

VACCINATE ADULTS!

A special bulletin for adult medicine specialists from *NEEDLE TIPS & Hepatitis B Coalition News*

Highlighting the latest developments on routine adult immunization and chronic hepatitis B virus infection.

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Artwork courtesy of NY State Health Dept.

Ask the Experts

Editors' note: The Coalition thanks William L. Atkinson, MD, MPH, and Harold S. Margolis, MD, of the Centers for Disease Control and Prevention for answering the following questions for our readers. Dr. Atkinson and Dr. Margolis act as CDC liaisons to the Coalition.

- Dr. Atkinson, medical epidemiologist at the National Immunization Program, conducts training workshops via satellite across the United States.
- Dr. Margolis, pediatrician, is chief of the Hepatitis Branch and principal author of the soon-to-be-released updated ACIP recommendations on hepatitis B.

Questions for the experts?

Here's how you get answers to your immunization and hepatitis A and B questions:

Write: Immunization Action Coalition
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Influenza vaccine

by William L. Atkinson, MD, MPH

Is there a new recommendation to vaccinate pregnant women against influenza?

Pregnant women were included in the group recommended for routine vaccination in 1996. This recommendation was clarified in the 1997 influenza statement. Healthy women in their second and third trimesters of pregnancy have been found to be at higher risk of complications of influenza than nonpregnant women. As a result, all women who will be in their second or third trimesters of pregnancy during influenza season (December through March) should receive influenza vaccine. Pregnant women who have medical conditions that increase their risk for complications from influenza should be vaccinated before the season regardless of their stage of pregnancy.

For whom else is influenza vaccine currently recommended?

- People who are 65 years of age or older.
- People under 65 with medical conditions such as heart disease, lung disease, diabetes, renal dysfunction, hemoglobinopathies, immunosuppression, and/or those living in long term care facilities. Adults working or living with these people should be vaccinated as well.
- Anyone who wishes to reduce the likelihood of becoming ill with influenza.

Which employees of chronic care facilities and nursing homes should receive influenza shots?

All employees of long term care facilities who have any patient contact and do not have a valid contraindication should receive annual influenza vaccination.

Which physicians, nurses, and home health care providers need influenza shots?

All physicians, nurses, and home health care providers who have any patient contact and do not have a valid contraindication should receive annual influenza vaccination.

My patient came in last February and asked for a "flu" shot. Should I have given it to her?

Yes. Influenza vaccine may be given at any time during influenza season. Health care providers should continue to offer influenza vaccine to unvaccinated persons who desire it throughout the influenza season.

What is the recommended route of administration for influenza vaccine?

Influenza vaccine should always be administered intramuscularly.

Can influenza vaccine be given to people who are receiving chemotherapy?

Yes. Influenza vaccine is inactivated, so it does not pose a risk to immunosuppressed persons, including those receiving cancer chemotherapy. Persons who are immunosuppressed for any reason should receive annual influenza vaccination.

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From the publishers of *NEEDLE TIPS*
& the *Hepatitis B Coalition News*

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The Immunization Action Coalition, a 501(c)3 nonprofit organization, works to boost immunization rates. The Coalition promotes physician, community, and family awareness of, and responsibility for, appropriate immunization of all people of all ages against all vaccine-preventable diseases.

The Hepatitis B Coalition, a program of the Immunization Action Coalition, promotes hepatitis B vaccination for all children 0-18 years; HBsAg screening for all pregnant women; testing and vaccination for high-risk groups; and education and treatment for people who are chronically infected with hepatitis B.

Join the Coalition!

Please become a member. Your membership contribution will be used to continue providing you with **VACCINATE ADULTS!**, a publication that contains excellent information and resources. See the back page for details about how to join.



Pneumococcal disease

by William L. Atkinson, MD, MPH

I understand that the new 1997 ACIP statement on pneumococcal disease discusses revaccination. Could you briefly summarize these revaccination recommendations?

The revaccination recommendations were modified slightly in the 1997 statement. Revaccination with pneumococcal polysaccharide vaccine is not routinely recommended for all healthy persons 65 years of age and older. A one-time revaccination dose should be considered for adults at highest risk for serious pneumococcal infection and persons likely to have a rapid decline in antibody levels, provided at least five years have passed since receipt of the first dose of pneumococcal vaccine. Persons at highest risk include children two years of age and older and adults with functional or anatomic asplenia, HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, nephrotic syndrome, or other conditions associated with immunosuppression (such as organ or bone marrow transplantation), and those receiving immunosuppressive chemotherapy, including long-term corticosteroids. Persons 65 years of age and older should be administered a second dose of pneumococcal vaccine if they received the vaccine more than five years previously, and were less than 65 years of age at the time of the first dose.

For which adults is pneumococcal vaccine recommended?

Pneumococcal vaccine is recommended for all adults who are 65 years of age and older. It is also recommended for adults under 65 years who have chronic illnesses specifically associated with increased risk from pneumococcal infection (e.g., cardiovascular disease, pulmonary disease, diabetes mellitus, alcoholism, cirrhosis, or cerebrospinal fluid leaks).

Adults with asymptomatic or symptomatic HIV infection should be vaccinated. In addition, immunocompromised adults with chronic illnesses specifically associated with increased risk from pneumococcal infection should receive the vaccine (e.g., persons with splenic dysfunction or anatomic asplenia, Hodgkin's disease, lymphoma, multiple myeloma, chronic renal failure, nephrotic syndrome, or conditions such as organ transplantation associated with immunosuppression).

Persons living in special environments or social settings with an identified increased risk from pneumococcal infection (e.g., certain Native American populations) should also be vaccinated. The vaccine is not indicated for patients having only recurrent upper respiratory tract disease, including otitis media and sinusitis.

Should all nursing home patients 65 and over be vaccinated against pneumococcal disease?

Yes. Standing orders for vaccination of persons admitted to long term care facilities can help simplify the procedure. Providers should not withhold vaccination in the absence of an immunization record or complete record. The patient's verbal history should be used to de-

termine prior vaccination status. Persons with uncertain or unknown vaccination status should be vaccinated.

Is asthma considered a chronic disease for which adults should receive pneumococcal vaccine?

Asthma is not an indication for routine pneumococcal vaccination unless it occurs with chronic bronchitis, emphysema, or long-term systemic corticosteroid use.

Should people who are HIV positive receive pneumococcal vaccine?

Yes. Persons with HIV infection should receive the vaccine as soon as possible after diagnosis. The risk of pneumococcal infection is up to 100 times greater in HIV-infected persons than in other adults of similar age. Although severely immunocompromised persons may not respond well to the vaccine, the risk of disease is great enough to warrant vaccination even though there is a chance that the vaccine may not produce an antibody response.

My patient has had laboratory-confirmed pneumococcal pneumonia. Does he/she still need to be vaccinated?

