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Viral Hepatitis

INTRODUCTION

The United Federation of Teachers prepared this pamphlet to answer questions asked by school staff who are concerned about catching hepatitis from their students or fellow staff members.

The good news is that there is no danger of contracting the hepatitis B or C viruses (which usually are spread by sexual contact or injecting drug use) through normal school activities. However, there is some risk of exposure for school employees such as nurses, special education staff, or school safety officers whose jobs may result in contact with blood or other body fluids. Any staff members called upon to provide first aid in the case of a blood spill also risk exposure to hepatitis B and C unless they follow simple safety precautions that can prevent direct contact with potentially infected blood.

Staff routinely exposed to blood can further protect themselves by taking the hepatitis B vaccine. The Department of Education has promised to provide free vaccines for at-risk staff in compliance with federal and state regulations but had not yet begun to do so at press time (September 1995).

Hepatitis A is spread by oral contact with contaminated fecal matter. Staff working with children who require diapering or assistance with toilet usage are at risk of catching the virus through hand-to-mouth contact. Transmission can be prevented by the thorough cleaning of hands after diapering and before the preparation of food. As explained later, staff who assist children with toileting also may want to consider taking the new hepatitis A vaccine.

This pamphlet describes how all school employees, regardless of job assignment, can minimize the risk of exposure to viral hepatitis.

PORTRAIT OF A DISEASE

Q: WHAT IS HEPATITIS?

A: Hepatitis is a serious and sometimes life-threatening inflammation of the liver.

Q: WHAT CAUSES HEPATITIS?

A: Viral hepatitis is caused by one of five viruses that have been designated hepatitis A, B, C, D and E. The symptoms are similar for all forms of viral hepatitis but the routes of infection are different. The long-term health risks vary depending on the type of virus involved.

Hepatitis also may be caused by non-viral substances such as alcohol, drugs and chemicals.

This pamphlet discusses the hepatitis A, B and C viruses because it is possible (although not likely) for those viruses to be transmitted in a school setting.

Q: HOW IS VIRAL HEPATITIS TRANSMITTED?

A: The chart below summarizes the transmission routes for the five different forms of viral hepatitis.

Virus	Exposure Route
A	Ingestion of contaminated fecal matter (through hand-to-mouth contact or by eating contaminated seafood).
B	Contact with blood or other body fluids containing the virus.
C	Contact with blood containing the virus; role of other body fluids in transmission is not clear.
D	Contact with blood containing the virus; affects only individuals infected with hepatitis B.
E	Ingestion of contaminated fecal matter. The virus is not found in the USA.

Q: WHAT ARE THE SYMPTOMS OF VIRAL HEPATITIS?

A: The most common symptoms include fatigue, mild fever, abdominal pain, muscle or joint pain, nausea, vomiting and loss of appetite. Some patients develop jaundice, in which the skin and the whites of the eyes appear yellow.

Many people infected with hepatitis experience only mild symptoms that resemble the flu or have no symptoms at all. As a result, they don't realize they have a potentially serious illness and their hepatitis is never diagnosed.

Q: WHAT ARE THE LONG-TERM HEALTH EFFECTS OF HEPATITIS?

A: Fortunately, most people recover completely from hepatitis. However, hepatitis B is fatal in about one percent of reported cases. About five percent of patients with hepatitis B and 50 percent of those with hepatitis C develop chronic liver disease, which ultimately can result in cirrhosis, a life-threatening scarring of the liver. Hepatitis B and C patients, especially those with chronic hepatitis, also have a greater risk of developing liver cancer.

Q: CAN HEPATITIS BE PREVENTED BY VACCINATION?

A: Both hepatitis A and hepatitis B can be prevented by vaccination. The hepatitis B vaccine, which is given in three doses over several months, is effective for at least nine years in most people.

Given in two doses, the hepatitis A vaccine provides protection for at least 15 years.

HEPATITIS A IN SCHOOLS

Q: HOW IS HEPATITIS A TRANSMITTED?

A: Hepatitis A is transmitted when the virus in an infected person's feces (stool/bowel movement) is transferred to another person's mouth.

