State of Alaska Epidemiology Bulletin

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Bulletin No. 15
May 4, 1993

Hepatitis B and Athletics

Participation in athletics is an important extra-curricular activity for many young Alaskans. Sports activities involving close contact between participants may rarely cause transmission of communicable diseases. Some examples include an outbreak of furunculosis (boils, skin infections) caused by *Staphylococcus aureus* among players on a high school football team in Kentucky;[1] an outbreak of skin infections due to herpes simplex virus type I (herpes gladiatorum) among high school wrestlers at a wrestling camp in Minnesota;[2] and a recent outbreak of ringworm, a skin infection caused by a fungus, among wrestlers in Wasilla.[3]

Injuries and bleeding can occur during contact sports and it is possible for hepatitis B virus (HBV) to be transmitted through blood-to-blood contact with an infected individual. Physicians, parents, and athletes have asked if they should be concerned about the risk of HBV transmission during athletic events.

Hepatitis B virus is transmitted primarily through sexual contact and direct blood-to-blood exchange. Although HBV would seem to be a risk to athletes participating in contact sports, there is only one report of sport-related hepatitis B transmission--a small outbreak among members of a high school sumo wrestling team in Japan.[4] Undue concern about hepatitis B in athletics diverts attention from the well-documented and far higher risks of HBV transmission through sexual contact or injecting drug use.

The Section of Epidemiology makes the following recommendations concerning hepatitis B virus and athletics:

1. Based on scientific evidence to date, the risk of HBV transmission through participation in athletics is extremely low.

2. There is no public health basis for excluding a person from participation in any sport because of HBV infection. Participation should be determined by the athlete's physician after medical evaluation of the seriousness of the illness.

3. There is no medical or public health justification for routine HBV testing of participants in any sports activity.

4. Consistent with routine, sound public health practice, all sports teams should employ universal precautions when providing first-aid or when cleaning-up blood or body fluids visibly contaminated with blood, as recommended by the U.S. Centers for Disease Control and Prevention and the Alaska Division of Public Health.

5. Athletes, coaches, and athletic trainers should receive information on HBV prevention. This training should focus on high-risk behaviors associated with HBV transmission: sexual intercourse and blood-to-blood transmission as a result of sharing contaminated drug injection equipment. The risk associated with sharing needles/syringes for anabolic steroid injection should be included.

6. HBV immunization should be encouraged for all adolescents and young adults engaging in high-risk behaviors; e.g., injecting drug use or sexually active.

These recommendations are consistent with current policies and recommendations of the National Collegiate Athletic Association, the U.S. Olympic Committee, the American Academy of Pediatrics, and the National Federation of State High School Associations.

References:

1. Sosin DM, Gunn RA, Ford WL, Skaggs JW. An outbreak of furunculosis among high school athletes. Am J Sports Med 1989; 17: 828-32.

2. Belongia ED, Goodman JL, Holland EJ, et al. An outbreak of herpes gladiatorum at a high-school wrestling camp. N Engl J Med 1991; 325:906-910.

3. Section of Epidemiology. Ringworm pins wrestlers. State of Alaska Epidemiology Bulletin No. 9; March 4, 1993.

4. Kashiwagi S, Hayashi J, Ikematsu H, et al. An outbreak of hepatitis B in members of a high school sumo wrestling club. JAMA 1982; 248: 213-4.

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