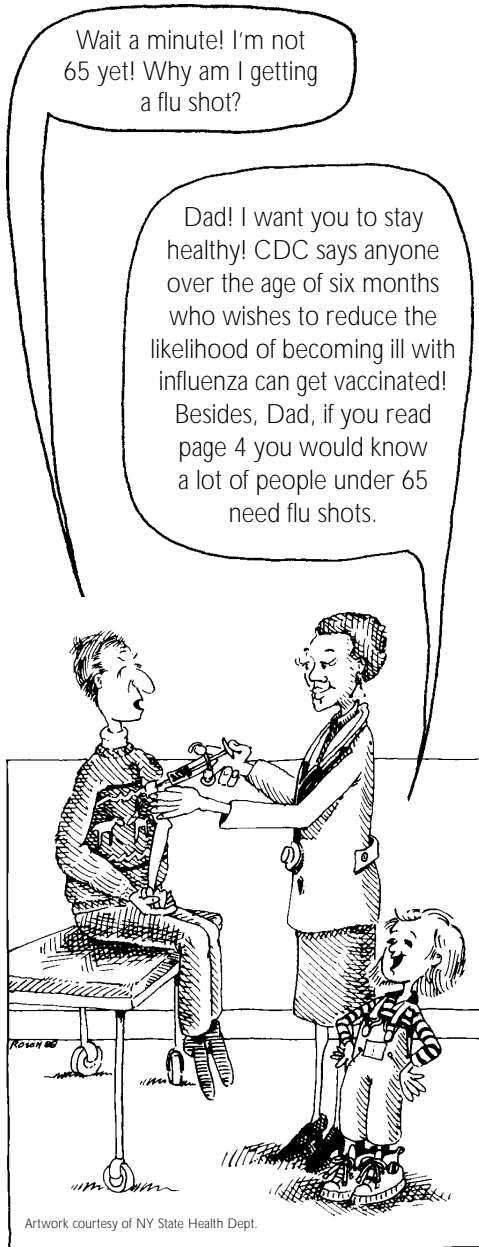


VACCINATE ADULTS!

A bulletin for adult medicine specialists from the Immunization Action Coalition

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



Artwork courtesy of NY State Health Dept.

Ask the Experts

Editors' note: The Immunization Action Coalition thanks William L. Atkinson, MD, MPH, Harold S. Margolis, MD, and Linda A. Moyer, RN, of the Centers for Disease Control and Prevention for answering the following questions for our readers. Dr. Atkinson, medical epidemiologist at the National Immunization Program, and Dr. Margolis, chief of the Hepatitis Branch, are CDC liaisons to the Coalition. Ms. Moyer is an epidemiologist at the Hepatitis Branch.

General vaccine questions

by William L. Atkinson, MD, MPH

In which circumstances must I give adult patients Vaccine Information Statements (VISs)?

A VIS must be given to adult patients before any dose of a vaccine for diphtheria, tetanus, pertussis, hepatitis B, measles, mumps, rubella, varicella, Hib, or polio.

Immunization questions?

- Call your state health department
- E-mail: nipinfo@cdc.gov
- Call CDC's Immunization Information Hotline at (800) 232-2522

Where can I get instructions on how, why, and when to use the federally mandated VISs?

Instructions on the use of VISs are available from the National Immunization Program at www.cdc.gov/nip/publications/vis/default.htm or you can call your state immunization program.

Where can I get foreign language VISs?

Foreign language VISs are available on the Immunization Action Coalition's website at: www.immunize.org/vis or you can call your state immunization program.

Tetanus

by William L. Atkinson, MD, MPH

If a person gets a puncture wound or laceration on Friday night, does the person need to receive tetanus wound management that night or can it wait until Monday?

ACIP has not addressed this issue specifically. Puncture wounds, however, should be attended to as soon as possible. The decision to delay a booster dose of Td following an injury should be based on the nature of the injury and likelihood that the injured person is susceptible to tetanus. The more likely the person is to be susceptible, the

more quickly that tetanus prophylaxis should be administered. A person with a tetanus-prone wound (punctures, wounds contaminated with soil or fecal material) and who has no history of tetanus immunization must be immunized (and given tetanus immune globulin [TIG]) as soon as possible. A person with a documented series of three Td doses, with a booster dose 10 years ago, is less likely to be susceptible to tetanus, and the need for a booster dose is not as urgent, particularly if the wound can be thoroughly cleaned. The more likely a person is to be completely susceptible to tetanus (i.e., unvaccinated or incompletely vaccinated), the sooner TIG (and Td) should be administered, even if it means a trip to the emergency department.