This may occur if food or eating utensils are handled by an infected person whose hands are not clean. Consuming water contaminated by sewage or eating raw or undercooked shellfish from sewage-polluted waters also can spread the infection.

Hepatitis A also spreads easily among small children and the adults who assist them with diapering and toilet usage.

Q: HOW CAN SCHOOL EMPLOYEES WHO ASSIST CHILDREN WITH TOILETING PROTECT THEMSELVES AGAINST HEPATITIS A?

A: If your work includes diapering children or helping them with toilet use, you should wear disposable gloves which the school must provide. It is important to put on a new pair of gloves for each child you assist and to wash your hands thoroughly each time you remove your gloves. It also is essential to wash your hands thoroughly before handling food or eating.

Staff who provide toileting assistance to special needs children may want to talk with a physician about whether to take the new hepatitis A vaccine.

Q: ARE THERE ANY OTHER WAYS SCHOOL EMPLOYEES COULD CONTRACT HEPATITIS A AT WORK?

A: The entire school community is at risk if any member of the cafeteria staff has hepatitis A. Because the infection is generally most contagious before any symptoms appear, it is essential that employees whose jobs involve preparing or serving food wash their hands thoroughly after using the toilet.

If a food preparation employee is diagnosed with hepatitis A, the New York City Department of Health requires that he/she be removed from such work until he/she is no longer contagious.

Q: CAN ANYTHING BE DONE TO PROTECT A PERSON EXPOSED TO HEPATITIS A FROM DEVELOPING THE INFECTION?

A: Yes. A shot of immune globulin (IG) can provide temporary protection. (IG is different than the HBIG--hepatitis B immunoglobulin--shot given to people exposed to the hepatitis B virus.) It should be administered as soon as possible after exposure.

Q: IF THERE'S A CASE OF HEPATITIS A IN MY SCHOOL, SHOULD WE GET IG SHOTS?

A: That depends. If one or more children in diapers is diagnosed with hepatitis A in a day care center or special education setting, the New York City Department of Health recommends IG shots for all classmates and all employees working with the children.

If there is a case of hepatitis A in a regular classroom, however, IG injections are not routinely recommended unless there is evidence of a school-centered or class-centered outbreak. Preventive treatment generally is not necessary because the oral/fecal contact required for transmission is not likely to occur in a regular classroom setting.

If a food handler in the school cafeteria developed hepatitis A, the Department of Health would recommend IG shots for everyone in the school.

TRANSMISSION OF HEPATITIS B

Q: HOW IS HEPATITIS B TRANSMITTED?

A: Hepatitis B is spread primarily by sharing needles during injecting drug use or by sexual contact with infected individuals. Transmission occurs when a healthy individual has direct contact with the blood of a person infected with the virus or with that person's semen, vaginal secretions or saliva.

Q: WHAT ABOUT MORE CASUAL CONTACT LIKE THE NORMAL INTERACTION BETWEEN SCHOOL STAFF AND STUDENTS?

A: Hepatitis B cannot be spread by sneezing or coughing. There is no danger if you shake hands with an infected person or share a water fountain, telephone or toilet.

Q: ARE SEXUAL CONTACT AND DRUG USE THE ONLY WAYS HEPATITIS B IS TRANSMITTED?

A: No. The virus also can be passed at birth from an infected woman to her fetus. Transmission during blood transfusions used to be a problem, but now blood screening programs have virtually eliminated the risk.

Cases of hepatitis B in patients who report no readily identifiable risk factors are thought to result from unrecognized contact with contaminated blood.

Q: WHAT KINDS OF JOBS EXPOSE PEOPLE TO HEPATITIS B?

A: Workers employed in health care, emergency response services, law enforcement and other jobs that routinely involve contact with blood and other body fluids face a significant risk of infection with the hepatitis B virus. Before the introduction of the hepatitis B vaccine, the United States Centers for Disease Control estimated that 6,000 to 8,000 health care workers were infected with the virus each year as a result of workplace exposure.

