



TO: NJUHSD Employees
FROM: District Nurse
RE: Hepatitis B Vaccine

According to the OSHA Bloodborne Pathogens Standards, the district must offer Hepatitis B vaccinations to all employees who are "reasonably anticipated" to have occupational exposure to blood and other potentially infectious materials. This exposure would occur as the result of performing their job duties and no include "good Samaritan" acts such as assisting a co-worker with a nosebleed.

Please review the attached "Informed Consent" document - "Important Information about Hepatitis B and Hepatitis B Vaccine" to ascertain if you fall into category number **1 or 9** of the 13 categories listed. You will note that number 9 of the 13 categories addresses teachers and teacher assistants who serve developmentally disabled students.

It is critical that all personnel consistently use universal precautions when giving direct assistance to students with bleeding injuries and while doing perineal care during diapering and toileting. Personnel who provide assisted feedings to students who frequently gag, requiring an immediate finger sweep of the mouth to remove food, must wear gloves while assisting with the feeding. Please protect yourselves and other by using proper hand washing technique, appropriately using gloves and other protective equipment (such as the CPR micro shield) and by properly disposing of all contaminated articles. Any needles or instruments that have been infected with blood must be discarded in a proper receptacle for contaminated "sharps." This information has been provided to you during in-service meetings and by handout. Please review the information and contact the district nurse for clarification or more information.

"Whether you have been vaccinated or not, notify your administrator and the district nurse as soon as possible following any exposure to blood or body fluids - by needle stick, laceration, bite, or through contact with the eye or mucous members." Post-exposure prophylaxis can be given at that time. "Post-exposure prophylaxis includes Hepatitis B vaccination and administration of hepatitis immune globulin (HBIG) which contains antibodies to the virus. When it is administered within seven days of exposure, HBIG can confer temporary passive immunity until the vaccine can take effect. It should be given as soon as possible, however, preferably within 24 hours of the initial exposure. This regimen is more than 90% effective in preventing Hepatitis B." (SOURCE: Heeg, J.M. & Coleman, D.A., "Hepatitis Kills," RN, April 1992, p. 64)

Please read the attached information on the Hepatitis B vaccine and complete the employee notification/response form.

Return the signed form to the District Office Personnel Department.

IMPORTANT INFORMATION ABOUT HEPATITIS B AND HEPATITIS B VACCINE

(Please read carefully)

What is Hepatitis B?

Hepatitis B is an infection of the liver caused by the hepatitis B virus (HBV). The term "viral hepatitis" is often used for and may include hepatitis B and other similar diseases which affect the liver but are caused by different viruses.

Acute hepatitis generally begins with mild symptoms that may or may not become severe. These symptoms may include loss of appetite, a vague feeling of oncoming illness, extreme tiredness, nausea, vomiting, stomach pain, dark urine, and jaundice (yellow eyes and skin). Skin rashes and joint pain can also occur.

In the United States about 300,000 persons, mostly young adults, catch hepatitis B each year. About one-fourth will develop jaundice, and more than 10,000 will need to be hospitalized. About 250 people die each year from severe acute hepatitis B. Between 6 and 10 of every 100 young adults who catch hepatitis become chronic carriers (have HBV in their blood for 6 or more months) and may be able to spread the infection to others for a long period of time. Infants who catch hepatitis B are more likely to become carriers than adults. About one-fourth of these carriers go on to develop a disease called "chronic active hepatitis." Chronic active hepatitis often causes cirrhosis of the liver (liver destruction) and death due to liver failure. In addition, HBV carriers are much more likely than others to get cancer of the liver. An estimated 4,000 persons die from hepatitis B-related cirrhosis each year in the United States and more than 800 die from hepatitis B-related liver cancer.

The risk of catching hepatitis is higher in certain groups of people because of their occupation, lifestyle, or environment. Because of the risks of serious problems associated with hepatitis B infection, vaccination to help prevent infections is recommended for these groups.

Hepatitis B Vaccine

Hepatitis B vaccine is made two ways. Plasma-derived vaccine is made from HBV particles that have been purified from the blood of carriers. The method used to prepare the plasma-derived hepatitis vaccine kills all types of viruses found in human blood, including the virus that causes Acquired Immunodeficiency Syndrome (AIDS). Recombinant vaccines are made from common baker's yeast cells through genetic engineering. The yeast-derived vaccines do not contain human blood products. The vaccine is given by injection on three separate dates. Usually, the first two doses are given one month apart, and the third dose five months after the second. After three doses, the hepatitis B vaccine is 85%-95% effective in preventing hepatitis B infection in those who received vaccine. An alternative schedule of four doses of vaccine given at 0, 1, 2 and 12 months is approved for one vaccine. Protection for normal, healthy adults and children given vaccine lasts at least seven years. Booster doses of vaccine are not routinely recommended at the present time.