When should tetanus immune globulin (TIG) be administered as part of wound management?

TIG should be given as soon as possible after the injury. TIG is recommended for any wound other than a clean minor wound if the person's vaccination history is either unknown, or s/he has had less than a full series of 3 doses of Td vaccine.

How long after a wound occurs is tetanus immune globulin no longer recommended?

In the opinion of the tetanus experts at the National Immunization Program, for a person who has been vaccinated but is not up to date, there is probably little benefit in giving TIG more than a week or so after the injury. For a person believed to be completely unvaccinated, we would suggest increasing this interval to 3 weeks (i.e., up to day 21 post injury). Tetanus diphtheria toxoid should be given concurrently.

(continued on page 9)

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Immunization Action Coalition Hepatitis B Coalition

1573 Selby Avenue, Suite 234
St. Paul, MN 55104
phone: (651) 647-9009
fax: (651) 647-9131
e-mail: admin@immunize.org
website: www.immunize.org

VACCINATE ADULTS! is a publication of the Immunization Action Coalition. Everything herein is reviewed for technical accuracy by the Centers for Disease Control and Prevention (unless it is an opinion piece written by a non-CDC author). **VACCINATE ADULTS!** is written for physicians, nurses, and other health professionals in the public and private sectors. Circulation is now approximately 150,000. ISSN 1526-1824

Co-Editors:

Deborah L. Wexler, MD
Margaret Vaillancourt

Publication Assistants:

Lynn Bahta, RN, Linda Boerger-Johnson, Elyse Chadwick, Kim Klose

Artwork:

Leo, Isaac, and Sarah Wexler-Mann

Layout & Design:

Creative Training & Consulting

IAC EXPRESS is the e-mail announcement service of the Immunization Action Coalition. To subscribe, send an e-mail request to express@immunize.org with the word **SUBSCRIBE** in the "Subject:" field.

www.immunize.org is IAC's website. Visit often for our most current resources. Website design by Lantern Web™

The Immunization Action Coalition (IAC), a 501(c)3 nonprofit organization, works to increase immunization rates and prevent disease. IAC 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.

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Letters to the Editor...

AAFP recommends annual influenza vaccination to begin at age 50

The American Academy of Family Physicians (AAFP) has lowered the age at which it recommends routine influenza vaccination. Starting in the fall of 1999, AAFP recommends that all persons aged 50 years and older receive annual influenza vaccine.

Influenza outbreaks of varying severity occur every winter. In recent U.S. influenza epidemics, there were about 20,000 estimated influenza-associated deaths; the figure climbed to greater than 40,000 excess deaths in selected epidemics.

The fatality rate from influenza begins to rise at age 45 and is highest in persons who have chronic medical conditions, such as chronic obstructive lung disease, cardiovascular disease, and diabetes mellitus, particularly if they are elderly. Influenza has a higher case-fatality rate in middle-aged persons with chronic medical conditions than persons 65 years of age who are well.

Influenza vaccination of working adults reduces episodes of upper respiratory illness (URI) by 25 percent (105 vs. 140 episodes per 100 subjects), reduces sick leave from work due to URI by 43 percent (70 vs.

122 days per subjects), and reduces visits to physicians' offices for URI by 44 percent (31 vs. 55 visits per 100 subjects). In working adults aged 18 to 64, the cost savings were estimated at \$46.85 per person vaccinated (Nichol et al.: Effectiveness of vaccination against influenza in healthy, working adults. *NEJM* 1995;333:889-893).

Although many persons aged 50-64 have a high-risk condition such as asthma, diabetes mellitus, or heart disease, only a minority are vaccinated despite recommendations from the AAFP, CDC, and other groups that they should be vaccinated.

For these reasons, the AAFP has lowered the age for routine influenza vaccination to age 50 years. AAFP recognizes that physicians may require time and resources to incorporate this new recommendation into practice. The AAFP continues to recommend influenza vaccine for all persons who are six months of age and older with chronic cardiopulmonary, renal, metabolic, or immunosuppressive diseases.