There are more than 80 known serotypes of pneumococcus. Infection with one serotype does not necessarily produce immunity to other serotypes. As a result, if the person is a candidate for vaccination, he/she should receive it even after one or more episodes of invasive pneumococcal disease.

Which route should pneumococcal vaccine be given?

Pneumococcal vaccine should be given as a single intramuscular or subcutaneous injection.

How serious is pneumococcal pneumonia?

Pneumococcal pneumonia accounts for 10-25% of all pneumonias leading to hospitalization. Pneumococcal infections account for an estimated 40,000 deaths annually in the United States.

Tetanus, diphtheria

by William L. Atkinson, MD, MPH

How often does an adult need to be vaccinated with Td? What if in the past they didn't receive the primary series?

Adults without documentation of tetanus and diphtheria toxoids should receive a primary series of three doses. The first two doses should be separated by 4-8 weeks, and the third dose given 6-12 months after the second dose. Adults should then be given a routine booster dose of Td every 10 years.

Our clinic gives tetanus toxoid shots to adults, not Td. Should we use Td instead?

ACIP recommends the use of combined tetanus-diphtheria toxoid (Td) in any circumstance where one antigen is indicated. Diphtheria is rare in the United States (fewer than 5 cases reported per year since 1980). However, serologic surveys indicate that up to 60 percent of adults are not protected against diphtheria. Large outbreaks of diphtheria have recently occurred in the newly independent states of the former Soviet Union and elsewhere. These outbreaks illustrate what can happen if immunity levels are allowed to fall, and also increase the risk of importation of diphtheria into the United States.

Varicella

by William L. Atkinson, MD, MPH

Should varicella vaccine be given to adults?

Varicella vaccine is recommended for susceptible adults (i.e., those without a history of having had varicella disease). Efforts should be made to vaccinate adults who will have close contact with persons at high risk for serious complications of varicella, i.e., health care workers and household contacts of immunosuppressed persons. Vaccination should be considered for persons who are at high risk of exposure to varicella (e.g., teachers, college students). Persons 13 years of age and older should receive 2 doses of varicella vaccine separated by 4 to 8 weeks.

How soon after a dose of varicella vaccine will a person be protected?

Most vaccinated persons should be protected within 2–3 weeks after vaccination.

If a woman receives varicella vaccine, how long should she wait before becoming pregnant?

Contrary to the information provided in the package insert (3 months), the ACIP recommends that a wait of 1 month is sufficient.

General vaccine questions

by William L. Atkinson, MD, MPH

Which vaccinations can be given to a pregnant health care worker?

Inactivated vaccines (Td, hepatitis B, influenza, IPV) may be given to pregnant women if indicated. Pneumococcal vaccine should be administered prior to pregnancy. Live vaccines (MMR, varicella) should not be given to a pregnant woman or one who is trying to become pregnant.

When giving two IM injections in the same limb, what is the minimum spacing between the two injection sites?

The vaccines should be sufficiently separated (one or two inches) in the body of the muscle so that any local reactions are unlikely to overlap.

What length of needle is recommended for subcutaneous and intramuscular vaccines given to adults?

Subcutaneous injections (MMR, varicella, IPV) should be given with a 5/8- to 3/4-inch, 23- to 25-gauge needle. For intramuscular injections, a mini-

mum needle length of 1- to 1½-inch needle is recommended, depending on muscle mass and thickness of subcutaneous fat.

Why are some vaccinations given subcutaneously while others must be given intramuscularly?

In general, inactivated vaccines are administered intramuscularly (IM), and live virus vaccines are given subcutaneously (SC). Inactivated polio and pneumococcal vaccines may be given either SC or IM. Vaccines intended to be given IM may cause local reactions (such as irritation, induration, skin discoloration, inflammation, and granuloma formation) if injected into subcutaneous tissue. Response to the vaccine may also be reduced if not given by the recommended route.

How long can the interval between doses of a vaccine be without having to restart the vaccine series over?

Every effort should be made to adhere to the recommended vaccine schedule, including the spacing between doses. However, if the interval between doses is prolonged, there is no need to restart the series of any vaccine.

If I give a pneumococcal vaccine to my client now, how long must I wait before giving the influenza or Td vaccine?

Influenza vaccine and Td may be given at the same time or at any time before or after a dose of pneumococcal vaccine. There are no minimum interval requirements between the doses of any inactivated vaccines.

Where can I get the most up-to-date information on vaccination recommendations for my patients who travel outside the United States?

Check with your local and/or state health departments because many of them receive up-to-date vaccination recommendations for international travelers from CDC. You may also receive travel recommendations from CDC by fax (404-332-4559) or from the CDC Home Page on the World Wide Web (<http://www.cdc.gov>). "Health Information for International Travel," an annual publication of the Division of Quarantine at CDC, is available from the Government Printing Office (202-512-1800). The National Immunization Program also has tapes available of the March 1996 videoconference "Vaccines for International Travel," which you can get by faxing your request to 404-639-8828. In addition to these sources, there are a number of private companies which sell computer programs and books designed to assist with vaccine recommendations for international travelers.

Which vaccines can be given if the patient is taking steroids?

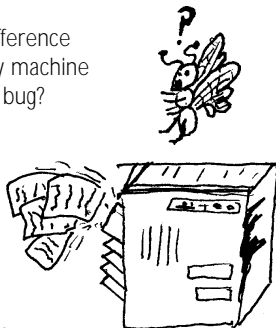
If the patient is receiving immunosuppressive doses of steroids (i.e., more than 2 mg/kg/day or more than 20 mg of prednisone per day), live vaccines (MMR, OPV, varicella) should not be given. All vaccines may be administered if lower doses of steroids are being taken. Examples of nonimmunosuppressive doses of steroids include inhalers, topical preparations, short rapidly-tapering courses, and alternate day schedules.

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What's the difference
between a copy machine
and the flu bug?



One makes facsimiles, the other
makes sick families.

Hepatitis B

by Harold S. Margolis, MD

Many adult medicine specialists today care for well-defined groups of patients at high risk of HBV infection within their practices. These include internists who provide care for HIV-positive patients, provide medical care or consultation for drug treatment centers; provide care for prisoners or juvenile detention centers; have practices with a high proportion of men who have sex with men; or have urgent care practices where they treat persons with STDs, illicit drug use, or victims of sexual assault. All of these settings present the opportunity to provide vaccination or counseling about HBV prevention if a conscious effort is made to include this prevention strategy.

Which sexually active adults should be offered hepatitis B vaccine?

Over 50% of people who acquire hepatitis B virus infection in the United States are infected through sexual activity with an infected person. Make sure you vaccinate your patients who are in any of these high-risk groups:

- Heterosexuals who have more than one sex partner during a six-month period
- Gay and bisexual men who have more than one sex partner during a six-month period
- People who have a sexually transmitted disease (STD) or who have ever had an STD
- Sex partners and household contacts of hepatitis B carriers
- Sex partners of illicit injection drug users

Often, women at high risk of HBV infection are identified during pregnancy. Hepatitis B vaccination is not contraindicated during pregnancy or lactation and is recommended for high-risk women by the American College of Obstetrics and Gynecology.