Who Should Get Hepatitis B Vaccine?

The vaccine is recommended for persons at high risk of catching HBV infection who are or may be unprotected. These groups include:

1. *Person with occupational risk.* Health care and public safety workers who are exposed to blood or blood products or who may get accidental needlesticks should be vaccinated.
2. *Clients and staff of institutions for the developmentally disabled.* The special behavioral and medical problems of these persons make this a high-risk setting. Risk in institutions is related to contact with blood and also with bites and contact with skin lesions and other body fluids that contain HBV. Clients and staff of group and foster homes where a carrier is known to be present should also be vaccinated.
3. *Hemodialysis patients.* Although the hepatitis B vaccine is less effective in these patients, it should still be offered to all hemodialysis patients. Higher doses and/or special preparations are required for these persons.
4. *Homosexually active men.*
5. *User of unlawful injectable drugs.* Sharing needles is an extremely high-risk activity for transmitting hepatitis B.
6. *Recipients of certain blood products.* Persons such as hemophiliacs who receive special products to help their blood clot are at high risk of infection.

7. *Household and sexual contacts of HBV carriers.* When HBV carriers are identified, household and sexual contacts should be offered vaccine.
8. *Adoptees from countries with high rates of HBV infection.* Families with orphans or unaccompanied minors from such countries should have the child checked for HBV carriage, and, if positive, family members should be vaccinated.
9. *Other contact of HBV carriers.* Vaccine use should be considered in classroom and other day settings where deinstitutionalized developmentally disabled HBV carriers behave aggressively or have special medical problems that may expose contacts to their blood or body secretions. Teachers and teachers' aides have been shown to be at significant risk in these settings. Other persons who have casual contact with carriers at schools and offices are at little risk of catching HBV infection and vaccine is not recommended for them.
10. *Special populations from areas with high rates of hepatitis B.* These groups include Alaskan natives, native Pacific Islanders, immigrant and refugees from eastern Asia and sub-Saharan Africa, and their U.S. born children.
11. *Inmates of long-term correctional facilities.* The risk of inmates catching HBV infection may be due to use of unlawful injectable drugs and male homosexual practices.
12. *Heterosexuals who come in for treatment of other newly acquired sexually transmitted diseases who have histories of sexual activity with multiple sexual partners in the past six months.*
13. *Persons who plan to travel to areas outside the United States that have high rates of hepatitis B infection, stay in these areas for more than six months, and have close contact with the local population; and, persons traveling for shorter durations who may have contact with blood from or sexual contact with local person in areas where HBV infection is common. Person traveling abroad who will perform medical procedures in areas where HBV infection is common are at very high risk.*

Additional Vaccines

Hepatitis B vaccine is also recommended as part of the therapy used to prevent hepatitis B infection *after* exposure to HBV. Postexposure use of hepatitis B vaccine is recommended for the following persons: 1) infants born to mothers who have had a positive blood test for hepatitis B surface antigen (HBsAg); 2) persons having accidents involving HBsAg-positive blood, where there is entry through the skin or mucous membrane, and 3) infants less than 12 months old whose mother or primary caregiver has HBV infection; and, 4) person have sexual contact with someone who has a positive blood test for HBsAg. The hepatitis B vaccine series should be started at the same time as other therapy, primarily, treatment with hepatitis B Immune globulin (HBIG).

Possible Side Effects from the Vaccine

The most common side effect is soreness at the site of the injection. Illnesses, such as neurologic reactions, have been reported after the vaccine is given, but hepatitis B vaccine not believed to be the cause of these illnesses. As with any drug or vaccine, there is a rare possibility that allergic or more serious reactions or even death could occur. No deaths, however, have been reported in persons who have received this vaccine. Giving hepatitis B vaccine to person who are already immune or to carriers will not increase the risk of side effects.

Pregnancy

No information is available about the safety of the vaccine for unborn babies; however, because the vaccine contains only particles that do not cause hepatitis B infection, there should be no risk. In contrast, if a pregnant woman gets a hepatitis B infection, this may cause severe disease in the mother and chronic infection in the newborn baby. Therefore, pregnant woman who are otherwise eligible can be given hepatitis B vaccine.