—Richard K. Zimmerman, MD, MPH, FAAFP
Dept. of Family Medicine & Clinical Epidemiology
University of Pittsburgh Medical School



TWO

"handy" resources

For practical
immunization information

IAC EXPRESS

- Delivers vaccine information directly to your e-mail box
- SIGN UP: send an e-mail message to express@immunize.org and enter the word **SUBSCRIBE** in the "Subject:" field



www.immunize.org

- Immunization and hepatitis resources you can use (including VISs in 18 languages)

Vaccine highlights

Latest recommendations and schedules

Editors' note: The information on this page is current as of August 6, 1999.

Influenza vaccine news

On July 2, 1999, "Outbreak of Influenza A Infection Among Travelers – Alaska and the Yukon Territory, May–June 1999" was published in the *MMWR*. The article stated that as of June 29, 1999, CDC had received reports of 428 cases of acute respiratory infection in which influenza A virus was identified as the cause of illness.

On April 30, 1999, the ACIP recommendation, "Prevention and Control of Influenza" was published in the *MMWR*. The influenza statement, published every spring, reviews recommendations for the use of influenza vaccine such as which children and adults should be given influenza vaccine, when it should be administered, who needs more than one dose, vaccine side effects, antiviral treatment for influenza, etc. The recommendations include a discussion on the expanded use of influenza vaccine and new information on the epidemiology of influenza among travelers.

On June 1, 1999, the 1999–2000 Influenza Vaccine Information Statement (VIS) became available. A camera-ready copy is provided on page 5 of this publication. This VIS can also be downloaded from CDC's website: www.cdc.gov/nip/far.htm or IAC's website: www.immunize.org/vis or you can contact your state immunization program for a copy.

Varicella vaccine news

On May 28, 1999, "Prevention of Varicella – Update Recommendations" was published in the *MMWR*. The updated statement includes recommendations for the use of the vaccine following exposure and for outbreak control, and vaccination of adults and adolescents at high risk for exposure. These recommendations also provide new information on varicella vaccine postlicensure safety data.

On May 14, 1999, "Varicella-Related Deaths – Florida, 1998" was published in the *MMWR*. During 1998, the Florida Department of Health reported six fatal cases of varicella to CDC. Two deaths occurred in children and four in adults.

Lyme disease vaccine

On June 4, 1999, "Recommendations for the Use of Lyme Disease Vaccine" was published in the *MMWR*. The ACIP recommends that decisions regarding the use of Lyme disease vaccine be based on assessment of individual risk, taking into account geographic risk as well as a person's activities and behaviors relating

to tick exposure. Lyme disease vaccine is manufactured by SmithKline Beecham and is the only Lyme disease vaccine currently available in the United States. It is licensed for use in persons 15–70 years of age.

Rubella news

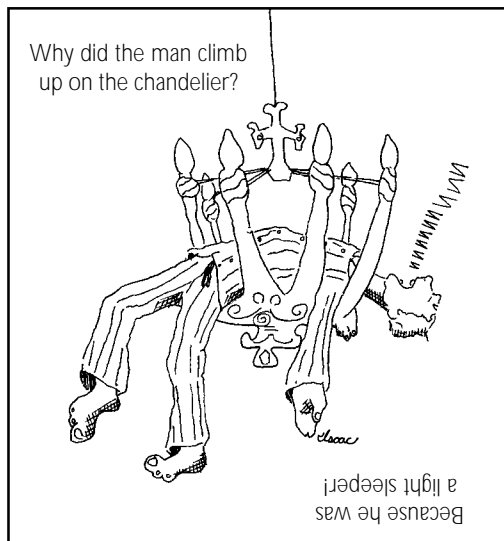
On July 9, 1999, "Rubella Outbreak – Westchester County, New York, 1997–1998" was published in the *MMWR*. The article reports that 95 confirmed rubella cases were identified in Westchester County from December 1997 through May 1998. This rubella outbreak occurred among young, unvaccinated Hispanic adults who were born outside the United States.

ACIP statement information

ACIP statements. No clinic should be without a set of these public health recommendations on vaccines which are published in the *MMWR*. Continuing education credits (CMEs, CEUs, CNEs) are available for reading and completing the brief tests found in the 1999 ACIP statements.