Since there is a national recommendation to begin the hepatitis B series on all persons diagnosed with STDs, how do I decide which patients need prevaccination testing?

In general, it is better to vaccinate than test if there is a concern that testing will interfere with getting the person vaccinated. Testing is only indicated if the expected prevalence of HBV infection is >30%. Testing is not indicated for ANY adolescents being vaccinated because they have had an STD. For adults seen in STD clinics where the prevalence of HBV infection is known to be >30%, testing might be warranted, but the cost effectiveness should be determined. In general, the prevalence of infection is lower among adults being vaccinated in private practice settings and testing may not be warranted.

If a person has been sexually assaulted should he/she be offered HBIG or hepatitis B vaccine? What is the time frame?

There have been no studies to determine the risk of HBV infection following sexual assault. However, it is known that other STDs are transmitted

following such episodes. Thus, it would be reasonable to provide postexposure prophylaxis to victims of sexual assault.

Unless the victim has a documented history of completed hepatitis B vaccination, I would give hepatitis B vaccine alone on a 0-, 1-, 6-month vaccination schedule because of its high efficacy in postexposure protection. The first dose should be given as part of the medical work-up of the assault; that is, as soon as possible.

There is no need to give HBIG for the following reasons: 1) vaccine alone has high efficacy in postexposure prophylaxis in persons exposed to chronic HBV infection; 2) HBIG is only needed to improve efficacy of postexposure prophylaxis of sexual contacts of persons with ACUTE hepatitis B and in most cases it could be assumed that if the rape perpetrator were HBV infected, he/she would have chronic infection and not acute hepatitis B.

What should be done for a health care worker who never received post-vaccination serology after his/her hepatitis B series?

A health care worker does not need to be tested unless he or she has an exposure. If an exposure occurs, refer to the ACIP recommendations for hepatitis B (11/21/91), Appendix A, for management guidelines. In addition to following these guidelines, if prophylaxis (HBIG and a booster dose of vaccine) is indicated, the person should receive post-vaccination testing 4-6 months afterwards. This post-vaccination anti-HBs test result should be recorded in the person's health record.

How often should anti-HBs titers be drawn on health care workers who perform invasive procedures?

No healthy person needs to be repeatedly tested for anti-HBs. Persons who perform invasive procedures should be treated no differently from other health care workers with respect to anti-HBs testing. If a health care worker has an exposure (e.g., needlestick) he or she should be evaluated for postexposure prophylaxis according to current recommendations.

Should a health care worker who performs invasive procedures and who once had a positive anti-HBs result, be revaccinated if his/her anti-HBs titer is rechecked and found to be below 10mIU/mL?

Postvaccination testing should be done 1-2 months after the vaccine series is completed. Only immunocompromised persons (e.g., hemodialysis patients, HIV positive persons) need to have anti-

HBs tested and booster doses of vaccine to maintain their anti-HBs concentrations ≥ 10 mIU/mL in order to be protected against infection. All others have been shown to remain protected because of long-term immune memory that is induced by the initial 3-dose vaccine series.

My adult patient finally came in nine months after the first hepatitis B shot to receive the second dose. Should she restart the series?

No. The vaccine series does not need to be restarted. The person should receive the second dose at this time and the third dose 2-6 months later.

For whom is hepatitis B surface antibody titer (test for immunity) recommended after three doses of vaccine are given?

Testing is not recommended after routine vaccination of infants, children, or adolescents. It is only necessary to know the immune response to vaccination for the following reasons: 1) to guide postexposure prophylaxis in persons at high risk of occupationally acquired infections; 2) to ensure protection of infants born to HBsAg-positive mothers; 3) to ensure protection in immunocompromised persons; 4) to provide sex partners of HBsAg-positive persons who do not respond to vaccination the opportunity to use other means to protect themselves from infection.

If a person in a household is found to be a carrier of hepatitis B virus, does everyone in the household need to receive HBIG and hepatitis B vaccine?

When feasible, sex partners should be tested to see if they are susceptible because of the high likelihood that they are already infected. Susceptible partners should be vaccinated since vaccine alone provides a high level of postexposure protection. The use of HBIG is not indicated in this situation for either sex partners or household contacts.

My sex partner is a carrier of hepatitis B virus. I tested negative, and started on hepatitis B vaccine. Should I have received HBIG, too?

Since your partner was shown to be a carrier of HBV, there is no reason to also receive HBIG. HBIG is only needed if your partner had a documented case of acute hepatitis B.

Should all HBsAg-positive adults and children be referred to hepatologists?

All HBsAg positive adults and children should be evaluated to determine whether they have active liver disease (i.e., liver enzymes, biochemical tests of liver function) and whether they are candidates for treatment with interferon. Depending on your practice situation or setting, this may be done by referral or consultation with a hepatologist.

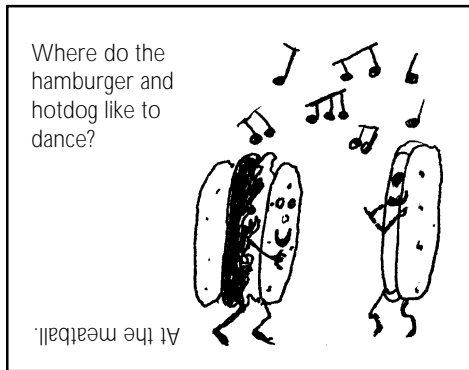
For dialysis patients who have received hepatitis B vaccination, how often do they have to be screened for anti-HBs and HBsAg?

For dialysis patients who have responded to hepatitis B vaccination (i.e., ≥ 10 mIU/mL), no HBsAg testing is needed and anti-HBs should be done annually.

Because dialysis patients are immunocompromised, they do not retain immune memory as



do patients whose immune systems are not compromised. Therefore, dialysis patients who have a low level (<10mIU/mL) or no anti-HBs are at risk for HBV infection and should be revaccinated with one or more additional doses of hepatitis B vaccine. Post vaccination anti-HBs testing should follow 1–2 months later. Until the patient is found to have an adequate anti-HBs level, monthly HBsAg testing should be done. If the patient continues to have low level (<10mIU/mL) or no anti-HBs and a total of six doses of hepatitis B vaccine have been given, the patient should be considered a non-responder to vaccination and susceptible to HBV infection. Monthly HBsAg testing should then be continued and anti-HBs testing should be done every 6 months.



Hepatitis A

by Harold S. Margolis, MD

Who should receive hepatitis A vaccine?

