

PHYSICAL INFORMATION

Dear Parent or Guardian:

Enclosed is an information packet for your child's sport's history and physical examination. The actual physical examination will be required every other year, (i.e. 9th and 11th grades). The purpose of this exam is to detect any conditions that may increase your child's risk of injury or death while practicing or competing in his or her sport. Although there are many beneficial aspects of participating in high school sports (improved self-image, self-motivation and health habits), as with any activity there are some associated risks. Overall, the risk of death in high school sports is extremely low; fewer high school students die due to their sports each year than in automobile accidents. In recent years there has been an average of 20 to 40 non-traumatic deaths in high school sports each year, or one per 100,000 to 200,000 student athletes per year.

The major causes of non-traumatic deaths in sports are heart problem, with a syndrome called "Hypertrophic Cardiomyopathy (HCM)" being the most common. Fortunately, not all athletes with HCM are at risk for sudden death. Our goal is to identify those student-athletes who may be at risk. Currently, the method for doing this is by having a physician perform a specific "Preparticipation Exam" (PPE). By taking the appropriate history and performing the appropriate physical, we can detect some of the student-athletes at risk for sudden death. Unfortunately, this is not a perfect system and some athletes with HCM will be missed and many others without HCM or other heart problems will be referred for other tests, which will turn out to be normal.

Other parts of the history and physical focus on areas that may not lead to death but are more commonly associated with problems. The musculoskeletal and neurologic history and exam is critical in detecting old injuries or other problems that need special attention in order to prevent future injuries.

The final role of the PPE is to provide the student-athletes with a chance to ask a physician health related questions and receive some health counseling. While this exam is very limited and should not replace a regular visit to his or her personal doctor, the limited contact that young adults have with doctors is a recognized fact. Therefore, this provides a much needed opportunity for young athletes to have contact with a physician.

We hope that this letter explains some of the reasons that this history and physical is so important and we urge you to take the time to complete the history form carefully.

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FORM B - - NIAA PRE-PARTICIPATION HISTORY FORM
(COMPLETED THE ATHLETE'S FIRST AND THIRD YEARS OF PARTICIPATION WITH PHYSICAL)

HISTORY NAME: _____	DATE OF EXAM: _____	SEX: _____	AGE: _____	D.O.B.: _____
GRADE: _____	SCHOOL: _____	SPORT(S): _____		
ADDRESS: _____		PHONE: _____		
PERSONAL PHYSICIAN: _____				
IN CASE OF EMERGENCY, CONTACT- (NAME): _____				
RELATIONSHIP: _____		PHONE (H): _____	(W): _____	

<p>EXPLAIN "YES" ANSWERS BELOW.</p> <p>CIRCLE QUESTIONS YOU DON'T KNOW THE ANSWERS TO.</p>
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- | | YES | NO |
|--|-------|-------|
| 1. Do you have a chronic medical condition (asthma, diabetes, high blood pressure, etc.)? | _____ | _____ |
| 2. Have you ever been hospitalized overnight? | _____ | _____ |
| 3. Are you currently taking any prescriptions or non-prescriptions (over-the-counter) medications or pills or using an inhaler? | _____ | _____ |
| 4. Do you have any allergies (for example, to pollen, medicine, food, or stinging insects)? | _____ | _____ |
| 5. a. Have you passed out or been dizzy during exercise? | _____ | _____ |
| b. Have you had chest pain (or pressure) with exercise? | _____ | _____ |
| c. Have you had excessive unexplained shortness of breath or fatigue with exercise? | _____ | _____ |
| d. Is there a family history of premature death or morbidity from cardiovascular disease in a relative younger than age 50? | _____ | _____ |
| e. Is there a history in your family of hypertrophic cardiomyopathy, dilated cardiomyopathy long QT syndrome or Marfan's syndrome? | _____ | _____ |
| f. Has a physician denied or restricted your participation in sports for any heart problem? | _____ | _____ |
| 6. Do you have any current skin problems (for example, itching, rashes, acne, warts, fungus or blisters)? | _____ | _____ |
| 7. a. Have you had a head injury or concussion? | _____ | _____ |
| b. Have you been knocked out, become unconscious, or lost your memory? | _____ | _____ |
| c. Have you had a seizure? | _____ | _____ |
| d. Do you have frequent or severe headaches? | _____ | _____ |
| e. Have you had numbness or tingling in your arms, hands, legs, or feet? | _____ | _____ |
| 8. Have you become ill from exercising in the heat? | _____ | _____ |
| 9. Do you cough, wheeze, or have trouble breathing during or after activity? | _____ | _____ |