To get a complete set of ACIP statements or just the ones you want:

- Download individual statements from CDC's website: www2.cdc.gov/mmwr (You also can request a free electronic subscription to the *MMWR* at this site.)
- E-mail your request to nipinfo@cdc.gov
- Call CDC's Immunization Information Hotline: (800) 232-2522.
- Call your state's immunization program.
- Request them from your medical library.
- Call (781) 893-3800 to subscribe to the *MMWR*.



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Give these people influenza vaccine!

WHY? Influenza is expected to kill over 20,000 people this year in the United States.

The Advisory Committee on Immunization Practices (ACIP) of the U.S. Public Health Service recommends that persons in the following groups receive influenza vaccine every year. Check this list and make sure you offer influenza vaccine to all your patients who need it or want it.

ANY person who wishes to reduce the likelihood of becoming ill with influenza as long as the person is 6 months of age or older and has no contraindications to the vaccine

ALL persons 65 years of age and over

Persons with certain medical conditions

Any person (6 months of age or older) who is at increased risk for complications from influenza because of underlying medical conditions:

- residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- adults and children who have chronic disorders of the pulmonary or cardiovascular systems, including asthma
- adults and children who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications)
- persons aged 6 months to 18 years who are receiving long-term aspirin therapy and therefore might be at risk for developing Reye's syndrome after influenza
- women who will be in the second or third trimester of pregnancy (greater than or equal to 14 weeks gestation) during the influenza season
- pregnant women who have medical conditions that increase their risk for complications from influenza should be vaccinated before the influenza season—regardless of the stage of pregnancy

Health care workers

Health care workers and others in close contact with persons in high-risk groups should be vaccinated to decrease the risk of transmitting infection to persons at high risk:

- physicians, nurses, and other personnel in both hospital and outpatient-care settings
- employees of nursing homes and chronic-care facilities who have contact with patients or residents
- employees of assisted living and other residences for persons in high-risk groups
- persons who provide home care to people in high-risk groups

Household members of high-risk persons

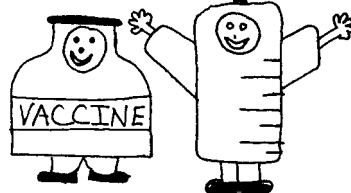
- household members (including children) of persons in high-risk groups listed in the left column

Other groups to consider

- persons infected with HIV
- travelers (the risk during travel depends on the time of year, the destination, and if traveling with others from places where influenza viruses are circulating)
- persons who provide essential community services should be considered for vaccination to minimize disruption of essential activities during influenza outbreaks
- students or other persons in institutional settings (e.g., those who reside in dormitories) should be encouraged to receive vaccine

Persons who should not be vaccinated

Inactivated influenza vaccine should not be administered to persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine.



Source: *Prevention and Control of Influenza—Recommendations of the Advisory Committee on Immunization Practices*, April 30, 1999, Vol. 48, No. RR-4.

Item #P2013 (8/99)

INFLUENZA VACCINE

WHAT YOU NEED TO KNOW

1999-2000

1 Why get vaccinated?

Influenza is a serious disease.

It is caused by a virus that spreads from infected persons to the nose or throat of others. The “influenza season” in the U.S. is from November to March or April each year.

Influenza can cause:

- fever
- sore throat
- cough
- headache
- chills
- muscle aches

People of any age can get influenza. Most people are ill with influenza for only a few days, but some get much sicker and may need to be hospitalized. Influenza causes thousands of deaths each year, mostly among the elderly.

Influenza vaccine can prevent influenza.

2 Influenza vaccine

The viruses that cause influenza change often. Because of this, influenza vaccine is updated each year by replacing at least one of the vaccine viruses with a newer one. This is done to make sure that influenza vaccine is as up-to-date as possible.

Protection develops about 2 weeks after the shot and may last up to a year.

3 Who should get influenza vaccine?

People at risk for getting a serious case of influenza or complications – or people in close contact with them – should get the vaccine. These include:

- Everyone 65 years of age or older.
- Residents of long term care facilities housing persons with chronic medical conditions.

