

Blood Born Diseases

Hep C

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV), which is found in the blood of persons who have this disease. HCV is spread by contact with the blood of an infected person. There is no *vaccine for the prevention of HCV infection*.

There are blood tests which can detect HCV they are:

- EIA (enzyme immunoassay) or CIA (enhanced chemiluminescence immunoassay)
Test is usually done first. If positive, it should be confirmed
- RIBA (recombinant immunoblot assay)
A supplemental test used to confirm a positive EIA test

Anti-HCV does not tell whether the infection is new (acute), chronic (long-term) or is no longer present.

A single positive PCR test indicates infection with HCV. A single negative test does not prove that a person is not infected. Virus may be present in the blood and just not found by PCR. Also, a person infected in the past who has recovered may have a negative test. When hepatitis C is suspected and PCR is negative, PCR should be repeated

A false positive test means the test looks as if it is positive, but it is really negative. This happens more often in persons who have a low risk for the disease for which they are being tested. For example, false positive anti-HCV tests happen more often in persons such as blood donors who are at low risk for hepatitis C. Therefore, it is important to confirm a positive anti-HCV test with a supplemental test as most false positive anti-HCV tests are reported as negative on supplemental testing. Persons with early infection may not as yet have developed antibody levels high enough that the test can measure. In addition, some persons may lack the (immune) response necessary for the test to work well. In these persons, research-based tests such as PCR may be considered. Anti-HCV can be found in 7 out of 10 persons when symptoms begin and in about 9 out of 10 persons within 3 months after symptoms begin. However, it is important to note that many persons who have hepatitis C have no symptoms. It is possible to find HCV within 1 to 2 weeks after being infected with the virus. persons who ever injected illegal drugs, including those who injected once or a few times many years ago persons who were treated for clotting problems with a blood product made before 1987 when more advanced methods for manufacturing the products were developed persons who were notified that they received blood from a donor who later tested positive for hepatitis C persons who received a blood transfusion or solid organ transplant before July 1992 when better testing of blood donors became available long-term hemodialysis patients persons who have signs or symptoms of liver disease (e.g., abnormal liver enzyme tests) healthcare workers after exposures (e.g., needle sticks or splashes to the eye) to HCV-positive blood on the job children born to HCV-positive women

HCV is spread primarily by direct contact with human blood. For example, you may have gotten infected with HCV if:

- you ever injected street drugs, as the needles and/or other drug "works" used to prepare or inject the drug(s) may have had someone else's blood that contained HCV on them.
- you received blood, blood products, or solid organs from a donor whose blood contained HCV.
- you were ever on long-term kidney dialysis as you may have unknowingly shared supplies/equipment that had someone else's blood on them.
- you were ever a healthcare worker and had frequent contact with blood on the job, especially accidental needlesticks.
- your mother had hepatitis C at the time she gave birth to you. During the birth her blood may have gotten into your body.
- you ever had sex with a person infected with HCV.
- you lived with someone who was infected with HCV and shared items such as razors or toothbrushes that might have had his/her blood on them.

HCV can live outside the body. Recent studies suggest that HCV may survive on environmental surfaces at room temperature at least 16 hours, but no longer than 4 days. You should clean up any blood spills - including dried blood, which can still be infectious - using 1:10 dilution of one part household bleach to 10 parts of water for disinfecting the area. Use gloves when cleaning up any blood spills.

Can you get Hepatitis C from getting a tattoo?

Although biologically possible when poor infection control practices are used, there is no evidence that hepatitis C virus (HCV) has been spread through tattooing.

Since more advanced tests have been developed for use in blood banks, what is the chance now that a person can get HCV infection from transfused blood or blood products?

Less than 1 chance per 2 million units transfused.

Is it possible that HCV could be transmitted through the bite of a mosquito or other blood sucking arthropods, especially in third world countries?

Hepatitis C virus has not been shown to be transmitted by mosquitoes or other arthropods. HCV is not spread by sneezing, hugging, coughing, food or water, sharing eating utensils or drinking glasses, or casual contact. Persons should not be excluded from work, school, play, child-care or other settings on the basis of their HCV infection status.

HEP A

Hepatitis A is a liver disease caused by the hepatitis A virus. Hepatitis A can affect anyone. In the United States, hepatitis A can occur in situations ranging from isolated cases of disease to widespread epidemics.

