

**STATE OF CONNECTICUT**  
DEPARTMENT OF PUBLIC HEALTH

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**TO:** Local health departments, school nursing supervisors, school medical advisers, high school wrestling coaches

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**DATE:** February 15, 2013

**SUBJECT:** Information regarding Herpes Gladiatorum infections among high school wrestlers

The Connecticut Department of Public Health (DPH) recently learned of skin infections occurring among high school wrestlers. At least one wrestler has been confirmed to have a herpes infection (known as Herpes Gladiatorum) with several other wrestlers at multiple schools with skin infections that are consistent with this diagnosis. With multiple state and regional tournaments occurring in the next few days and weeks, this communication is meant to alert health care providers, health departments and coaches to these infections so that infections can be promptly identified and treated to prevent further transmission among wrestlers.

Skin infections, including herpes infections, are common among wrestlers. Herpes Gladiatorum is an infection with the virus herpes simplex type-1, the same virus that causes cold sores. Infection is spread by direct skin-to-skin contact and can affect any part of the body with the face and neck most commonly affected among wrestlers. The rash usually occurs within 8 days of exposure (range 2–12 days) and consists of small, often clustered, fluid-filled vesicles surrounded by redness which eventually open up to sores; it is often confused with a bacterial skin infection called impetigo. Some people might experience additional symptoms such as fever, sore throat or swollen lymph nodes. Most infections resolve on their own without any treatment but antiviral treatment can decrease the severity and shorten the length of symptoms. Infections can be more severe if they affect the eye. Herpes infections are lifelong with some people having recurrent rashes that are usually less severe than the initial outbreak but are still infectious to others.

Attached to this letter is a fact sheet on Herpes Gladiatorum as well as guidelines from the National Federation of State High Schools on the treatment, prevention and control of these infections among athletes, including wrestlers. This information should be shared with anyone who assists in the management of high school wrestling teams in the state including student athletes and their parents.

The Epidemiology and Emerging Infections Program at DPH can be contacted at 860-509-7994 with further questions.

## Herpes Gladiatorum Fact Sheet

### 1. What is herpes gladiatorum?

Herpes gladiatorum is a skin infection caused by the herpes simplex virus.



Photos: courtesy of the Minnesota Department of Health

### 2. How do you get herpes gladiatorum?

This skin infection is spread by direct skin-to-skin contact. Sports that involve close contact with herpes gladiatorum lesions may spread this infection to other athletes.

### 3. What is herpes gladiatorum illness like?

Generally, lesions (sores) appear within 8 days after exposure to an infected person, but in some cases it may take longer to appear. Good personal hygiene and thorough cleansing and disinfecting of all equipment are essential to helping prevent the spread of this and other skin infections.

All athletes with skin sores or lesions should be referred to a physician or primary care provider for evaluation and possible treatment. These individuals should not participate in practice or competition until their lesions have healed.

Before skin lesions appear, some people have a sore throat, swollen lymph nodes, fever or tingling on the skin. Herpes gladiatorum lesions appear as a cluster of blisters and may be on the face, arms, legs or trunk. Seek medical care immediately for lesions in or around the eye. Every wrestler should be evaluated by a knowledgeable, unbiased adult for the presence of a rash and excluded from practice and competition if suspicious rashes are present until evaluation and clearance by a competent medical professional.

### 4. What are the serious complications from herpes gladiatorum?

Herpes gladiatorum infections can recur. The virus can "hide out" in the nerves and reactivate later, causing another infection. Generally, recurrent infections are less severe and don't last as long. However, a recurring infection is just as contagious as the original infection, so the same steps need to be taken to prevent infecting others.

### 5. How can herpes gladiatorum infection be prevented?

- Personal hygiene for athletes is essential.
  - Shower at school immediately after practice, using soap and water.
  - Always use your own plastic bottle of liquid soap.