- Anyone who has a serious long-term health problem with:
 - heart disease
 - lung disease
 - asthma
 - kidney disease
 - metabolic disease, such as diabetes
 - anemia, and other blood disorders
- Anyone whose immune system is weakened because of:
 - HIV/AIDS or other diseases that affect the immune system
 - long-term treatment with drugs such as steroids
 - cancer treatment with x-rays or drugs
- Anyone 6 months to 18 years of age on long-term aspirin treatment (who could develop Reye Syndrome if they catch influenza).
- Women who will be past the 3rd month of pregnancy during the influenza season.
- Physicians, nurses, family members, or anyone else coming in close contact with people at risk of serious influenza

Others who should consider getting influenza vaccine include:

- People who provide essential community services
- Travelers to the Southern hemisphere between April and September, or those traveling to the tropics any time
- Students and staff at schools and colleges, to prevent outbreaks
- Anyone who wants to reduce their chance of catching influenza

4 When should I get influenza vaccine?

The best time to get influenza vaccine is between September and December. A new shot is needed each year.

- People 9 years of age and older need **one shot**.
- Children less than 9 years old may need **two shots**, given one month apart.

Influenza vaccine can be given at the same time as other vaccines, including pneumococcal vaccine.

5 Can I get influenza even though I get the vaccine this year?

Yes. Influenza viruses change often, and they might not always be covered by the vaccine. But people who *do* get influenza despite being vaccinated often have a milder case than those who did not get the shot.

Also, to many people “the flu” is any illness with fever and cold symptoms. They may expect influenza vaccine to prevent these illnesses. But influenza vaccine is effective only against illness caused by influenza viruses, and not against other causes of fever and colds.

6 Some people should consult with a doctor before getting influenza vaccine.

Consult with a doctor before getting an influenza vaccination if you:

- 1) ever had a serious allergic reaction to *eggs* or a *previous dose of influenza vaccine*
or
- 2) have a history of Guillain-Barré Syndrome (GBS).

If you are moderately or severely ill at the time the shot is scheduled you should usually wait until you recover before getting influenza vaccine. Talk to your doctor or nurse about rescheduling the vaccination.

7 What are the risks from influenza vaccine?

A vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of a vaccine causing serious harm, or death, is extremely small. Almost all people who get influenza vaccine have no serious problems from it. ***The viruses in the vaccine are killed, so you cannot get influenza from the vaccine.***

Mild problems:

- soreness, redness, or swelling where the shot was given
- fever
- aches

If these problems occur, they usually begin soon after the shot and last 1-2 days.

Severe problems:

- Life-threatening allergic reactions are very rare. If they do occur, it is within a few minutes to a few hours after the shot.
- In 1976, swine flu vaccine was associated with a severe paralytic illness called Guillain-Barré Syndrome (GBS). Influenza vaccines since then have not been clearly linked to GBS. However, if there *is* a risk of GBS from current influenza vaccines it is estimated at 1 or 2 cases per million persons vaccinated – much less than the risk of severe influenza, which can be prevented by vaccination.

8 What if there is a moderate or severe reaction?

What should I look for?

- Any unusual condition, such as a high fever or behavior changes. Signs of a serious allergic reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness.

What should I do?

- Call a doctor, or get the person to a doctor right away.
- Tell your doctor what happened, the date and time it happened, and when the vaccination was given.
- Ask your doctor, nurse, or health department to file a Vaccine Adverse Event Reporting System (VAERS) form, or call VAERS yourself at **1-800-822-7967**.

9 How can I learn more?

- Ask your doctor or nurse. They can give you the vaccine package insert or suggest other sources of information.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-2522** (English)
 - Call **1-800-232-0233** (Español)
 - Visit the National Immunization Program’s website at <http://www.cdc.gov/nip>