Good personal hygiene and proper sanitation can help prevent hepatitis A. Vaccines are also available for long-term prevention of hepatitis A virus infection in persons 12 months of age and older. Immune globulin is available for short-term prevention of hepatitis A virus infection in individuals of all ages.

SIGNS & SYMPTOMS

Adults will have signs and symptoms more often than children, jaundice ,fatigue, abdominal pain, loss of appetite nausea, diarrhea and fever .

CAUSE : Hepatitis A virus (HAV)

LONG-TERM EFFECTS : There is no chronic (long-term) infection. Once you have had hepatitis A you cannot get it again. About 15% of people infected with HAV will have prolonged or relapsing symptoms over a 6-9 month period.

TRANSMISSION : HAV is found in the stool (feces) of persons with hepatitis A. HAV is usually spread from person to person by putting something in the mouth (even though it may look clean) that has been contaminated with the stool of a person with hepatitis A. It is good to wash all fruits and veggies you get at the store and wash your hands frequently while shopping for other goods because they have been handled by the general public

PERSONS AT RISK OF INFECTION :. Household contacts of infected persons Sex contacts of infected persons Persons, especially children, living in areas with increased rates of hepatitis A during the baseline period from 1987-1997) (increased rates were higher in heavily populated areas)Persons traveling to countries where hepatitis A is common Men who have sex with men Injecting and non-injecting drug users

PREVENTION : Hepatitis A vaccine is the best protection. Short-term protection against hepatitis A is available from immune globulin. It can be given before and within 2 weeks after coming in contact with HAV. Always wash your hands with soap and water after using the bathroom, changing a diaper, and before preparing and eating food. Occurs in epidemics both nationwide and in communities During epidemic years, the number of reported cases reached 35,000. In the late 1990s, hepatitis A vaccine was more widely used and the number of cases reached historic lows. One-third of Americans have evidence of past infection (immunity).

Hepatitis B is a serious disease caused by a virus that attacks the liver. The virus, which is called hepatitis B virus (HBV), can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death.

Hepatitis B vaccine is available for all age groups to prevent hepatitis B virus infection.

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Hepatitis B vaccine is available for all age groups to prevent hepatitis B virus infection.

SIGNS & SYMPTOMS	About 30% of persons have no signs or symptoms.
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	Signs and symptoms are less common in children than adults.	
	<ul style="list-style-type: none"> • jaundice • fatigue • abdominal pain 	<ul style="list-style-type: none"> • loss of appetite • nausea, vomiting • joint pain
CAUSE	<ul style="list-style-type: none"> • Hepatitis B virus (HBV) 	
LONG-TERM EFFECTS WITHOUT VACCINATION	<p>Chronic infection occurs in:</p> <ul style="list-style-type: none"> • 90% of infants infected at birth • 30% of children infected at age 1 - 5 years • 6% of persons infected after age 5 years <p>Death from chronic liver disease occurs in:</p> <ul style="list-style-type: none"> • 15-25% of chronically infected persons 	
CONTRAINDICATIONS TO VACCINE	<ul style="list-style-type: none"> • A serious allergic reaction to a prior dose of hepatitis B vaccine or a vaccine component is a contraindication to further doses of hepatitis B vaccine. The recombinant vaccines that are licensed for use in the United States are synthesized by <i>Saccharomyces cerevisiae</i> (common bakers' yeast), into which a plasmid containing the gene for HBsAg has been inserted. Purified HBsAg is obtained by lysing the yeast cells and separating HBsAg from the yeast components by biochemical and biophysical techniques. Persons allergic to yeast should not be vaccinated with vaccines containing yeast. 	
TRANSMISSION	<ul style="list-style-type: none"> • Occurs when blood from an infected person enters the body of a person who is not infected. • HBV is spread through having sex with an infected person without using a condom (the efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use may reduce transmission), by sharing drugs, needles, or "works" when "shooting" drugs, through needlesticks or sharps exposures on the job, or from an infected mother to her baby during birth. <p>Persons at risk for HBV infection might also be at risk for infection with hepatitis C virus (HCV) or HIV.</p>	
RISK GROUPS	<ul style="list-style-type: none"> • Persons with multiple sex partners or 	<ul style="list-style-type: none"> • Infants born to infected mothers • Infants/children of