- Use your own soap and towel.
  - Wash your towel after each use, using hot water with detergent (and bleach if possible); and dry on high heat setting.
- Equipment and gear should be clean.
    - Practice and competition gear should be cleaned every day.
    - Headgear should be cleaned daily with a bleach wipe or any other cleaning material.
    - Clean towels should always be used.
- Good hygiene is essential to preventing infection with herpes gladiatorum.
    - Hands should be cleaned often! At least 15 seconds washing should be done using soap and warm water. An alcohol-based hand rub can be used instead of soap if their hands are not visibly soiled.
    - Avoid touching your eyes, nose or mouth with your hands.
    - Clean your hands before and after practice and competitions.
    - Never pick or squeeze skin sores; drainage is very infectious.
    - Always report any skin lesions or sores to your athletic trainer or coaching staff immediately, whom in turn should notify teams that they have wrestled in the 8 days prior to an outbreak of herpes gladiatorum and notify/consult with their school physician immediately so that a treatment plan can be started.
  - Cleaning and disinfecting the environment is also important in preventing infection with herpes gladiatorum. Disinfectants approved by the Environmental Protection Agency (EPA) must be used according to manufacturer recommendations (viricidal, fungicidal, bactericidal) OR bleach solution (800 ppm = ¼ c bleach: 1 gallon water). Mix daily to be effective. Mats should be washed after every practice session or competition. Locker rooms and shower areas should be cleaned and disinfected daily using EPA-approved product or bleach solution. Mop heads and cleaning cloths should be laundered daily using laundry detergent, hot water and dry on high heat setting. All facilities should be cleaned daily with an appropriate cleaning agent. This includes locker room, practice room, mats and weight room.

## 6. How is herpes gladiatorum diagnosed?

Diagnosis is usually based upon appearance and clinical grounds. . If herpes or another infectious skin lesion is suspected, wrestlers should not practice or play until evaluated by a competent medical professional. Please contact your primary care provider for specific clinical medical information.

## 7. For more information on herpes gladiatorum, or skin infections in sports health:

<http://www.health.state.pa.us/sportshealth>.

Additional information **(for athletic trainers and clinicians)** from the National Federation of State High School Associations (NFSHSA) is available at:

[http://www.nfhs.org/core/contentmanager/uploads/pdfs/wrestling/physician\\_release\\_for\\_wrestlers.pdf](http://www.nfhs.org/core/contentmanager/uploads/pdfs/wrestling/physician_release_for_wrestlers.pdf) and <http://www.nsaahome.org/textfile/spmeds/Herpes.pdf>



## **Herpes Gladiatorum** **Position Statement and Guidelines**

### **National Federation of State High School Associations (NFHS) Sports Medicine Advisory Committee**

In the recent years, control of skin infections has become a crucial part of high school wrestling. Herpes Gladiatorum (HG), caused by Herpes Simplex Type-1 virus (HSV-1), has received the most attention due to the speed of which it can spread and the long term consequences an athlete may have, even after finishing his/her career. The NFHS Sports Medicine Advisory Committee realizes these issues and has helped establish guidelines to educate the sporting and medical community about their presence, means to treat and reduce transmission of this virus.

#### **Guidelines for Herpes Gladiatorum – Treatment and Prevention**

##### **First time Outbreak:**

1. Seek medical attention and oral antiviral treatment to expedite its clearance.
2. Regardless if treated, no wrestling until all lesions are healed with well-adhered scabs. No new vesicle formation and no swollen lymph nodes near area involved.
3. Consider being placed on prophylactic oral antiviral medication for remainder of season and each subsequent season.

##### **Recurrent Outbreaks:**

1. Seek medical attention and oral antiviral treatment to expedite its clearance.
2. No wrestling until after 120 hours of oral antiviral medication and no swollen lymph nodes near area involved.
3. If not treated with antiviral medication, no wrestling until all lesions are healed with well-adhered scabs. No new vesicle formation and no swollen lymph nodes near area involved.
4. Consider being placed on prophylactic oral antiviral medication for remainder of the season and each subsequent season.