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 - August 1999

Vaccine name and route	For whom it is recommended	Schedule	Contraindications and precautions (mild illness is not a contraindication)
<p>Influenza "flu shot"</p> <p>Give IM</p>	<ul style="list-style-type: none"> Adults who are 65 years of age or older. People 6mo-65yrs of age with medical problems such as heart disease, lung disease, diabetes, renal dysfunction, hemoglobinopathies, immunosuppression, and/or those living in chronic care facilities. People (≥ 6mo of age) working or living with at-risk people. All health care workers and those who provide key community services. Healthy pregnant women who will be in their 2nd 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. Travelers to areas where influenza activity exists or when traveling among people from areas of the world where there is current influenza activity. 	<ul style="list-style-type: none"> Given every year. October through November is the optimal time to receive an annual flu shot to maximize protection but the vaccine may be given at any time during the influenza season (typically December through March) or at other times when the risk of influenza exists. May be given anytime during the influenza season. May be given with all other vaccines but at a separate site. 	<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.
<p>Pneumococcal</p> <p>Give IM or SQ</p>	<ul style="list-style-type: none"> Adults who are 65 years of age or older. People 2yrs-65yrs of age who have chronic illness or other risk factors including chronic cardiac or pulmonary diseases, chronic liver disease, alcoholism, diabetes mellitus, CSF leaks, as well as persons living in special environments or social settings (including Alaska natives and certain American Indian populations). Those at highest risk of fatal pneumococcal infection are persons with anatomic or functional asplenia (including sickle cell disease), 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; administer if previous vaccination history is unknown. One-time revaccination is recommended 5 years later for people at highest risk of fatal pneumococcal infection or rapid antibody loss (e.g., renal disease) and for people ≥ 65 years if the 1st dose was given prior to age 65 and ≥ 5 years have elapsed since previous dose. May be given with all other vaccines but at a separate site. 	<ul style="list-style-type: none"> Previous anaphylactic reaction to this vaccine or to any of its components. Moderate or severe acute illness.
<p>Hepatitis B (Hep-B)</p> <p>Give IM</p> <p>Brands may be used interchangeably.</p>	<ul style="list-style-type: none"> High-risk adults including household contacts and sex partners of HBsAg-positive persons; users of illicit injectable drugs; heterosexuals with more than one sex partner in 6 months; men who have sex with men; people with recently diagnosed STDs; patients in hemodialysis units and patients with renal disease that may result in dialysis; 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. Note: Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure. All adolescents. <p>Note: In 1997, the NIH Consensus Development Conference, a panel of national experts, recommended that hepatitis B vaccination be given to all persons infected with hepatitis C virus.</p> <p>Ed. note: Do serologic screening for people who have emigrated from endemic areas. When HBsAg-positive persons are identified, offer them appropriate disease management. In addition, screen their household members and intimate contacts and, if found susceptible, vaccinate.</p>	<ul style="list-style-type: none"> Three doses are needed on a 0, 1, 6m schedule. Alternative timing options for vaccination include: 0, 2, 4 months 0, 1, 4 months There must be 4 wks between doses #1 and #2, and 8wks between doses #2 and #3. Overall there must be at least 4mo between doses #1 and #3. Schedule for those who have fallen behind: If the series is delayed between doses, do not start the series over. Continue from where you left off. May be given with all other vaccines but at a separate site. 	<ul style="list-style-type: none"> Previous anaphylactic reaction to this vaccine or to any of its components. Moderate or severe acute illness.
<p>Hepatitis A (Hep-A)</p> <p>Give IM</p> <p>Brands may be used interchangeably.</p>	<ul style="list-style-type: none"> People who travel outside of the U.S. (except for Northern and Western Europe, New Zealand, Australia, Canada, and Japan). People with chronic liver disease including people with hepatitis C virus infection; people with hepatitis B who have chronic liver disease; illicit drug users; men who have sex with men; people with clotting-factor 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 >40yrs of age as well as for younger persons in certain groups with a high prevalence of hepatitis A virus infection.</p>	<ul style="list-style-type: none"> Two doses are needed. The minimum interval between dose #1 and #2 is 6mo. If dose #2 is delayed, do not repeat dose #1. Just give dose #2. May be given with all other vaccines but at a separate site. 	<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.

Note: For specific ACIP immunization recommendations refer to the full statements which are published in the *MMWR*. To obtain a complete set of ACIP statements, call (800) 232-2522, or to access individual statements, visit CDC's website: www.cdc.gov/nip/publications/ACIP-list.htm

This table will be revised approximately once a year because of the changing nature of national immunization recommendations. Check our website www.immunize.org to make sure you have the most current copy.