	<p>diagnosis of a sexually transmitted disease</p> <ul style="list-style-type: none"> • Men who have sex with men • Sex contacts of infected persons • Injection drug users • Household contacts of chronically infected persons 	<p>immigrants from areas with high rates of HBV infection</p> <ul style="list-style-type: none"> • Health care and public safety workers • Hemodialysis patients
<p>PREVENTION</p>	<ul style="list-style-type: none"> • Hepatitis B vaccine is the best protection. • If you are having sex, but not with one steady partner, use latex condoms correctly and every time you have sex. The efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use may reduce transmission. • If you are pregnant, you should get a blood test for hepatitis B; Infants born to HBV-infected mothers should be given HBIG (hepatitis B immune globulin) and vaccine within 12 hours after birth. • Do not shoot drugs; if you shoot drugs, stop and get into a treatment program; if you can't stop, never share drugs, needles, syringes, water, or "works", and get vaccinated against hepatitis A and B. • Do not share personal care items that might have blood on them (razors, toothbrushes). • Consider the risks if you are thinking about getting a tattoo or body piercing. You might get infected if the tools have someone else's blood on them or if the artist or piercer does not follow good health practices. • If you have or had hepatitis B, do not donate blood, organs, or tissue. • If you are a health care or public safety worker, get vaccinated against hepatitis B, and always follow routine barrier precautions and safely handle needles and other sharps. (<u>View current post-exposure prophylaxis recommendations.</u>) 	
<p>VACCINE RECOMMENDATIONS</p>	<ul style="list-style-type: none"> • Hepatitis B vaccine available since 1982 • Routine vaccination of 0-18 year olds • Vaccination of risk groups of all ages (<u>see section on risk groups</u>) 	

<p>TREATMENT & MEDICAL advise</p>	<ul style="list-style-type: none"> • HBV infected persons should be evaluated by their doctor for liver disease. • Adefovir dipivoxil, interferon alfa-2b, pegylated interferon alfa-2a, lamivudine, and entecavir are five drugs used for the treatment of persons with chronic hepatitis B. • These drugs should not be used by pregnant women. • Drinking alcohol can make your liver disea
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HEP D Hepatitis D is a liver disease caused by the hepatitis D virus (HDV), a defective virus that needs the hepatitis B virus to exist. Hepatitis D virus (HDV) is found in the blood of persons infected with the virus

HEP E. Hepatitis E is a liver disease caused by the hepatitis E virus (HEV) transmitted in much the same way as hepatitis A virus. Hepatitis E, however, does not occur often in the United States

Mosquito Born Diseases

A number of particularly serious infections are transmitted by mosquitoes and other insects. The risk of infection can be reduced by taking precautions to avoid insect bites in places where infection is likely to be present.

Below is a list of mosquitoes and their diseases, along with some additional information and links to different agencies and their information. This list is not "all inclusive", but contains an overview of some mosquitoes and the diseases they can transmit. The links are provided for informational purposes only. The agencies listed give no direct or implied endorsement of any of the Mosquito Control Trap products.

Mosquitoes and their Diseases

Aedes

Transmitted Diseases:

Dengue fever
Rift Valley fever
Yellow fever

Aedes mosquitoes are painful and persistent biters, attacking during daylight hours (not at night). They do not enter dwellings, and they prefer to bite mammals like humans. Aedes mosquitoes are strong fliers and are known to fly many miles from their breeding sources.

Anopheles

Transmitted Diseases:

Lymphatic filariasis
Malaria

Anopheles mosquitoes are the only mosquito which transmits malaria to man. Anopheles quadrimaculatus is common in the eastern United States. A. freeborni is found west of the Rocky Mountains. The adult mosquitoes of both species are capable of transmitting malaria. They breed in ditches, ponds, swamps, and puddles. These mosquitoes are problems in areas where extensive irrigation of crops occurs. They enter structures to feed on humans, but, although aggressive, they are not painful biters.

Culex

Transmitted Diseases:

St. Louis encephalitis

Japanese encephalitis

Lymphatic filariasis

West Nile Virus

Culex mosquitoes are painful and persistent biters also, but prefer to attack at dusk and after dark and readily enter dwellings for blood meals. Domestic and wild birds are preferred over man, cows and horses. Culex tarsalis is known to transmit encephalitis (sleeping sickness) to man and horses. Culex are generally weak fliers and do not move far from home, although they have been known to fly up to two miles. Culex usually live only a few weeks during the warm summer months. Those females which emerge in late summer search for sheltered areas where they "hibernate" until spring. Warm weather brings her out in search of water on which to lay her eggs.