QUESTIONS

If you have any questions about hepatitis B or hepatitis B vaccine, please ask us now or call your doctor or health department before you sign the form.

REACTIONS

If the person who received the vaccine gets sick and visits a doctor, hospital or clinic during the four weeks after receiving the vaccine, please report it to the Nevada County Health Department at 265-1450.

PRECAUTIONS TO PREVENT THE SPREAD OF INFECTIOUS DISEASES IN THE SCHOOL SETTING

Although there are many infectious diseases that can be transmitted through casual contact such as the school setting (the common cold, flu, streptococcal sore throat), two serious diseases (HIV/AIDS and Hepatitis B) are not readily spread this way. However, it is important for us to understand these illnesses and use Universal Precautions at all times to protect ourselves.

Human Immunodeficiency Virus (HIV)/AIDS

Acquired Immune Deficiency Syndrome (AIDS) is the advanced stage of HIV infection. The virus attacks the immune system leaving it vulnerable to life-threatening infections from other agents (bacteria or viruses) and allowing rare cancers to develop. The virus may also attach the brain and nervous system. Persons infected with HIV frequently have no apparent symptoms and may not even be aware of their HIV status. A period of up to 10-15 symptom free years has occurred in some individuals. More than half the people in the United States who have been diagnosed with AIDS have died.

Transmission of HIV

1. Blood to blood, i.e. shared needles, mucous membrane exposure to blood, blood transfusion (highly unlikely since 1985). Sharing unsterile instruments for tattooing or ear piercing may also transmit HIV.
2. Any sexual activity involving direct genital contact with semen, blood, or vaginal secretions with someone who is infected.
3. Perinatal (being born to an infected mother).

The possibility that HIV/AIDS will be transmitted in schools, the workplace or other public gathering is remote. HIV is not spread from one person to another through everyday activities.

Hepatitis B

Hepatitis B is much more easily transmitted than HIV. Hepatitis is an inflammation of the liver which may be caused by drugs, alcohol, chemicals and viruses. They symptoms are similar for each type of hepatitis and may range from mild to severe. The symptoms may be fatigue, loss of appetite, weight loss, nausea, headache, jaundice, dark urine, clay-colored stools, and abdominal pain. Onset of symptoms may appear 1-6 months after exposure to the virus. Death, while uncommon, may result from permanent damage to the liver.

Transmission of Hepatitis B

Because of the much higher concentration of hepatitis B virus in blood, transmission of hepatitis B virus is more likely to occur than transmission of AIDS/HIV. Some specific school populations, such as children from residential facilities for the developmentally disabled, have hepatitis B more often than other school children.

Hepatitis B infection may be spread by:

1. Sharing intravenous (IV) needles and/or syringes with infected persons.
2. Contaminated needles or instruments used to puncture skin (ear piercing, tattooing, acupuncture, razors).
3. Sexual contact involving direct genital contact with semen, blood or vaginal secretions.
4. Direct contact with infected blood with broken skin (such as cuts or scratches).
5. Direct contact of mucous membrane of the eye and the mouth with the blood of an infected person.
6. Sharing toothbrushes.
7. Saliva/human bite.
8. Perinatal (before and during birth).
9. Blood transfusion (can screen for virus).
10. Fomites (inanimate objects). Can live 7 days in dried blood in room temperature.

Transmission may occur as early as four weeks before any symptoms occur. Incubation period is 6 weeks to 6 months. Carriers of the virus often have no symptoms. Unlike hepatitis A, hepatitis B is broken down by digestive enzymes and therefore not transmitted in feces.

Hepatitis B Vaccine

1. Series of three injections given to prevent hepatitis B infection.
2. Cost is approximately \$175. Available at the County Health Department.

Universal Precautions

Universal precautions are steps recommended by the U.S. Centers for Disease Control to be taken in healthcare settings to reduce risks of infection. Taking universal precautions simply means taking routine care in handling blood and body fluids containing blood of all persons regardless of whether those persons are known to be infected with some specific disease causing agent. In the school setting, those precautions should include: handwashing, using gloves, careful trash disposal, using disinfectants, and modifications of cardiopulmonary resuscitation (CPR).

It is critical that universal precautions be used in every instance when handling blood and body fluids because (1) for legal reasons related to confidentiality, there is no requirement that health officials notify school authorities of the results of blood tests for antibody to the AIDS virus, (2) there may be situations where we do not know that a person is infected, and (3) we should not wait until we encounter an identified infected student or adult before practicing infectious disease prevention techniques.

