

MUSCULOSKELETAL- 2 minute exam

Have patient: To check for:

1. Stand facing examiner AC joints, general habitus
2. Look at ceiling, floor, over shoulders, touch ears to shoulders Cervical spine motion
3. Shrug shoulders (against resistance) Trapezius strength
4. Abduct shoulders 90 degrees, hold against resistance Deltoid strength
5. Externally rotate arms fully Shoulder motion
6. Flex and extend elbows Elbow motion
7. Arms at sides, elbows 90 degrees flexed, pronate/supinate wrists Elbow and wrist motion
8. Spread fingers, make fist Hand and finger motion, deformities
9. Contract quadriceps, relax quadriceps Symmetry and knee/ankle effusion
10. "Duck walk" 4 steps away from examiner Hip, knee and ankle motion
11. Stand with back to examiner Shoulder symmetry, scoliosis
12. Knees straight, touch toes Scoliosis, hip motion, hamstrings
13. Rise up on heels, then toes Calf symmetry, leg strength

MARFAN'S SCREEN – Screen all men over 6'0" and all women over 5'10" in height with echocardiogram and slit lamp exam when any two of the following are found:

1. Family history of Marfan's syndrome (this finding alone should prompt further investigation)
2. Cardiac murmur or mid-systolic click
3. Kyphoscoliosis
4. Anterior thoracic deformity
5. Arm span greater than height
6. Upper to lower body ratio more than 1 standard deviation below mean
7. Myopia
8. Ectopic lens

CONCUSSION -- When can an athlete return to play after a concussion?

After suffering a concussion, no athlete should return to play or practice on the same day. Previously, athletes were allowed to return to play if their symptoms resolved within 15 minutes of the injury. Studies have shown that the young brain does not recover that quickly, thus the Oregon Legislature has established a rule that no player shall return to play following a concussion on that same day and the athlete must be cleared by an appropriate health care professional before they are allowed to return to play or practice.

Once an athlete is cleared to return to play they should proceed with activity in a stepwise fashion to allow their brain to readjust to exertion. The athlete may complete a new step each day. The return to play schedule should proceed as below following medical clearance:

Step 1: Light exercise, including walking or riding an exercise bike. No weightlifting.

Step 2: Running in the gym or on the field. No helmet or other equipment.

Step 3: Non-contact training drills in full equipment. Weight training can begin. Step 4: Full contact practice or training.

Step 5: Game play. If symptoms occur at any step, the athlete should cease activity and be re-evaluated by a health care provider.