

Washburn University – Kinesiology Department

Athletic Training Program Hepatitis Information Sheet

Hepatitis Infection

Hepatitis is an inflammation of the liver. Formerly called “serum hepatitis,” viral hepatitis is caused by the Hepatitis B virus (HBV). This form of viral hepatitis, which is the major cause of acute and chronic hepatitis, cirrhosis and primary hepatocellular carcinoma, is transmitted by intimate exposure to infectious blood or serum derived fluids, semen, vaginal secretions, or saliva. In the workplace, exposure is parenteral, or by contact with mucous membranes or non-intact skin, most commonly by needlestick or sharps accident, or by contamination of unapparent breaks in the skin. Also contaminated fomites play a role in HBV transmission. Approximately 0.2-0.9% of adults in the U.S., and greater than 1% of all hospitalized patients, are infectious for Hepatitis B.

Hepatitis B infection is the major infectious occupational hazard to healthcare workers, causing approximately 12,000 infections, 3,000 cases of acute clinical illness, 600 hospitalizations, 1,000 chronic carriers, and 200 deaths annually. Without pre or post-exposure prophylaxis, 6-30% of non-immune healthcare workers who sustain an exposure from an infectious source develops Hepatitis B infection. The use of Hepatitis B vaccine and other appropriate environmental controls can prevent almost all occupational infections.

The Vaccine

Hepatitis B vaccine (recombinant) is a non-infectious, recombinant DNA Hepatitis B vaccine produced in yeast cells. The yeast-derived vaccines contain no human plasma so there is absolutely no possibility that they can cause HIV infection. This was a concern, without merit, with the previous vaccine derived by inactivated antigen from the plasma of chronic HBV carriers. The vaccine is given in a series of three (3) doses over a six (6) month period. The vaccine induces protective antibody levels in 85-97% of healthy adults completing the series.

Side-Effects

No serious side effects have been noted; however, it is possible that with expanded use, rare adverse reactions may become noted. In studies, 22% noted soreness at the site and 14% noted fatigue. Fewer persons experienced fever, joint pain, local reaction, rash, headache or dizziness.

Contraindications

- *The vaccine is contraindicated if you have a hypersensitivity to yeast or any other components of the vaccine.
- *Immunocompromised persons, e.g., hemodialysis patients, those receiving immunosuppressive drugs, or those with HIV infection, may not develop protective antibody levels with the course recommended for healthcare workers and would need special monitoring.
- *Product literature states that it is not known whether the vaccine causes fetal harm and should only be given to a pregnant woman if clearly needed and caution should be used during administration to nursing mothers.

The Center for Disease Control states that since HBV infection in a pregnant woman may result in severe disease for the mother and newborn, and since the vaccine contains only non-infectious HBsAg particles, hence there should be no risk to the fetus, that neither pregnancy nor lactation should be considered a contraindication.

The American Public Health Association states, “Pregnancy is not a definitive contraindication for receiving the inactivated vaccine.”

Deferrals

- *Those with known hypersensitivity to yeast
 - *Those known to be immune to Hepatitis B
 - *Those with history of immunosuppressive disorders
 - *Those receiving hemodialysis
 - *Those who are HIV positive, must bring written specific authorization from their attending physician stating they will be closely monitored and additional doses of the vaccine will be given by the physician if necessary
 - *Pregnant women must have written consent from their obstetricians
 - *Lactating women must have written consent from their pediatricians
- As with any vaccine, persons with any febrile illness (temperature 100°F or greater) or active infection should postpone immunization until symptoms clear.

Signs and Symptoms of HBV

The most commonly identified signs and symptoms of HBV are:

Anorexia	Nausea and vomiting	Mild fever
Abdominal discomfort	Arthralgia and rash	Jaundice