



HEPATITIS B IMMUNIZATION: THE ELEMENTS OF A GOOD PROGRAM

The OSHA bloodborne disease standard mandates that all healthcare employers offer Hepatitis B vaccine free of charge to employees who "reasonably" anticipate exposure to blood and other infectious materials. It's important not only that healthcare workers be offered immunization but that the immunization program reflect good clinical practice.

Some important elements of a good program include:

1. **Training:** Many healthcare workers have delayed being vaccinated because of lack of information and misinformation. A training program that informs healthcare workers about the risks of work-related exposure to hepatitis and the safety of the vaccine is essential to encourage more participation in an immunization program.
2. **Susceptibility or Prevacination Testing:** It may be worth knowing immunity status before entering a program. Some healthcare workers have been infected in the past; these workers are probably immune and will not need to be vaccinated. One antibody test is generally done (anti-HBc or anti-HBs).
3. **A Vaccination Protocol That Adheres to CDC Recommendations:** The Centers for Disease Control (CDC) recommends the following doses and schedule:

Three intramuscular injections of Recombivax or Engerix-B (both are synthetic vaccines made from yeast). The recommended dose for all adults for each injection is 1 mL of either vaccine in the deltoid muscle. Some institutions are using intradermal injections; however, intradermal vaccination has a much lower success rate of conferring immunity. For now, CDC does not recommend low-dose intradermal vaccination except in a research setting with written informed consent.

The second dose of the vaccine should be administered one month after the first; the third dose, six months after the first (or five months after the second). The third dose acts as a booster. Longer intervals between the second and third doses result in higher levels of protective antibodies.

4. **Postvaccination Testing for Immunity:** Although CDC does not recommend routine postvaccination testing, it's probably a good idea for healthcare workers who have frequent exposure to blood and body fluid. This testing should be performed one to six months after completion of the series. When healthcare workers do not respond to the first series of vaccine, they should be offered revaccination with up to three additional doses.

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Questions:

I was vaccinated several years ago. Should I have a booster shot?

Right now, boosters are not recommended for normal adults. In long-term studies of immunity among vaccinated adults, researchers found that immunity remains intact for at least nine years, maybe longer.

I never completed the vaccine series. What should I do?

You should discuss this with your employer's medical provider. More than likely, if you interrupted the series by only a few months, you can complete the series. If the interruption was long, you may have to be evaluated for immunity--if antibody levels are very low or nonexistent, the provider may recommend that you begin the series again.

I changed jobs before completing the vaccination series. The new facility offers a different vaccine. Should I start the series over?

Probably not. Studies have shown that a satisfactory immune response can be obtained when one or two doses of a vaccine produced by one manufacturer are followed by subsequent doses by another.

I'm pregnant. Should I postpone having the vaccine?

No. According to CDC, the vaccine poses no risk to the developing fetus. Unprotected pregnant healthcare workers who are exposed to contaminated blood are at serious risk of severe disease and their infants may be born with chronic hepatitis.

I've been vaccinated. Should I have any special medical evaluation after a needlestick or significant exposure to blood and infectious materials?

Yes. Unless your hepatitis antibody levels have been measured in the last two years, the medical provider should measure your antibody levels (anti-HBs). If you have adequate antibody levels (10 mIU/mL or above), then you will need no special treatment. If, however, the antibody levels are lower, experts recommend that a booster dose of Hepatitis B vaccine be given.

If you are one of the small group of healthcare workers who did not respond to the vaccine series, you should probably be offered two doses of HBIG (hepatitis B immunoglobulin)--one after the exposure and another one month later.

For more information, contact the AFT Healthcare Occupational Safety and Health Program at 202/393-5674.