The Coalition thanks Bill Atkinson, MD, MPH; Beth Bell, MD; Judith Coates, RN; Nancy Fix-Bloeser; Pierce Gardner, MD; Bernard Gonik, MD; Anne Kuettel, PHN; Ed Marcuse, MD, MPH; Margaret Morrison, MD; Linda Moyer, RN; Greg Poland, MD; Fred Ruben, MD; William Schaffner, MD; Jane Seward, MBBS; Ray Strikas, MD; Litjen Tan, PhD; Thomas Vernon, MD; and Rick Zimmerman, MD, MPH, for their comments on this table. Responsibility for errors or omissions lies with the editors. This table is published by the Immunization Action Coalition, 1573 Selby Avenue, St. Paul, MN 55104, (651) 647-9009. Item #P2011 (8/99)

Summary of Recommendations for Adult Immunization - side 2

Vaccine name and route	For whom it is recommended	Schedule	Contraindications and precautions (mild illness is not a contraindication)
Td (Tetanus, diphtheria) Give IM	<ul style="list-style-type: none"> All adolescents and adults. 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. A booster dose as early as 5 years later may be needed for the purpose of wound management, so consult ACIP recommendations. 	<ul style="list-style-type: none"> Booster dose every 10 years after completion of the primary series of 3 doses. For those who have fallen behind: The primary series is 3 doses: <ul style="list-style-type: none"> Give dose #2 four weeks after #1. #3 is given 6-12 months after #2. May be given with all other vaccines but at a separate site. 	<ul style="list-style-type: none"> Previous anaphylactic or neurologic reaction to this vaccine or to any of its components. Moderate or severe acute illness.
MMR (Measles, Mumps, Rubella) Give SQ	<ul style="list-style-type: none"> Adults born in 1957 or later who are ≥ 18 yrs of age (including those born outside the U.S.) should receive at least one dose of MMR if there is no serologic 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 colleges and other post high school educational institutions, and international travelers should receive a total of two doses. All women of childbearing age (i.e., adolescent girls and premenopausal adult women) who do not have acceptable evidence of rubella immunity or vaccination. <p>Note: Adults born before 1957 are usually considered immune but proof of immunity may be desirable for health care workers.</p>	<ul style="list-style-type: none"> One or two doses are needed. If dose #2 is recommended, give it no sooner than 4 wks after dose #1. May be given with all other vaccines but at a separate site. If varicella vaccine and MMR are both needed and are not administered on the same day, space them at least 4wks apart. 	<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.) Pregnancy or possibility of pregnancy within 3 months. HIV positivity is NOT a contraindication to MMR except for those who are severely immunocompromised. Immunocompromised persons due to cancer, leukemia, lymphoma, immunosuppressive drug therapy, including high-dose steroids or radiation therapy. 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. <p>Note: MMR is NOT contraindicated if a PPD test was done recently. PPD should be delayed for 4-6 weeks after an MMR has been given.</p>
Varicella (Var) "Chickenpox shot" Give SQ	<ul style="list-style-type: none"> All susceptible adults and adolescents should be vaccinated. Make special efforts to vaccinate susceptible persons who have close contact with persons at high risk for serious complications (e.g., health care workers and family contacts of immunocompromised persons) and susceptible persons who are at high risk of exposure (e.g., teachers of young children, day care employees, residents and staff in institutional settings such as colleges and correctional institutions, military personnel, adolescents and adults living with children, non-pregnant women of childbearing age, and international travelers who do not have evidence of immunity). <p>Note: People with reliable histories of chickenpox (such as self or parental report of disease) can be assumed to be immune. For adults who have no reliable history, serologic testing may be cost effective since most adults with a negative or uncertain history of varicella are immune.</p>	<ul style="list-style-type: none"> Two doses are needed. Dose #2 is given 4-8 weeks after dose #1. May be given with all other vaccines but at a separate site. If varicella vaccine and MMR are both needed and are not administered on the same day, space them at least 4 weeks apart. If the second dose is delayed, do not repeat dose #1. Just give dose #2. 	<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 cellular immunodeficiency including HIV/AIDS. Note: For those on high dose immunosuppressive therapy, consult ACIP recommendations regarding delay time. If blood products or immune globulin have been administered during the past 5 months, consult the ACIP recommendations regarding time to wait before vaccinating. Moderate or severe acute illness. <p>Note: Manufacturer recommends that salicylates be avoided for 6 weeks after receiving varicella vaccine because of a theoretical risk of Reye's syndrome.</p>
Polio IPV Give IM or SQ	<ul style="list-style-type: none"> Not routinely recommended for persons 18 years of age and older. <p>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. Previously vaccinated adults should receive one booster dose if traveling to polio endemic areas.</p>	<ul style="list-style-type: none"> Refer to ACIP recommendations regarding unique situations, schedules, and dosing information. May be given with all other vaccines but at a separate site. 	<ul style="list-style-type: none"> Refer to ACIP recommendations.
Lyme disease Give IM	<ul style="list-style-type: none"> Consider for persons 15-70 years of age who reside, work, or recreate in areas of high or moderate risk and who engage in activities that result in frequent or prolonged exposure to tick-infested habitat. Persons with a history of previous uncomplicated Lyme disease who are at continued high risk for Lyme disease. (See description in the first bullet.) See ACIP statement for a definition of high and moderate risk. 	<ul style="list-style-type: none"> Three doses are needed. Give at intervals of 0, 1, and 12mos. Schedule dose #1 (given in yr 1) and dose #3 (given in yr 2) to be given several weeks before tick season. See ACIP statement for details. Safety of administering Lyme disease vaccine with other vaccines has not been established. ACIP says if it must be administered concurrently with other vaccines, give it at a separate site. 	<ul style="list-style-type: none"> Previous anaphylactic reaction to this vaccine or to any of its components. Pregnancy. Moderate or severe acute illness. Persons with treatment-resistant Lyme arthritis. There are not enough data to recommend Lyme disease vaccine to persons with these conditions: immunodeficiency, diseases associated with joint swelling (including rheumatoid arthritis) or diffuse muscular pain, chronic health conditions due to Lyme disease.