The ACIP and CDC have made recommendations for the use of the newly licensed hepatitis A vaccine. These recommendations were published in December 1996. The ACIP's hepatitis A immunization strategy is to both protect individuals from disease and to lower the overall incidence of hepatitis A in the United States. To achieve the latter, hepatitis A vaccine will have to be included in the routine childhood immunization schedule. However at this time, hepatitis A vaccine is not licensed for use in children < 2 years of age. Thus, the current recommendations should be viewed as an interim immunization strategy that is primarily targeted at populations at high risk of hepatitis A virus (HAV) infection or its consequences. These populations include:

- Persons traveling or working in countries with high or intermediate endemicity of HAV infection.
- Children living in communities with high rates of HAV infection and periodic outbreaks of hepatitis A – routine vaccination of all children at 2 years of age combined with catch-up vaccination of children 2 to 12–15 years of age over a 5-year period.
- Men who have sex with men.
- Illicit drug users – injecting and noninjecting drug users should be vaccinated if local epidemiology demonstrates outbreaks among this risk group.

- All persons with hemophilia (Factor VIII, Factor IX) who receive replacement therapy
- Persons at occupational risk of infection – the only groups at increased risk of exposure are persons working with experimentally infected nonhuman primates or with HAV in research laboratories.
- Persons with chronic liver disease – this group has increased likelihood of a severe adverse outcome from hepatitis A, including fulminant hepatitis. This includes persons with chronic hepatitis or awaiting or having had a liver transplant.

In addition, hepatitis A vaccination may be able to control community-wide epidemics of disease. However, the best strategies for targeting persons to vaccinate have not been established. The use of vaccine in these settings should be done in consultation with state or local health departments or CDC.

Who should have serologic testing for hepatitis A prior to vaccination?

Serologic testing to determine hepatitis A susceptibility is not indicated in children or adolescents. Testing may be cost effective for adults >40 years of age and for young adults in populations with high rates of HAV infection (i.e., American Indians/Alaskan Natives, Hispanic populations, persons born and raised in countries with a high endemicity of HAV infection, illicit drug users, men who have sex with men). However, obtaining prevaccination test results should be balanced against the likelihood of achieving timely vaccination, especially in some high risk populations. One approach is to give the first dose of vaccine at the time the blood is drawn for serologic testing. If the person is subsequently found to be anti-HAV positive, they should not get the second (booster) dose.

Should health care workers be vaccinated against hepatitis A?

A number of studies have shown that health care workers are NOT at increased risk of hepatitis A virus (HAV) infection because of their occupation. It is not recommended that they be routinely vaccinated. However, if the health care worker is going to work (or vacation) in a country with a high or intermediate endemic rate of HAV infection, he/she is at risk of infection and should be vaccinated.

Which travelers should be offered hepatitis A vaccine?

Pre-exposure immunization against hepatitis A is recommended for ALL susceptible persons who travel outside the U.S. (except for travel to Western Europe, New Zealand, Australia, Canada, and Japan). This can be provided either by short-term immunization with immune globulin (IG) or long-term immunization with hepatitis A vaccine. Hepatitis A vaccination is definitely indicated for persons who: 1) will travel or work in the indicated countries for longer than 3 months, and 2) will travel internationally on more than one occasion. Hepatitis A vaccination should be considered for persons who will travel on only one occasion since there is a high likelihood they will

travel again and vaccination provides long-term protection against infection. It should also be remembered that many children are travelers and they should be protected. This is especially true for children born in the U.S. traveling to the home country of their immigrant parents. Children who travel may play with other children who are infected with HAV. These children may become infected, and then infect other children and adults upon return to the U.S. If the child-traveler is younger than 2 years of age, he/she should be protected with IG because hepatitis A vaccine is not licensed for this age child.

(Ed. note: Those who provide hepatitis A vaccine to travelers should remember that other vaccinations may be required or recommended for travelers. For more information contact your local health department or travel clinic.)

How soon after the first dose of hepatitis A vaccine will a traveler be protected?

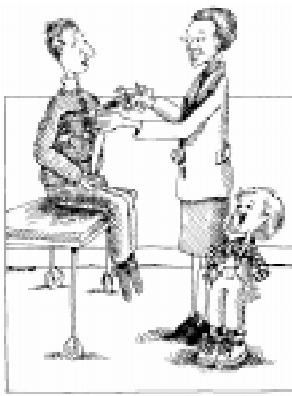
Hepatitis A vaccine is highly immunogenic with >95% of adults having protective levels of antibody within one month after vaccination and there are data to indicate most vaccinated persons have levels of antibody considered protective within 2 weeks of vaccination. However, it is not known whether everyone with early “protective antibody” levels actually has neutralizing antibody; one study suggested that early after vaccination most antibody is not neutralizing (i.e., actually protective). In addition, there are data indicating that the immunogenicity of hepatitis A vaccine is somewhat lower in older persons (age >40 years).

Although the package insert for both hepatitis A vaccines indicates that protection is present 2 weeks after vaccination, to be safe, the ACIP has recommended that persons traveling to areas where they will be immediately at risk of HAV infection be vaccinated at least ONE MONTH prior to travel. If the person is not vaccinated one month prior to travel, and depending on the travel destination and situation, administration of immune globulin (IG) in addition to hepatitis A vaccine should be given in order to provide optimum protection.

About 85% of Americans infected with HCV will progress to chronic liver disease.

Should all of these people be immunized against hepatitis A, or only those with abnormal ALT?

The current recommendation is that persons with “chronic liver disease” should be vaccinated against hepatitis A. The data supporting this recommendation show that there is a higher rate of fulminant hepatitis A among persons with chronic liver disease. For anti-HCV positive persons, only those with biochemical evidence of chronic liver disease and who are susceptible to HAV infection should be vaccinated. Approximately 50% of adults >40 years of age have been previously infected with HAV. Because of the relatively high cost of the vaccine, serologic testing is a cost-effective means to target immunization among adults.

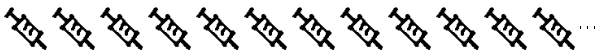







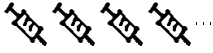

















Vaccinations for Adults

You're NEVER too old to get shots!

Many adults don't know they are supposed to get immunized against diseases. They think shots are for kids. There are millions of adults in this country who need influenza, pneumococcal, tetanus, and other shots. Are you one of them?

Getting immunized is a lifelong, life-protecting job. Make sure you and your health care professional keep your shots up-to-date! Don't leave your clinic without making sure that you've had all the shots you need.