Some health care workers have contracted hepatitis after accidentally puncturing their skin with a needle previously used on an infected patient. Healthy individuals also can be infected if contaminated blood splashes on an open wound or on their mouth, nose or eyes.

Q: WHAT ABOUT PEOPLE WHO WORK WITH THE DEVELOPMENTALLY DISABLED?

A: People who work with the developmentally disabled in institutions are at risk because the residents often are infected with the hepatitis B virus. School staff at some District 75 sites and in some special education classrooms in the community school districts may be at risk as well. Biting, scratching and other aggressive behaviors among some of the children may result in staff exposure to blood or other body fluids. Contact with skin lesions that secrete blood and other fluids also may be a factor in transmission.

Q: IS IT TRUE THAT SOME PEOPLE ARE "CARRIERS" WHO CAN SPREAD THE HEPATITIS B VIRUS EVEN THOUGH THEY ARE NO LONGER SICK?

A: Yes. Most people who recover from hepatitis B are no longer contagious, but as many as 10 percent of infected adults become carriers who can continue to spread the disease even though they are no longer actively sick. (The carrier rate is 90 percent among infants who contract hepatitis B at birth from their mothers.) The United States Centers for Disease Control estimates that more than one million Americans are carriers of the virus.

Many carriers of hepatitis B are not aware that they are infected. They don't realize that they should take precautions to prevent transmitting the disease to sexual partners or others who may come in contact with their body fluids. Pregnant women who are carriers may not be aware that their babies should receive an injection of hepatitis immunoglobulin (HBIG) as soon as they are born, as well as the first dose of the hepatitis B vaccine.

HEPATITIS B IN SCHOOLS

Q: SO LEVEL WITH ME. ARE UFT MEMBERS LIKELY TO CATCH HEPATITIS B AT THEIR SCHOOLS?

A: Some school employees such as school nurses and health aides have job duties that involve routine exposure to blood. Just like health care personnel working in hospitals, these school employees could contract hepatitis B if they sustain direct contact with infected blood.

Other school staff with some risk of exposure to hepatitis B include any physical education teachers, school secretaries and school safety officers who frequently deal with injured students. Custodial staff who are responsible for cleaning up any blood spills could be in danger. Some special education teachers and paraprofessionals also may be at risk if they accompany children receiving medical procedures or work with children who bite and scratch.

Q: WHAT ABOUT CLASSROOM TEACHERS AND OTHER STAFF WHOSE JOBS DON'T INCLUDE SPECIAL RISK FACTORS?

A: For these school staff there is NO danger of contracting hepatitis B while following normal school routines. Repeat: NO DANGER.

Q: WHAT ABOUT CIRCUMSTANCES THAT AREN'T ROUTINE?

A: There is some risk if an employee is called upon to provide first aid in a situation that involves significant blood loss. This could include helping a student care for a major nose bleed.

Transmission of hepatitis B through a deep human bite also has been documented.

Information on how to protect yourself in situations where you could be exposed to blood or other body fluids is provided in the next section of this pamphlet.

Q: HOW LIKELY IS IT THAT THE STUDENTS IN OUR SCHOOL ARE INFECTED WITH HEPATITIS B?

A: The United States Centers for Disease Control estimate that one of every 300 school age children is a carrier of the hepatitis B virus. The infection is more common among children who have been institutionalized, children whose families emigrated from countries where hepatitis B is more prevalent than in the United States (Southeast Asia, Africa, the Amazon Basin in South America, the Pacific Islands and the Middle East) and adolescents who engage in risky sexual activity or injecting drug use.

PROTECTING SCHOOL EMPLOYEES FROM HEPATITIS B

Q: WHAT STEPS SHOULD THE DEPARTMENT OF EDUCATION BE TAKING TO PROTECT SCHOOL EMPLOYEES AGAINST HEPATITIS B?

A: The Bloodborne Pathogen Standard adopted by the United States Occupational Safety and Health Administration in December 1991 requires that every employer develop a plan to prevent or reduce worker exposure to bloodborne pathogens (germs), including the hepatitis B and C viruses and the unrelated human immunodeficiency (HIV) virus that causes AIDS. For Department of Education employees, the Bloodborne Pathogen Standard is enforced by the New York State Department of Labor through PESH, the Public Employee Safety and Health Program. The OSHA/PESH Bloodborne Pathogen Standard was adopted after strong pressure by the UFT, the American Federation of Teachers (AFT) and many other unions throughout the country.