YES NO

- 10. a. Do you use any special protective or corrective equipment or devices that aren't usually used for your sport or position (for example, knee brace, special neck roll, foot orthotics, retainer on your teeth, hearing aid)? _____ _____
- b. Are you missing an eye, kidney, testicle or ovary? _____ _____
- 11. a. Have you had any problems with your eyes or vision? _____ _____
- b. Do you wear glasses, contacts or protective eyewear? _____ _____
- 12. Have you had any problems with pain or swelling in muscles, tendons, bones, or joints? _____ _____

If yes, check appropriate item and explain below:

- | | | | |
|----------------|-----------------|-------------|-----------------|
| _____ Head | _____ Elbow | _____ Hip | _____ Neck |
| _____ Forearm | _____ Thigh | _____ Back | _____ Wrist |
| _____ Knee | _____ Chest | _____ Hand | _____ Shin/Calf |
| _____ Shoulder | _____ Finger(s) | _____ Ankle | _____ Upper Arm |
| _____ Foot | _____ Toe(s) | | |

- 13. Are you actively trying to gain or lose weight? _____ _____
- 14. Would you like to talk to someone about stress, anger, depression, or other issues? _____ _____
- 15. Record the dates of your most recent immunizations (shots) for:

Tetanus _____ Measles _____
 Hepatitis B _____ Chickenpox _____

FEMALES ONLY:

16. When was your first menstrual period? _____

17. When was your most recent menstrual period? _____

18. How much time do you usually have from the start of one period to the start of another? _____

19. How many periods have you had in the last year? _____

20. What was the longest time between periods in the last year? _____

EXPLAIN "YES" ANSWERS HERE: _____

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of Athlete *Signature of Parent/Guardian* *Date*

Dear Health Practitioner:

Enclosed is the revised Nevada Interscholastic Activities Association (NIAA) packet for High School Pre-participation Physical Evaluations (PPE's). You will notice that the form we are using incorporates recommendations from the Second PPE Task Force (1997)(supported by the AAFP, AAP, AMSSM, AOSM and AOASM) and separately from the AHA. We anticipate that this form will be reviewed every few years and we will keep you apprised of any changes. Also, for young athletes with known cardiovascular abnormalities, we recommend following the guidelines of the 26th Bethesda Conference. We recommend you reference the Task Force monograph, the AHA recommendations or the 26th Bethesda Conference before performing high school athletic physicals in Nevada.

While many of you have been performing these evaluations for years, we would like to bring your attention to a few points. As discussed in the introduction to the monograph, there are multiple reasons for performing PPE's; the foremost reasons are to prevent injury and sudden cardiac death.

It is estimated that between 1 and 2 deaths (predominantly cardiovascular in etiology) per 200,000 high school athletes occur per year. The prevalence of cardiovascular disease capable of causing sudden cardiac death in these athletes is around 1/20,000. The most common cause of cardiac death in this population is hypertrophic cardiomyopathy (HCM).

Since the vast majority of PPE's will be completely normal, and, conversely, most students with abnormalities on history or physical exam do NOT have significant cardiac pathology, extreme diligence is required when performing these exams so that the few students with serious conditions are not missed.

ANSWERS ON THE HISTORY FORM THAT WOULD SUGGEST A NEED FOR A CARDIOLOGY CONSULTATION INCLUDE:

- Excessive shortness of breath, syncope or chest pain during exercise.
- Family history of premature death or cardiovascular morbidity. (Before age 50)
- Family history of HCM, dilated cardiomyopathy, long QT syndrome, or Marfan's syndrome.

ABNORMALITIES ON THE PHYSICAL EXAM THAT SUGGEST THE NEED FOR ECHOCARDIOGRAPHY OR CARDIAC CONSULTATION INCLUDE:

- Any systolic murmur greater than II/VI.
- Any diastolic murmur.
- A murmur that increases in intensity from supine to standing (suggests HCM).
- Stigmata of Marfan's syndrome. (Attachment 7).

A second goal of the PPE is to detect chronic illnesses or old injuries that may hamper the athlete's performance (such as Exercise Induced Asthma) or lead to injury ("the most common cause of injury is reinjury").

The final goal of the PPE is to provide our young athletes with a chance to talk to a physician about health issues. While this exam does not replace ongoing care by a personal physician, it may be the only contact these students have. Therefore, a brief discussion of health issues such as breast and testicular cancer screening, alcohol and tobacco use, automobile safety, etc., may be appropriate during the PPE.

Thank you for your willingness to help ensure a safer future for Nevada's young athletes.