<p>Influenza "flu shot"</p>	<p>The "flu shot" is recommended every fall for: people age 65 or older; women who will be in their 2nd or 3rd trimester of pregnancy during flu season; residents of long-term care facilities; people younger than 65 who have medical problems such as heart or lung disease (including asthma), diabetes, kidney disease, or an immune system weakened by disease, medication, or a physical condition; and for those who work with or live with any of these individuals.</p> 				
<p>Pneumococcal "pneumococcal shot"</p>	<p>The "pneumococcal shot" is recommended one time at age 65 (or older if it was not given at 65). This shot is also recommended for people younger than 65 who have certain chronic illnesses. Some individuals with particular health risks will need a one-time revaccination dose 5 years later. Consult your doctor.</p> 				
<p>Tetanus, diphtheria (Td) often referred to as "tetanus shot"</p>	<p>If you haven't had at least 3 basic tetanus-diphtheria shots in your lifetime, you need to complete the series listed below:</p> <table border="1" data-bbox="393 982 1198 1150"> <tr> <td data-bbox="393 982 620 1150"> <p>first dose now</p>  </td> <td data-bbox="625 982 880 1150"> <p>second dose one month later</p>  </td> <td data-bbox="885 982 1198 1150"> <p>third dose six months after the second dose</p>  </td> </tr> </table>	<p>first dose now</p> 	<p>second dose one month later</p> 	<p>third dose six months after the second dose</p> 	<p>And then all adults need a booster dose every 10 years</p> 
<p>first dose now</p> 	<p>second dose one month later</p> 	<p>third dose six months after the second dose</p> 			
<p>Hepatitis A (Hep A) for those at risk*</p>	<p>Hepatitis A vaccine is recommended for many adults including travelers to certain areas outside the U.S.*</p> <table border="1" data-bbox="393 1213 1518 1354"> <tr> <td data-bbox="393 1213 880 1354"> <p>first dose now</p>  </td> <td data-bbox="885 1213 1518 1354"> <p>second dose 6-12 months after the first dose</p>  </td> </tr> </table>			<p>first dose now</p> 	<p>second dose 6-12 months after the first dose</p> 
<p>first dose now</p> 	<p>second dose 6-12 months after the first dose</p> 				
<p>Hepatitis B (Hep-B) for those at risk*</p>	<p>first dose now</p> 	<p>second dose one month later</p> 	<p>third dose is usually given five months after the second dose</p> 		
<p>Measles, mumps, rubella (MMR)</p>	<p>One dose is recommended for those born in 1957 or later if that person has not been previously vaccinated. (A second dose of MMR may be required in some work or school settings, or recommended for international travel.) People born before 1957 are usually considered immune.</p> 				
<p>Varicella (Var) for those who have never had chickenpox</p>	<p>first dose now</p> 	<p>second dose 4-8 weeks later</p> 			

*Consult your health care professional to determine your level of risk and need for this vaccine.

Do you travel outside the United States? If so, you may need additional vaccines, including hepatitis A. Consult your doctor or nurse about recommended and/or required vaccines. The Centers for Disease Control and Prevention operates an international traveler's immunization hot line. Call 404-332-4559 to obtain information about required and/or recommended shots for your destination.

Item #P4030 (10/97)

Summary of Recommendations for Adult Immunization - side 1

Adapted from the Advisory Committee on Immunization Practices (ACIP) by the Immunization Action Coalition with review by ad hoc team - October 1997

Vaccine name and storage temperature	For whom it is recommended	What is the usual schedule?	Schedule for those who have fallen behind	Contraindications and precautions*	Rules of simultaneous administration	Route
Influenza "flu shot" 35-46°F 2-8°C	<ul style="list-style-type: none"> • People who are 65 years of age or older. • People under 65 with medical problems such as heart disease, lung disease, diabetes, renal dysfunction, hemoglobinopathies, immunosuppression, and/or those living in chronic care facilities. Adults working or living with these people should be vaccinated as well. • Healthy pregnant women who will be in their 2rd or 3rd trimesters during the influenza season. • Pregnant women who have underlying medical conditions should be vaccinated before the flu season, regardless of the stage of pregnancy. • Anyone who wishes to reduce the likelihood of becoming ill with influenza. 	<ul style="list-style-type: none"> • October through November is the optimal time to receive a flu shot to maximize protection, but the vaccine may be given at any time during the influenza season. 	May be given anytime during the influenza season, including the winter months, as long as cases are still occurring in the community.	<ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine, to any of its components, or to eggs. • Moderate or severe acute illness. 	Can give with all others but at a separate site.	IM
Pneumococcal "pneumococcal shot" 35-46°F 2-8°C	<ul style="list-style-type: none"> • All adults 65 years of age and older. • People under 65 who have chronic illness or other high risk factors including chronic cardiac and pulmonary diseases, anatomic or functional asplenia, chronic liver disease, alcoholism, diabetes mellitus, CSF leaks. Others at high risk include immunocompromised persons including those with HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephrotic syndrome, those receiving immunosuppressive chemotherapy (including corticosteroids), and those who received an organ or bone marrow transplant. 	<ul style="list-style-type: none"> • Routinely given as a one-time dose. • Revaccination is recommended 5 years later for people at highest risk of fatal pneumococcal infection, or if the 1st dose was given prior to age 65. 		<ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine or to any of its components. • Pregnancy, unless risk of disease is greater. • Moderate or severe acute illness. 	Can give with all others but at a separate site.	IM or SC
Hepatitis B (Hep-B) (HBV) 35-46°F 2-8°C	<ul style="list-style-type: none"> • Many high-risk adults need vaccination including: household contacts and sexual partners of hepatitis B carriers; users of injectable drugs; heterosexuals with more than one sexual partner in 6 months; men who have sex with men; patients in hemodialysis units; recipients of certain blood products; health care workers and public safety workers who are exposed to blood; clients and staff of institutions for the developmentally disabled; inmates of long-term correctional facilities, and certain international travelers. <p>Note: Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure.</p> <p><i>Editor's note: It is especially prudent to screen individuals who have emigrated from endemic areas. When HBsAg "carriers" are identified, offer them appropriate disease management. In addition, their household members and intimate contacts should be screened and, if found susceptible, vaccinated.</i></p>	<ul style="list-style-type: none"> • Commonly used timing options for vaccination: 0, 1, 6 months 0, 2, 4 months 0, 1, 4 months 	<ul style="list-style-type: none"> • There must be one month between doses #1 and #2, and two months between doses #2 and #3. Overall there must be at least four months between doses #1 and #3. • If the series is delayed between doses, do not start the series over. Simply continue from where you left off. 	<ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. 	Can give with all others but at a separate site.	IM
Hepatitis A (Hep-A) 35-46°F 2-8°C	<ul style="list-style-type: none"> • Adults who travel outside of the U.S. (except for Northern and Western Europe, New Zealand, Australia, Canada, and Japan). • People with chronic liver disease; drug users; men who have sex with men; people with clotting disorders; people who work with hepatitis A virus in experimental lab settings (this does not refer to routine medical laboratories); and food handlers where health authorities or private employers determine vaccination to be cost-effective. <p>Note: Prevacination testing is likely to be cost effective for persons >40 years of age as well as for younger persons in certain groups with a high prevalence of HAV infection.</p>	<ul style="list-style-type: none"> • #1 • #2: If using Havrix, give second dose 6-12 months after the first dose. If using Vaqta, give second dose 6 months after the first dose. 	• #2 dose should be given no sooner than 6 months after #1.	<ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. • Safety during pregnancy has not been determined, so benefits must be weighed against potential risk. 	Can give with all others but at a separate site.	IM

For specific ACIP immunization recommendations refer to the full statements which are published in the *MMWR*. To obtain a complete set of ACIP statements, contact your state health department or call 800-232-2522. The references most frequently used in creating this table include recent ACIP statements, *General Recommendations on Immunization*, *MMWR*, 1/28/94, and *Update on Adult Immunization*, *MMWR*, 11/15/91.

immunization clinics or clinicians' offices. The table will be revised approximately once a year because of the changing nature of national immunization recommendations.