Only female mosquitoes bite animals and drink blood.

How HIV is Transmitted

HIV is spread by sexual contact with an infected person, by sharing needles and/or syringes (primarily for drug injection) with someone who is infected, or, less commonly (and now very rarely in countries where blood is screened for HIV antibodies), through transfusions of infected blood or blood clotting factors. Babies born to HIV-infected women may become infected before or during birth or through breast-feeding after birth.

In the health care setting, workers have been infected with HIV after being stuck with needles containing HIV-infected blood or, less frequently, after infected blood gets into a worker's open cut or a mucous membrane (for example, the eyes or inside of the nose). There has been only one instance of patients being infected by a health care worker in the United States; this involved HIV transmission from one infected dentist to six patients. Investigations have been completed involving more than 22,000 patients of 63 HIV-infected physicians, surgeons, and dentists, and no other cases of this type of transmission have been identified in the United States.

Some people fear that HIV might be transmitted in other ways; however, no scientific evidence to support any of these fears has been found. If HIV were being transmitted through other routes (such as through air, water, or insects), the pattern of reported AIDS cases would be much different from what has been observed. For example, if mosquitoes could transmit HIV infection, many more young children and preadolescents would have been diagnosed with AIDS.

All reported cases suggesting new or potentially unknown routes of transmission are thoroughly investigated by state and local health departments with the assistance, guidance, and laboratory support from CDC. *No additional routes of transmission have been recorded*, despite a national sentinel system designed to detect just such an occurrence.

The following paragraphs specifically address some of the common misperceptions about HIV transmission.

HIV in the Environment

Scientists and medical authorities agree that HIV does not survive well in the environment, making the possibility of environmental transmission remote. HIV is found in varying concentrations or amounts in blood, semen, vaginal fluid, breast milk, saliva, and tears. (See page 3, *Saliva, Tears, and Sweat*.) To obtain data on the survival of HIV, laboratory studies have required the use of artificially high concentrations of laboratory-grown virus. Although these unnatural concentrations of HIV can be kept alive for days or even weeks under precisely controlled and limited laboratory conditions, CDC studies have shown that drying of even these high concentrations of HIV reduces the amount of infectious virus by 90 to 99 percent within several hours. Since the HIV concentrations used in laboratory studies are much higher than those actually found in blood or other specimens, drying of HIV-infected human blood or other body fluids reduces the theoretical risk of environmental transmission to that which has been observed--essentially zero. Incorrect interpretation of conclusions drawn from laboratory studies have unnecessarily alarmed some people.

Results from laboratory studies should not be used to assess specific personal risk of infection because (1) the amount of virus studied is not found in human specimens or elsewhere in nature, and (2) no one has been identified as infected with HIV due to contact with an environmental surface. Additionally, HIV is unable to reproduce outside its living host (unlike many bacteria or fungi, which may do so under suitable conditions), except under laboratory conditions, therefore, it does not spread or maintain infectiousness outside its host.

Households

Although HIV has been transmitted between family members in a household setting, this type of transmission is very rare. These transmissions are believed to have resulted from contact between skin or mucous membranes and infected blood. To prevent even such rare occurrences, precautions, as described in previously published guidelines, should be taken in all settings "including the home" to prevent exposures to the blood of persons who are HIV infected, at risk for HIV infection, or whose infection and risk status are

Businesses and Other Settings

There is no known risk of HIV transmission to co-workers, clients, or consumers from contact in industries such as food-service establishments (see information on survival of

HIV in the environment). Food-service workers known to be infected with HIV need not be restricted from work unless they have other infections or illnesses (such as diarrhea or hepatitis A) for which any food-service worker, regardless of HIV infection status, should be restricted. CDC recommends that all food-service workers follow recommended standards and practices of good personal hygiene and food sanitation.

In 1985, CDC issued routine precautions that all personal-service workers (such as hairdressers, barbers, cosmetologists, and massage therapists) should follow, even though there is no evidence of transmission from a personal-service worker to a client or vice versa. Instruments that are intended to penetrate the skin (such as tattooing and acupuncture needles, ear piercing devices) should be used once and disposed of or thoroughly cleaned and sterilized. Instruments not intended to penetrate the skin but which may become contaminated with blood (for example, razors) should be used for only one client and disposed of or thoroughly cleaned and disinfected after each use. Personal-service workers can use the same cleaning procedures that are recommended for health care institutions.