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References:

26th Bethesda Conference: Recommendations for Determining Eligibility for Competition in Athletes with Cardiovascular Abnormalities. JACC. 1994;24(4):845-99.

Corrado D, Basso C, Schiavon M and Thiene G. Screening for Hypertrophic Cardiomyopathy in Young Adults. NEJM. 1998;339(6)364-9.

Epstein SE, Maron BJ. Sudden death and the competitive athlete: Perspectives on pre-participation screening studies. J Am Coll Cardiol 7:220-230, 1986.

Maron BJ, Thompson PD, Puffer JC, et al. Cardiovascular preparticipation screening in competitive athletes. Circ. 94:850-856, 1996.

Glover DW, Maron BJ. Profile of preparticipation cardiovascular screening in high school athletes. JAMA. 279:1817-1819. 1998.

Pelliccia A and Maron BJ. Preparticipation Cardiovascular Evaluation of the Competitive Athlete: Perspectives from the 30-Year Italian Experience. Am J Cardiol. 7(41)15/95:827-9.

Preparticipation Physical Evaluation, 2nd ed. AAFP, AAP, AMSSM, AOSM, AOASM. McGraw-Hill. 1992.
Smith J and Laskowski ER. The Preparticipation Physical Examination: Mayo Clinic Experience with 2,739 Examinations. Mayo Clin Proc. 1998;73:419-29.

Liberthson R. Sudden Death from Cardiac Causes in Children and Young Adults. Current Concepts. 1996;334(16):1039-44.

VanCamp SP, Bloor CM, Mueller OF, Cantu RC, Olson HG. Nontraumatic sports death in high school and college athletes. Med Sci Sports Exerc. 27:641-647, 1995.

Fuller C.M., McNulty C.M., Spring DA., et al. Preparticipation Screening of 5,615 High School Athletes for Risk of Sudden Cardiac Death, MSSE. 29:1131-1138, 1997.

Attachment 7

Suggested Screening Format for Marfan's Syndrome

Screen all men over 6 feet and all women over 5 feet 10 inches in height with echocardiogram and slit lamp examination when any two of the following are found:

1. Family History of Marfan's syndrome*
2. Cardiac murmur or mid-systolic click
3. Kyphoscoliosis
4. Anterior thoracic deformity
5. Arm span greater than height
6. Upper to lower body ration more than one standard deviation below the mean
7. Myopia
8. Ectopic lens

*This finding alone should prompt further investigation.

From Hara JH, Puffer JC. In Mellion MD: Sports Injuries & Athletic Problems. Philadelphia. Hanley & Belfus, Inc., 1988.

**FORM D -- Health Practitioner, please refer to the letter & references provided on Form C.
NIAA PRE-PARTICIPATION PHYSICAL EVALUATION
(Physical to be completed during an athlete's first and third year of participation)**

PHYSICAL EXAMINATION		DATE OF EXAMINATION: _____
NAME: _____		DATE OF BIRTH: _____
HEIGHT: _____	WEIGHT: _____	% BODY FAT (optional): _____ PULSE: _____ BP: _____ / _____ (____ / _____, ____ / _____)
VISION: R 20/ _____	L 20/ _____	CORRECTED: Y / N PUPILS: Equal _____ Unequal _____

<u>MEDICAL</u>	NORMAL /ABSENT	ABNORMAL FINDINGS	EXPLAIN	INITIALS
Appearance				
Eyes/Ears/Nose/Throat				
Lymph Nodes				
Lungs				
Abdomen				
Genitalia (Males Only)				
Skin				
<u>CARDIOVASCULAR</u>				
Murmur that Increases From Supine to Standing				
Systolic Murmur Greater Than II/VI				
Any Diastolic Murmur				
Radial & Femoral Pulses				
<u>MUSCULOSKELETAL</u>				
Neck				
Back				
Shoulder / Arm				
Elbow / Forearm				
Wrist / Hand				
Hip / Thigh				
Knee				
Leg / Ankle				
Foot				
Stigmata of Marfan's Syndrome				

CLEARED after completing evaluation/rehabilitation for: _____

NOT CLEARED FOR: _____ **REASON:** _____

Recommendations: _____

Name of physician (print/type): _____ **Phone:** _____

Address: _____
Street City State Zip Code

I, _____ hereby certify that I am a licensed _____, qualified to perform NIAA Pre-Participation Evaluations, and that on the date set forth below I performed all aspects of the NIAA Pre-Participation Evaluation on the above student. This student meets all physical examination requirements for participation in NIAA sanctioned sports.

Signature of Health Practitioner	License Number	Office Phone Number	Date
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Revised 5-2010; June 2012