* Note: While moderate or severe acute illness is reason to postpone vaccination, mild acute illness is not.

Item #P2011 (10/97)

This table was developed to combine the recommendations of adult immunization onto one page. It was devised especially to assist health care workers in determining appropriate use and scheduling of vaccines. It can be posted in

Summary of Recommendations for Adult Immunization - side 2

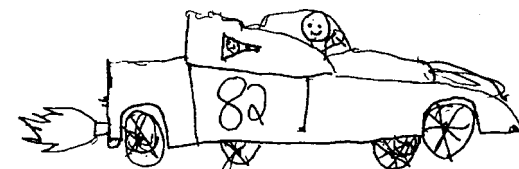
Vaccine name and storage temperature	For whom it is recommended	What is the usual schedule?	Schedule for those who have fallen behind	Contraindications and precautions*	Rules of simultaneous administration	Route
Td (Tetanus, diphtheria) 35-46°F 2-8°C	After the primary series has been completed, a booster dose is recommended every 10 years. Make sure your patients have received a primary series of 3 doses.	Booster dose every 10 years after completion of the primary series of 3 doses.	The primary series is: • #1 • #2 given 1 month later • #3 given 6-12 months after #2.	<ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. 	Can give with all others but at a separate site.	IM
MMR Measles, Mumps, Rubella 35-46°F 2-8°C	<ul style="list-style-type: none"> • Adults born in 1957 or later need one dose of the MMR if there is no proof of immunity or documentation of a dose given on or after 1st birthday. • Adults in high-risk groups, such as health care workers, students entering post secondary schools, and international travelers may need a second dose. Note: Adults born before 1957 are usually considered immune but proof of immunity may be considered for health care workers.	<ul style="list-style-type: none"> • #1 • #2, if recommended, is given no sooner than 1 month after #1. 	#2 may be given as early as 1 month after dose #1.	<ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine, or to any of its components. (Anaphylactic reaction to eggs is no longer a contraindication to MMR, so skin testing isn't needed prior to vaccination.) • Pregnancy or possibility of pregnancy within 3 months. • HIV positivity is NOT a contraindication to MMR except for those who are severely immunocompromised. • Immunocompromised: includes cancer, leukemia, lymphoma, immunosuppressive drug therapy, including high dose steroids. • If blood products or immune globulin have been administered during the past 11 months, consult the ACIP recommendations regarding time to wait before vaccinating. • Moderate or severe acute illness. Note: MMR is NOT contraindicated if a PPD test was done recently. However, PPD should be delayed if MMR was given 1-30 days before the PPD.	Can give with all others but at a separate site. If varicella is not given at the same time, space varicella and MMR at least 30 days apart.	SC
Varicella "Chickenpox shot" (Var) 5°F -15°C or colder	<ul style="list-style-type: none"> • All susceptible adults should be vaccinated. Note: Adults with reliable histories of chickenpox (such as self or parental report of disease) can be assumed to be immune. For those who have no reliable history, serologic testing may be cost effective to determine immunity since most adults are immune.	All adults need two doses. Give dose #2 4-8 weeks after dose #1.	• Give #2 no sooner than 4 weeks after #1.	<ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine or to any of its components. • Pregnancy, or possibility of pregnancy within 1 month. • Immunocompromised persons due to malignancies and primary or acquired immunodeficiency including HIV/AIDS. Note: For those on high dose immunosuppressive therapy, consult ACIP recommendations regarding delay time. <ul style="list-style-type: none"> • Moderate or severe acute illness. Note: Manufacturer recommends that salicylates be avoided for 6 weeks after receiving varicella vaccine.	Can give with all others but at a separate site. If MMR is not given on the same day, space MMR and varicella at least 30 days apart.	SC
Polio vaccine IPV 35-46°F 2-8°C	Not routinely recommended for adults 18 years of age and older. Note: Adults living in the U.S. who never received or completed a primary series of polio vaccine, need not be vaccinated, unless they intend to travel to areas where exposure to wild-type virus is likely. Health care workers should have completed a primary series.	Refer to ACIP recommendations regarding unique situations, schedules, and dosing information. If polio vaccine is indicated for adults, IPV is generally preferred.		Refer to ACIP recommendations.	Can give with all others but at a separate site.	SC or IM

* Note: While moderate or severe acute illness is reason to postpone vaccination, mild acute illness is not.

Your comments are welcome. Please send them to Lynn Bahta, PHN, or Deborah Wexler, MD, Immunization Action Coalition, 1573 Selby Ave., Suite 234, St. Paul, MN 55104, 612-647-9009, fax 612-647-9131, mail@immunize.org.

The Coalition thanks William Atkinson, MD; Tamara Kicera, BS; Gregory Gilmet, MD; John Grabenstein, MS Pharm; Neal Halsey, MD; Muriel Hoyt, BSN; Sam Katz, MD; Anne Kuettel, PHN; Edgar Marcuse, MD; Margaret Morrison, MD; Craig Shapiro, MD; Ray Strikas, MD; Walter Williams, MD; and Richard Zimmerman, MD, for their review and comments on this table. Final responsibility for errors or omissions lies with the editors.

"I follow the rules of the road. If you follow the rules of immunization, you won't get lost!"



Basic knowledge about hepatitis B

Know the risk groups for hepatitis B virus infection

Sexually active adults are extremely undervaccinated for hepatitis B virus infection.

Over 50% of people who acquire hepatitis B virus infection in the United States are infected through sexual activity with an infected person. Make sure you vaccinate your patients who are in any of these high-risk groups:

- ★ Heterosexuals who have more than one sex partner during a six-month period.
- ★ Gay and bisexual men who have more than one sex partner during a six-month period.
- ★ People who have a sexually transmitted disease (STD) or who have ever had an STD.
- ★ Sex partners and household contacts of hepatitis B carriers.
- ★ Sex partners of illicit injecting drug users.

Remember also to vaccinate your patients if they are in any of the following risk groups:

Many high-risk adults also need vaccination including: users of illicit injectable drugs; patients in hemodialysis units; recipients of certain blood products; health care workers and public safety workers who are exposed to blood; clients and staff of institutions for the developmentally disabled; inmates of long-term correctional facilities, and certain international travelers.