The term "body fluids" includes blood, semen, vaginal secretions, drainage from scrapes and cuts, feces, urine, vomitus, respiratory secretions (such as nasal drainage) and saliva.

Handwashing

1. Thorough handwashing is the single, most important factor in preventing the spread of infectious diseases and should be practiced routinely by all school personnel and taught to students as routine hygienic practice.
2. All staff should wash their hands in the following circumstances:
 - Before handling food, drinking, eating or smoking
 - After toileting
 - After contact with body fluids or items soiled with body fluids
 - After touching or caring for students, especially those with nose, mouth or other discharges
3. How to wash hands: Wet hands with running water and apply soap from a dispenser. Lather well and wash vigorously for 15-20 seconds. Soap suspends easily-removable soil and microorganisms allowing them to be washed off. Running water is necessary to carry away dirt and debris. Rinse well under running water with water draining from wrist to fingertips. Leave water running. Dry hands well with a paper towel. Turn off water using paper towel. Discard the towel.

First Aid Involving Body Fluids and CPR

1. Avoid direct contact with body fluids. If direct skin contact occurs, hands and other affected skin areas should be washed with soap and water immediately after contact has ended.
2. Disposable sing latex gloves should be used when contact with body fluids is anticipated (such as bloody nose, diapering). Gloves should be standards components of first aid supplies in the school so that they are readily accessible for emergencies.
3. Devices that prevent backflow of fluids from the mouth of a victim being given CPR should be used by rescuers in the school setting. These devices are available through medical supply companies.
4. Any soiled clothing should be placed in a plastic bag, sealed and placed in a second plastic bag labeled with the student's name. Send home with student.

Trash Disposal

1. Place soiled tissues, pads, gauze bandages, towels, etc. into a plastic bag and tie or seal the bag. Place it in a second plastic bag and leave unsealed.
2. If needles, syringes or lancets are used in the school setting, arrange for a puncture-proof container. Place intact needles and syringes in the designated container. Do not bend or break needles. Do not recap needles. These containers must be disposed of by a certified agency.

Using Disinfectants

1. Environmental surfaces contaminated with body fluids should be cleaned promptly with disposable towels and approved disinfectant such as household chlorine bleach in 1:10 solution (1/4 cup of bleach in bottle filled to one gallon). This should be mixed fresh daily. Disposable gloves should be worn. Disposable items should be discarded in a plastic-line wastebasket. Mop solution sued to clean up body fluid spills should consist of the approved disinfectant. Used mops should be soaked in this solution thirty (30) minutes and rinsed thoroughly before reusing.
2. After cleanup, remove gloves and wash hands.

**A COPY OF THE OSHA REGULATIONS REGARDING BLOODBORNE PATHOGENS IS POSTED IN THE NURSING OFFICE.
A COPY OF THE NJUHS D EMPLOYERS EXPOSURE CONTROL PLAN MAY BE OBTAINED FROM THE NURSING OFFICE.**

HEPATITIS B / HEPATITIS B VACCINE INFORMATION

Employee Notification Response Form

_____ I have read and have had explained to me the information about Hepatitis B and Hepatitis B vaccine. I have had a chance to ask questions which were answered to my satisfaction. I believe I understand the benefits and risks of the Hepatitis B vaccine. I believe I fall into category #1 or #9 of the list of 13 categories – “Who Should Get the Hepatitis B vaccine” in the attached document *Important Information About Hepatitis B*. Therefore **I wish to receive** the Hepatitis B vaccine series at no personal cost and will contact the Nevada County Health Department to make an appointment for initiating the vaccine series after my eligibility has been confirmed by the District Office.

_____ I have read and have had explained to me the information about Hepatitis B and Hepatitis B vaccine. I have had a chance to ask questions which were answered to my satisfaction. I believe I understand the benefits and risks of Hepatitis B vaccine. I **do not** wish to have the Hepatitis B vaccine series. I have read the information on the Hepatitis B vaccine and am aware of categories #1 or #9 of the list of 13 categories – “Who Should Get the Hepatitis B vaccine” in the attached document *Important Information About Hepatitis B*. At a later date, if I decide I wish to receive the vaccine, I can contact the District Office and request it.

NAME:

(Please print)

(Signature)

DATE:

SCHOOL:

POSITION:

THIS FORM MUST BE SIGNED AND RETURNED TO THE DISTRICT OFFICE