Q: WHAT DOES PESH REQUIRE FOR BLOODBORNE PATHOGEN CONTROL?

A: Every public employer must:

- Identify all employees whose work can be reasonably anticipated to involve contact with blood and other potentially infectious body fluids.

- Provide those employees with annual training in safe work practices, all necessary personal protective equipment (such as disposable gloves) and the opportunity to take the hepatitis B vaccine at employer expense.
- Provide for confidential medical counseling and testing for any employee who sustains a significant exposure to blood or body fluids at work as well as treatment to prevent hepatitis B, if appropriate.

Q: WHAT CAN I DO TO PROTECT MYSELF AGAINST WORKPLACE EXPOSURE TO HEPATITIS B?

A: As a school employee, there are three important ways that you can protect yourself against exposure to and infection with hepatitis B:

- Every school employee should follow special safety procedures called "universal precautions" to prevent contact with contaminated blood.
- If your job entails routine exposure to blood, you should consider taking the hepatitis B vaccine.
- If there is an incident in which you are directly exposed to blood (and you have never been vaccinated for hepatitis B), you should get a shot of HBIG (hepatitis B immunoglobulin) which can help your body resist the infection. (This is different than the IG shot given to people exposed to hepatitis A.)

All of these steps are described in greater detail below.

Q: WHAT ARE UNIVERSAL PRECAUTIONS?

A: Universal precautions involve:

1) Treating ALL blood and potentially infectious body fluids as if they are contaminated with the hepatitis B virus or other bloodborne pathogens.

It is necessary to assume that all blood and body fluids are infected because there is no way to tell by looking at a child or adult whether he or she is infected with hepatitis B or other bloodborne pathogens. Many people infected with hepatitis B have no symptoms. Some people infected with hepatitis B remain contagious even after they have recovered.

2) Following the safety procedures listed here whenever there is a risk of exposure to blood or other body fluids:

- Wear disposable gloves and other protective equipment when performing routine tasks that involve risk of exposure. Principals must make gloves available to all staff.
- In an accident or situation where no gloves are available, place another barrier (such as a paper towel or article of clothing) between yourself and the blood or body fluid.
- Notify the custodian if there is a blood spill. Custodial staff should use a hospital disinfectant or a solution of one part bleach and 10 parts water to clean up blood spills and disinfect potentially contaminated surfaces.

- Pick up potentially contaminated sharp objects--such as needles, knives, razor blades, box cutters and broken glass--with a tool such as a pliers or tweezers. Never pick up such objects with your hands.
- Discard any articles contaminated with blood or body fluids in a leak-resistant container, such as a plastic bag sealed inside another plastic bag. If possible, put sharp objects in a puncture-proof container before double-bagging them, so they won't injure anyone handling the waste bag. (When the Department implements the Bloodborne Pathogen Standard, it should supply special containers for blood-contaminated waste and establish appropriate disposal procedures.)
- When you are ready to remove your gloves, turn them inside out as you do so to avoid contact with blood. Discard gloves in a leak-resistant container, such as a double plastic bag.
- Use soap and warm water to thoroughly wash hands and any skin that may have been contaminated. Flush with water any mucous membranes (eyes, nose and mouth) that may have come in contact with blood or body fluids.
- School nurses should follow special procedures mandated in the OSHA/PESH Bloodborne Pathogen Standard for giving injections and handling used needles.

Q: HOW CAN I GET MORE INFORMATION ABOUT UNIVERSAL PRECAUTIONS?

A: The American Federation of Teachers, the UFT's national affiliate, has a video called "It's Up to You" that is designed for school staff--particularly those working with children with special needs. It shows how to handle everything from blood spills to toileting and diapering. If you want to see the video, ask your UFT district representative to borrow a copy for you from the UFT borough office.