Who needs serologic testing?

Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure. It is especially prudent to screen individuals who have emigrated from endemic areas. When HBsAg "carriers" are identified, offer them appropriate disease management. In addition, their household members and intimate contacts should be screened and, if found susceptible, vaccinated. Guidelines on which risk groups need to receive prevaccination serology (anti-HBc), which groups need to have post-vaccination serology (anti-HBs), and which groups need evaluation to determine if they are chronically infected with hepatitis B virus, will be published in 1998 in the *MMWR* as part of the ACIP recommendations on vaccination to prevent hepatitis B virus infection. You can get copies of ACIP recommendations by calling 800-232-2522.

Interpretation of the hepatitis B panel

Tests	Results	Interpretation
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible
HBsAg anti-HBc anti-HBs	negative negative or positive positive	immune
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected
HBsAg anti-HBc anti-HBs	negative positive negative	four interpretations possible*

- * 1. May be recovering from acute HBV infection.
 2. May be distantly immune and test not sensitive enough to detect very low level of anti-HBs in serum.
 3. May be susceptible with a false positive anti-HBc.
 4. May be undetectable level of HBsAg present in the serum and the person is actually a carrier.

Laboratory diagnosis of chronic hepatitis B, C, and D

Lab tests needed to diagnose chronic hepatitis B, C, or D:

Hepatitis B	HBsAg. If positive, obtain IgM anti-HBc to differentiate acute hepatitis B (IgM anti-HBc is positive) from chronic hepatitis B (IgM anti-HBc is negative). Chronic hepatitis B is also defined by 2 HBsAg-positive tests separated by at least 6 months.
Hepatitis C	Anti-HCV. Verify a positive test with a supplemental assay such as RIBA or nucleic acid detection of HCV RNA, depending on the clinical situation
Hepatitis D	Must meet criteria for chronic hepatitis B. Then, obtain anti-HDV.

To diagnose the presence of hepatitis-associated liver disease, the liver enzymes are usually elevated at least 1.5 - 2X normal. In this situation the patient should be referred to a gastroenterologist/hepatologist for further evaluation, which may include liver biopsy. Treatment for chronic hepatitis B and C is available for some patients who meet clinical criteria. Currently, interferon alfa-2b is the only FDA-approved treatment for hepatitis B or hepatitis C.

For more information about hepatitis B including guidelines for the management of the hepatitis B carrier, contact the Hepatitis B Coalition, 1573 Selby Avenue, St. Paul, MN 55104, 612-647-9009.

Does your patient have chronic hepatitis B?

Coleman I. Smith, MD, hepatologist, answers questions often asked by physicians

Coleman I. Smith, MD, is a consultant gastroenterologist/hepatologist at Minnesota Gastroenterology in Minneapolis, MN. He has written articles for the Hepatitis B Coalition on the care of the adult who is a hepatitis B carrier. Dr. Smith is a member of the Advisory Board of the Coalition.

Hepatitis B virus (HBV) markers and their significance

HBsAg	patient is infected with the virus
anti-HBs (surface antibody)	patient is immune (from natural infection or vaccine)
HBeAg	active viral replication, ongoing liver disease (usually), patient is highly infectious
anti-HBe (in the presence of HBsAg)	viral replication is reduced, inactive liver disease (usually), less infectious than if HBeAg were positive (in some cases, anti-HBe may be associated with active viral replication)
HBV DNA	active viral replication, ongoing liver disease (usually), patient is highly infectious
anti-HBc (core antibody)	patient has been infected with HBV and may have active or resolved infection
IgM anti-HBc	signifies recent (within six months) infection with HBV

How do I diagnose chronic HBV infection?

Chronic HBV infection is diagnosed by the presence of HBsAg in the serum for 6 months or more. It can also be diagnosed by the presence of HBsAg with the additional finding of anti-HBc with no evidence of IgM anti-HBc (using standard commercially available assays).

What happens if a person develops chronic HBV infection?

When an individual develops chronic HBV infection, a variety of outcomes are possible, ranging from a chronic carrier state with very little, if any, liver damage, to ongoing chronic hepatitis of varying degrees of severity. The latter may at times progress to cirrhosis with all its clinical sequelae. In addition, these individuals are at high risk for primary hepatocellular carcinoma (HCC).

What happens to the liver when a person becomes chronically infected?

During the early phase of chronic infection, there is often significant viral replication and ongoing liver damage as manifested by HBeAg positivity and elevated transaminases. HBeAg often disap-

pears after a variable period of time although it may sometimes take some years for this to occur. When the HBeAg does disappear, the liver disease becomes more quiescent and the patient is less infectious. It is in this stage that HCC may complicate long-standing chronic HBV infection.

If the HBeAg disappears, do I stop following the patient closely?

No. Even after the HBeAg has disappeared and the liver disease has become relatively inactive, the whole process may be reactivated. Multiple cycles of reactivation may occur. Episodes of reactivation may occur spontaneously or may be precipitated by a course of immunosuppressant therapy (such as steroids or chemotherapy given for an unrelated illness). Such an event may result in worsening of the liver disease with a potentially severe outcome. Thus, one has to watch closely any chronic hepatitis B carrier who requires immunosuppressant therapy. An additional reason to continue to follow these patients closely is to monitor them for the development of complications of cirrhosis and/or HCC.

How do I manage patients who are chronically infected with HBV?

Patients who have chronic hepatitis B should be managed as follows:

- Clinical history (including family history) should be taken, in particular looking for evidence of symptomatic liver disease in the patient, family, household member, or sexual partner(s).

- Physical exam to look for evidence of liver disease such as spider nevi, jaundice, ascites, etc.

- Biochemical tests to assess liver status (AST, ALT, alkaline phosphatase, bilirubin, albumin, prothrombin time). All of these should be repeated every six months.

- HBeAg and/or HBV DNA should be measured yearly to assess if active viral replication is present.

- HBsAg and anti-HBs should be assessed yearly to see if viral clearance has occurred.

- Individuals who are HBeAg positive or have an AST > 200 should be referred to a gastroenterologist or hepatologist for further assessment as should persons with clinical evidence of liver disease (e.g., jaundice, ascites, variceal hemorrhage). Consideration should be given to liver biopsy. In those with liver disease and active viral replication (HBeAg positivity) treatment with interferon should be considered.

- All HBsAg carriers should be monitored for the development of hepatocellular carcinoma. Although there is much debate on the degree of frequency of such monitoring and the modalities to be used, a reasonable approach is to do ultrasound and alpha-fetoprotein (a tumor marker) estimation every six months, especially if the infection has been present for ten years or more.

- Family members of chronically infected persons (including non-sexual contacts) as well as any sexual partners are at risk of acquiring hepatitis B and should be tested. If found susceptible or if they have an indeterminate serologic pattern (an isolated anti-HBc+) they should be vaccinated against hepatitis B, even if pregnant.