CDC knows of no instances of HIV transmission through tattooing or body piercing, although hepatitis B virus has been transmitted during some of these practices. One case of HIV transmission from acupuncture has been documented. Body piercing (other than ear piercing) is relatively new in the United States, and the medical complications for body piercing appear to be greater than for tattoos. Healing of piercings generally will take weeks, and sometimes even months, and the pierced tissue could conceivably be abraded (torn or cut) or inflamed even after healing. Therefore, a theoretical HIV transmission risk does exist if the unhealed or abraded tissues come into contact with an infected person's blood or other infectious body fluid. Additionally, HIV could be transmitted if instruments contaminated with blood are not sterilized or disinfected between clients.

Kissing

Casual contact through closed-mouth or "social" kissing is not a risk for transmission of HIV. Because of the potential for contact with blood during "French" or open-mouth kissing, CDC recommends against engaging in this activity with a person known to be infected. However, the risk of acquiring HIV during open-mouth kissing is believed to be very low. CDC has investigated only one case of HIV infection that may be attributed to contact with blood during open-mouth kissing.

Biting

In 1997, CDC published findings from a state health department investigation of an incident that suggested blood-to-blood transmission of HIV by a human bite. There have been other reports in the medical literature in which HIV appeared to have been transmitted by a bite. Severe trauma with extensive tissue tearing and damage and presence of blood were reported in each of these instances. Biting is not a common way

of transmitting HIV. In fact, there are numerous reports of bites that did *not* result in HIV infection.

Saliva, Tears, and Sweat

HIV has been found in saliva and tears in very low quantities from some AIDS patients. It is important to understand that finding a small amount of HIV in a body fluid does not necessarily mean that HIV can be *transmitted* by that body fluid. HIV has *not* been recovered from the sweat of HIV-infected persons. Contact with saliva, tears, or sweat has never been shown to result in transmission of HIV.

Insects

From the onset of the HIV epidemic, there has been concern about transmission of the virus by biting and bloodsucking insects. However, studies conducted by researchers at CDC and elsewhere have shown no evidence of HIV transmission through insects--even in areas where there are many cases of AIDS and large populations of insects such as mosquitoes. Lack of such outbreaks, despite intense efforts to detect them, supports the conclusion that HIV is not transmitted by insects.

The results of experiments and observations of insect biting behavior indicate that when an insect bites a person, it does not inject its own or a previously bitten person's or animal's blood into the next person bitten. Rather, it injects saliva, which acts as a lubricant or anticoagulant so the insect can feed efficiently. Such diseases as yellow fever and malaria are transmitted through the saliva of specific species of mosquitoes. However, HIV lives for only a short time inside an insect and, unlike organisms that are transmitted via insect bites, HIV does not reproduce (and does not survive) in insects. Thus, even if the virus enters a mosquito or another sucking or biting insect, the insect does not become infected and cannot transmit HIV to the next human it feeds on or bites. HIV is not found in insect feces.

There is also no reason to fear that a biting or bloodsucking insect, such as a mosquito, could transmit HIV from one person to another through HIV-infected blood left on its mouth parts. Two factors serve to explain why this is so--first, infected people do not have constant, high levels of HIV in their bloodstreams and, second, insect mouth parts do not retain large amounts of blood on their surfaces. Further, scientists who study insects have determined that biting insects normally do not travel from one person to the next immediately after ingesting blood. Rather, they fly to a resting place to digest this blood meal

unknown.

blood born diseases cont

19. How can we prevent Hep A from spreading? **Good personal hygiene, proper sanitation, and vaccines**

A avoid all contact with with unknown persons

B wash hands after using the bathroom

C receive immune globulin vaccine

D both b & c

20. What are the signs and symptoms of Hep A

A sleeplessness, coughing and rash

B jaundice, fatigue, abdominal pain, nausea, fever

C rashes, swollen stomach, fatigue

21. Hep B can cause life long infection, liver failure and death T F

22. There is a vaccine for all age groups to prevent Hep B T F

23. The signs and symptoms of Hep B are the same as Hep A but with one additional symptom, **Joint pain.**

24. Hep C is curable and there is a vaccine T F

25. Can you get a blood born disease from getting a tattoo?

Yes you could if the needles were not sterilized but tattoo artists put their needles in a clavier.