Q: TELL ME MORE ABOUT VACCINATION AGAINST HEPATITIS B.

A: As noted above, the Department of Education provides the hepatitis B vaccine without charge to employees routinely exposed to blood or body fluids. At-risk staff such as school nurses, health aides, physical education staff, school safety officers and some special education staff may want to consider taking the vaccine.

There is absolutely no risk of getting hepatitis B from the vaccine, because it is manufactured without any human blood or plasma. It is given in three doses.

Q: WILL MY MEDICAL INSURANCE COVER THE COST OF THE VACCINE?

A: Staff who are not considered at-risk for exposure to blood or other bodily fluids by the DOE must obtain the hepatitis B vaccine independently if they desire to take it. Medical insurance plans available to UFT members generally do not cover vaccine costs, but the UFT has been working to win coverage for hepatitis B. You should check with your carrier for up-to-date information.

Q: ONCE I HAVE BEEN VACCINATED, CAN I SAFELY IGNORE THE UNIVERSAL PRECAUTIONS YOU DESCRIBED EARLIER?

A: Absolutely not! Universal precautions also protect you against other bloodborne pathogens, such as the hepatitis C virus and the HIV virus, for which there is no vaccine.

Also, you could be one of the few people who does not develop immunity from the vaccine.

Q: What should I do immediately after an exposure to blood or other bodily fluids?

Immediately following an exposure to blood or other potentially infectious material:

- WASH needle sticks and cuts with soap and water.
- FLUSH splashes to the nose, mouth or skin with water.
- IRRIGATE eyes with clean water or use bottled eye wash.
- STOP any bleeding by applying sterile gauze.
- BANDAGE the injury.
- REPORT the incident to the Site Employee Safety Administrator immediately.
- FILL out the Bloodborne Pathogens Exposure Incident form or the Sharps Injury Report form if a contaminated sharp object was involved.
- SEEK medical attention within 24 - 48 hours of exposure.

Q: TELL ME MORE ABOUT TREATMENT WITH HEPATITIS IMMUNOGLOBULIN (HBIG) AFTER AN EXPOSURE TO BLOOD.

A: If you have not been vaccinated against hepatitis B and you sustain a significant exposure to blood or body fluids, you should have a single injection of HBIG as soon as possible after the exposure (within 24 hours if possible) unless you are pregnant or nursing. HBIG is designed to provide temporary, passive immunity to hepatitis B. Your doctor also may follow the United States Public Health Service recommendations and give you the first dose of the hepatitis B vaccine series at this time in order to provide long-term protection.

The Department of Education has promised to establish a program under which the Medical Division will deliver the HBIG medication to your doctor by messenger and without charge if you or your principal call to make the arrangements. The Department plans to establish a hotline to handle this.

If you have already been vaccinated, you will not require HBIG treatment after exposure to blood unless you are one of the small group of people who do not develop immunity as a result of the vaccine. Consult your doctor.

Q: WHAT TYPE OF EXPOSURE IS SIGNIFICANT ENOUGH TO WARRANT TREATMENT WITH HBIG?

A: Ultimately, that is for you and your physician to decide. But significant exposure could include any incident in which:

- Your skin is cut or punctured by a potentially infectious object (e.g., broken glass covered with blood).
- Blood or other body fluids come in direct contact with your eyes, nose, or mouth or with skin that is cut or abraded.

- You are bitten by a student and the bite is deep enough to cause bleeding.

Q: IS THERE ANYTHING ELSE I SHOULD DO IF I SUSTAIN A SIGNIFICANT EXPOSURE TO BLOOD OR BODY FLUIDS?

A: Yes. File an official incident report in the principal's office. Keep a copy of the report for your own records so you can document workplace exposure if you subsequently develop hepatitis B or another bloodborne infection.

HEPATITIS B AND AIDS

Q: YOU SAID THAT BOTH HEPATITIS B AND HIV, THE VIRUS THAT CAUSES AIDS, ARE BLOODBORNE PATHOGENS. IF I'M EXPOSED TO BLOOD AT WORK, COULD I GET HIV?