- Patients should be evaluated for the presence of antibody to hepatitis A (total anti-HAV). Those with a negative antibody are susceptible and should receive hepatitis A vaccine.

- Every chronically infected person should receive hepatitis B education, as should his/her household members and sexual partners. Brochures to assist with education are available in many languages from the Hepatitis B Coalition, a program of the Immunization Action Coalition. (See address below.)

What kinds of treatment modalities are available for chronic HBV infection?

Approximately 40% of suitable patients with chronic HBV with significant histologic liver damage and ongoing viral replication benefit from treatment with interferon. Those who are most likely to respond to treatment for HBV are those who have evidence of liver damage and low HBV DNA levels. Because interferon may have significant risks and side effects associated with its use, treatment should be carried out by a gastroenterologist or hepatologist with experience in antiviral treatment of chronic hepatitis. Clinical trials of other antivirals (e.g., lamivudine, famciclovir, lubocavir) are ongoing.

Ed note: The National Institute of Allergy and Infectious Diseases has information about adult and pediatric HBV clinical trials being conducted in the United States. For adult studies, contact Lanette Sherrill, CRNP, MSN, at 205-934-2424.

Adult Catalog

Publications and resources



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With a \$40 membership contribution for 1998 we'll send you all of the print and video materials listed on this page. Your contribution will also keep you on our mailing list and help us produce future issues of **VACCINATE ADULTS!** Won't you please join today?

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Qty.	Brochures for your patients	Amt.
___ P4030	Vaccinations for adults	\$1 _____
___ P4035	Immunizations...not just kids' stuff <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Chinese	\$1/ea _____
___ P4070	Chickenpox isn't just an itchy, contagious rash: <input type="checkbox"/> English <input type="checkbox"/> Spanish	\$1/ea _____
___ P4080	Hepatitis A is serious...should you be vaccinated? <input type="checkbox"/> English <input type="checkbox"/> Spanish	\$1/ea _____
___ P4090	Questions frequently asked about hepatitis B	\$1 _____
___ P4115	Hep B brochure for men who have sex with men	\$1 _____
___ P4116	Hep A brochure for men who have sex with men	\$1 _____
___ P4041	Shots for adults with HIV	\$1 _____
___ P4120	If you are a hepatitis B carrier: <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Hmong <input type="checkbox"/> Chinese	\$1/ea _____
___ P4170	Hep B brochure for adults & children from endemic areas <input type="checkbox"/> English <input type="checkbox"/> Hmong <input type="checkbox"/> Cambodian <input type="checkbox"/> Laotian <input type="checkbox"/> Vietnamese <input type="checkbox"/> Russian <input type="checkbox"/> Chinese <input type="checkbox"/> Korean	\$1/ea _____
___ P4190	Hep B info for Asian Americans: <input type="checkbox"/> English <input type="checkbox"/> Hmong <input type="checkbox"/> Cambodian <input type="checkbox"/> Laotian <input type="checkbox"/> Vietnamese <input type="checkbox"/> Tagalog	\$1/ea _____
___ P4200	Hepatitis B information for Soviet refugees: <input type="checkbox"/> English <input type="checkbox"/> Russian	\$1/ea _____

Materials for your clinic staff

___ P2011	Summary of recommendations for adult immunization	\$1 _____
___ P4065	Screening questionnaire for adult immunization	\$1 _____
___ P2020	Vaccine handling, storage, and transport	\$1 _____
___ P2023	Vaccine administration record for adults	\$1 _____
___ P2060	Hospitals & doctors sued for failing to immunize	\$1 _____
___ P2081	Recommended dosages of hep A and hep B vaccines	\$1 _____
___ P2100	No risk?? No way!!	\$1 _____
___ P2110	Hepatitis B toolbox	\$1 _____
___ P2164	Management of chronic hepatitis B in children/adults	\$5 _____
___ P2180	Tracking and managing hepatitis B patients and contacts	\$1 _____

Videos for your clinic staff

___ V2010	How to Protect Your Vaccine Supply	\$10 _____
___ V2020	Vaccine Administration Techniques	\$10 _____

Total \$ _____

**Immunization Action Coalition
& Hepatitis B Coalition**

1573 Selby Avenue, #234, St. Paul, MN 55104
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Please Join the Coalition!

This is the total amount for the materials I'm ordering. \$ _____

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Here is my 1998 membership contribution

\$40 \$75 \$100 \$250 \$ _____ other \$ _____

I'm joining the Coalition at a \$40 level or higher so please send me all of your adult materials, including videos, in English. I also would like to receive whatever translations you have in:

Spanish Hmong Cambodian

Laotian Vietnamese Tagalog

Russian Chinese Korean

I'm joining the Coalition for \$40 or more, but I don't need my packet of materials. Please give my packet to someone who can use it.

Grand Total \$ _____

All contributions to the Coalition are tax deductible to the full extent of the law.

Vaccinate grown-ups . . . it's the adult thing to do!



Dear Reader:

This is the premiere issue of VACCINATE ADULTS! - a special bulletin for internal medicine specialists from the publishers of NEEDLE TIPS & the Hepatitis B Coalition News. It is in your hands because you provide vaccination services to adults. VACCINATE ADULTS! will keep you up to date on the latest vaccination recommendations as well as provide you with information on chronic hepatitis B virus infection.

VACCINATE ADULTS! is made possible by a five-year, \$850,000 grant to the Immunization Action Coalition from the Centers for Disease Control and Prevention (CDC) as well as contributions from corporations, foundations, and readers of NEEDLE TIPS & the Hepatitis B Coalition News.

Test your vaccination knowledge:

1. What percent of adults 65 and over have received pneumococcal vaccine?*
2. What percent of adults 65 and over received influenza vaccine in the past year?*
3. What percent of adults have received a Td booster in the past 10 years?*
4. Which of your adult patients need hepatitis B vaccine? (see page 4)
5. Which of your adult patients need hepatitis A vaccine? (see page 5)

Look inside! Everything you'll find is carefully reviewed for technical accuracy by the Adult Vaccine Preventable Diseases Branch and the Hepatitis Branch of CDC, with additional help from members of our prestigious Advisory Board (listed on page 3). These materials are designed for you to copy and distribute to patients; to keep as ready references in exam rooms; or to distribute to your clinic staff members. All of the Coalition's materials are copyright free so you may use our materials in any way you'd like.

While you're looking through VACCINATE ADULTS! please consider becoming a 1998 member of the Immunization Action Coalition. Over 1,000 primary health care providers have joined. With a contribution of \$40 or more, we'll add you to our mailing list and send you a packet of all of the print materials and videos in our catalog on page 11. Won't you join today?

Deborah L. Wexler MD
Deborah L. Wexler, MD
Executive Director

*Answers 1. 36% 2. 58% 3. ~50%

Here's my contribution to become a new Coalition member for 1998!

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