26. How is Hep C transmitted?

A through sneezing coughing and casual contact

B through direct contact of blood, ingestion of blood, needle sharing, unprotected sex

C Mosquito bites, tick bites and blood transfusions

D both a and C

27. If you have had Hep A you:

A have the symptoms long term

B cannot get it again and you are not sick after 9 months

C you are more susceptible to other Hep viruses

28 Hep A is transmissible through contact with feces T F

29. There is a vaccine for Hep B (T) F

T

30. Name 3 mosquito born diseases and note if they are a problem in the US.
Yellow fever no, filariasis yes in south, malaria yes in south, dengue fever no, rift valley fever, no Encephalitis yes, west Nile virus yes

31. How many type of mosquito are there? 3

32. Can persons with Hep C A B have massage? If so when?

Contraindicated until in remission

33. Is "French Kissing" a way that BBD's are transmitted?

Yes

34. What is TB? **Tuberculosis (TB) bacteria cause infection of the lungs and occasionally**

other organs¹T

>35 How is TB transmitted?

The bacteria are primarily transmitted person to person by coughing¹

> Certain types of TB can also be spread through unpasteurized milk¹

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1st line of defense with universal precautions "wash with soap water!"

What are universal precautions?

Universal precautions are infection control guidelines designed to protect workers from exposure to diseases spread by blood and certain body fluids.

The Laboratory Centre for Disease Control, Health Canada, the Public Health Agency of Canada and the U.S. Centers for Disease Control have developed the strategy of "Universal Precautions" or guidelines on the prevention of transmission of bloodborne pathogens in health care settings to prevent contact with patient blood and body fluids. These precautions stress that all patients should be assumed to be infectious for blood-borne diseases such as AIDS and hepatitis B.

Note: There are several terms in use when referring to infection control in health care settings, including the terms "routine precautions", and "standard precautions". No one term is consistently used. This document refers to protective steps when workers are exposed to blood and specific other body fluids (as listed below).



Should universal precautions be applied to all workplaces?

In the workplace, universal precautions should be followed when workers are exposed to blood and certain other body fluids, including:

- semen
- vaginal secretions
- synovial fluid
- cerebrospinal fluid
- pleural fluid
- peritoneal fluid
- pericardial fluid
- amniotic fluid

Universal precautions do not apply to:

SIGNS & SYMPTOMS

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SIGNS & SYMPTOMS

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- feces
- nasal secretions
- sputum
- sweat
- tears
- urine
- vomitus
- saliva (except in the dental setting, where saliva is likely to be contaminated with blood)

Universal precautions should be applied to all body fluids when it is difficult to identify the specific body fluid or when body fluids are visibly contaminated with blood.

How can workers prevent exposure to blood and body fluids?

Barriers are used for protection against occupational exposure to blood and certain body fluids.

These barriers consist of:

- Personal protective equipment (PPE)
- Engineering controls
- Work practice controls

Personal Protective Equipment (PPE) - PPE includes gloves, lab coats, gowns, shoe covers, goggles, glasses with side shields, masks, and resuscitation bags. The purpose of PPE is to prevent blood and body fluids from reaching the workers' skin, mucous membranes, or personal clothing. It must create an effective barrier between the exposed worker and any blood or other body fluids.

Engineering Controls - Engineering controls refer to methods of isolating or removing hazards from the workplace. Examples of engineering controls include: sharps disposal containers, laser scalpels, and ventilation including the use of ventilated biological cabinets (laboratory fume hoods).

Work Practice Controls - It refers to practical techniques that reduce the likelihood of exposure by changing the way a task is performed. Examples of activities requiring specific attention to work practice controls include: hand washing, handling of used needles and other sharps and contaminated reusable sharps, collecting and transporting fluids and tissues according to approved safe practices.

Is universal protection required by law?

Occupational health and safety is regulated in Canada in each of the fourteen jurisdictions (provincial, territorial and federal). Some jurisdictions may have also developed specific modifications of infection control guidelines. For more information

on these, you may wish to contact the departments responsible for occupational health and safety and public health in your province.



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Universal precautions refers to the practice, in medicine, of avoiding contact with patients' bodily fluids, by means of the wearing of nonporous articles such as medical gloves, goggles, and face shields. Medical instruments, especially scalpels and hypodermic needles should be handled carefully and disposed of properly in a sharps container. Pathogens fall into two broad categories, bloodborne (carried in the body fluids) and airborne. Standard universal precautions cover both types.