A: Hepatitis B and HIV (human immunodeficiency virus) are totally separate viruses. But both can be transmitted by direct contact with blood. The risk of getting HIV from exposure to blood at school, however, is much smaller than the risk of getting hepatitis B.

Q: WHY IS THERE LESS RISK OF GETTING HIV FROM CONTACT WITH BLOOD?

A: HIV is far less contagious than the hepatitis B virus because the human immunodeficiency virus is found in lower concentrations in the blood of infected people. A person exposed to blood contaminated with the hepatitis B virus has a 30 percent chance of getting sick. This is 100 times greater than the chance of contracting HIV from a comparable exposure.

Unlike the hepatitis B virus which can remain alive for a week or more on surfaces contaminated with dried blood, the fragile HIV virus cannot survive for long outside the body. This further reduces the opportunities for contagion.

Q: WHAT DOES THIS MEAN FOR HEALTH CARE WORKERS AND ANY SCHOOL EMPLOYEES THAT MAY BE EXPOSED TO BLOOD AT WORK?

A: As noted earlier, the United States Centers for Disease Control estimated that 6,000 to 8,000 health care workers a year contracted hepatitis B through workplace exposure before the hepatitis B vaccine was introduced. By contrast only 42 cases of workplace transmission of HIV have been documented since the start of the AIDS epidemic. All of these 42 HIV cases occurred in health care facilities; none occurred in a school.

This means health care workers--and any school employees whose duties involve direct exposure to blood--should be far more concerned about contracting hepatitis B than HIV. For more information about HIV/AIDS in schools see AIDS/HIV: Straight Talk from the UFT, another booklet in this series.

HEPATITIS B VACCINATION OF THE COMMUNITY AT LARGE

Q: IF MY JOB DUTIES DON'T INVOLVE REGULAR EXPOSURE TO BLOOD, SHOULD I BE VACCINATED?

A: Public health professionals do not recommend vaccination for general classroom teachers and staff. If you are concerned, however, you should discuss this with your doctor.

But remember: You should get the vaccine if there are circumstances in your private life that put you at risk of exposure to the hepatitis B virus.

Q: WHO SHOULD BE VACCINATED?

A: The United States Public Health Service recommends that the vaccine be administered to people in the following groups, among others:

- People whose life circumstances or activities place them at risk for hepatitis B infection, including household contacts and sex partners of hepatitis B carriers, injecting drug users, sexually active homosexual and bisexual men, sexually active heterosexual men and women with more than one sex partner, and hemodialysis patients.
- Adolescents who are sexually active or participate in illegal drug use.
- Workers whose jobs entail frequent contact with blood or other body fluids, including health care personnel, law enforcement officials, and staff of institutions for the developmentally disabled.
- All infants and toddlers. (New York State law now requires that all children born after January 1, 1993, receive the hepatitis B vaccine before entering kindergarten.)

Q: WHY SHOULD INFANTS AND TODDLERS BE VACCINATED? THEY ARE NOT INVOLVED IN ACTIVITIES INVOLVING EXPOSURE TO THE HEPATITIS B VIRUS.

A: Traditionally, children have been vaccinated against communicable diseases common in childhood. Now, with the recommendation that all children be vaccinated against hepatitis B, childhood vaccination is being used for the first time to prevent a disease that is most likely to strike young adults. The United States Public Health Service and the American Academy of Pediatrics have endorsed this long-term preventive strategy because it is so difficult to identify and vaccinate adults in the high risk groups for hepatitis B.

HEPATITIS C

Q: CAN HEPATITIS C BE TRANSMITTED IN A SCHOOL SETTING?

A: Like hepatitis B, hepatitis C can be transmitted by contact with infected blood. Researchers are not yet sure what role other body fluids may play in transmission.

Because hepatitis C is a bloodborne germ, any school-based exposure to blood involves a risk of infection with hepatitis C as well as hepatitis B. Effective implementation of the OSHA/PESH Bloodborne Pathogen Standard will protect employees against all bloodborne pathogens. Because there is no vaccination for hepatitis C, strict adherence to universal precautions is essential.