Any individual exposed to the outbreak 3 days prior to its development, should be isolated from direct contact with other athletes for 8 days. Examine them daily for potential Herpes Gladiatorum.

Use of antiviral medication for prevention is only at the discretion of your Health Care Provider (HCP), who can then explain the potential risks and benefits.

The spreading of this virus is strictly skin-to-skin with the preponderance of the outbreaks developing on the head, face and neck. This reflects the typical lock-up position a wrestler has facing his/her opponent. Usually a primary outbreak is seen as a raised, rash coalesced into groupings of 6-10 vesicles. Sore throat, fever, swollen, cervical lymph nodes and malaise are typical signs with a first time outbreak. Reoccurrence usually involves a smaller area with less systemic signs and for a shorter duration.

Young athletes who contract Herpes Gladiatorum are destined to have a battle with life-long reoccurrences and potential spread to less suspecting individuals, such as partners or children. Differing from recurrent herpes labialis, or 'cold sores', recurrent Herpes Gladiatorum can develop around the eye. This location has potential for rare but serious consequences with reoccurrences possibly affecting the visual acuity of the afflicted eye.

Previously thought to exist in 2.6% of high school age wrestlers, recent data suggests it may exist in 29.8% of these individuals. Even though this is no different than non-wrestlers in this age group, the location of the outbreaks is of concern. Since only 2-3% of these athletes are aware they have Herpes Gladiatorum, a larger number are competing with the virus and unknowingly exposing it to others. Means of infection control should focus on coaches or Certified Athletic Trainers, performing daily skin checks. An athlete with a suspicious lesion must be withdrawn from practice or competition, only to return after evaluated and cleared by his/her Health Care Provider.

Once an outbreak occurs on a team, removing the athlete from competition or play is mandatory to minimize its spread. After being on antiviral medication, and provided no further signs of infection, he/she can return to play. Since the virus can spread before vesicles are present, it's recommended to examine all athletes in contact with this individual from the previous 3 days. Monitor them for any suspicious lesions, which may take 8 days to develop. Due to the risk of viral spread before vesicle formation, consider isolating these individuals from sparring with others during that time.

The usage of oral antiviral medication is beneficial in expediting the clearance of an outbreak. One paper showed that when used for a recurrent outbreak, these medications showed a 2 day reduction in the length of time it takes to clear the virus. Although controversial, the use of prophylactic dosing can help in reducing the reoccurrence of outbreaks. Data exists showing infected individuals to have a greater preponderance to outbreaks when not on the medication. These medications won't prevent 100% of the outbreaks, but can reduce their occurrence. Amongst health professionals, the concerns about using these medications in this venue center around potential risks, inconsistent benefit and possible resistance development.

Documentation exists stating these issues are minimal, yet plausible and need to be mentioned. Therefore, this determination should be done at the discretion of the parents/guardian, Health Care Provider and the athlete.

The NFHS Sports Medicine Advisory Committee will continue to promote control of Herpes Gladiatorum by education and raising public awareness about the virus. Affected athletes should work closely with their Health Care Providers to determine the best way to treat an outbreak and how to reduce its spread to other wrestlers. The coaching staff and Certified Athletic Trainers shall focus on: daily skin checks, proper hygienic practices, and withdrawal and treatment of individuals with an active outbreak.

*Addendum:* Other considerations could be given to perform blood testing to determine antibodies for HSV-1 at the beginning of each season. Anyone who is positive should be considered for daily antiviral prophylaxis throughout the season, even if they have never had a documented outbreak of Herpes Gladiatorum or cold sores. A belief held by few and supported by recent research in high school wrestlers. There is also data to support that shedding of the virus can occur before actual vesicle formation. This would be of importance since present guidelines focus on the presence of vesicles for withdrawal of competition. Prophylaxis would help prevent vesicle formation and possibly reduce viral shedding as these are very important factors in controlling Herpes Gladiatorum transmission.

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