Varicella

by William L. Atkinson, MD, MPH

I understand that varicella vaccine can be used in postexposure settings. How soon after exposure does the vaccine need to be given?

Varicella vaccine is effective in preventing chickenpox or reducing the severity of the disease if used within 3 days, and possibly up to 5 days, after exposure. ACIP now recommends the vaccine for use in susceptible persons following exposure to varicella.

Pneumococcal disease

by William L. Atkinson, MD, MPH

If influenza is recommended for health care workers to protect high-risk patients from getting influenza, why isn't pneumococcal vaccine also recommended?

Influenza virus is easily spread from health care workers to their patients, and infection usually leads to clinical illness. Pneumococcus is probably not spread from health care workers to their patients as easily as is influenza, and infection with pneumococcus does not necessarily lead to clinical illness. Host factors (such as age, underlying illness) are more important in the development of invasive pneumococcal disease than nasopharyngeal colonization with the organism.

When you're giving influenza vaccine to your patients this fall, don't forget to assess their need for pneumococcal vaccine as well as all other vaccines.

Pneumococcal vaccine isn't routinely recommended for people under 65 years of age with asthma. Influenza vaccine, however, is recommended. Could you please explain why this is the case?

Asthma, in the absence of obstructive lung disease, has not been identified as a risk factor for invasive pneumococcal disease.

Influenza

by William L. Atkinson, MD, MPH

For whom is influenza vaccine recommended?

ACIP recommends influenza vaccine for all persons 65 years of age or older, regardless of the presence of chronic illness. Other groups targeted for influenza vaccine include residents of long-term care facilities, pregnant women, and persons 6 months to 18 years of age receiving chronic aspirin therapy (because of the risk of Reye's syndrome following influenza infection).

Persons 6 months of age and older with chronic illness of many kinds should be vaccinated. These chronic illnesses include pulmonary illnesses, such as emphysema, chronic bronchitis, or asthma; cardiovascular illnesses, such as congestive heart failure; metabolic diseases, including diabetes mellitus; renal dysfunction; hemoglobinopathies, such as sickle cell disease; and immunosuppression, including HIV infection.

Groups that have contact with high-risk persons should be vaccinated. These groups include health care workers, employees of long-term care facilities, and household members of high-risk persons. These individuals may be younger and healthier, and more likely to respond to the vaccine than elderly persons. All health care providers should receive annual influenza vaccine. Groups that should be targeted include physicians, nurses, and other personnel in hospitals and outpatient settings who have contact with high-risk patients in all age groups, and providers of home care to high-risk persons (e.g., visiting nurses, volunteers).

Persons who provide essential community services and students or others in institutional settings (e.g., schools and colleges) may be considered for vaccination to minimize disruption of routine activities during outbreaks.

Foreign travelers may want to be vaccinated. The risk of exposure to influenza during foreign travel varies depending on season of travel, the mode of travel (e.g., increased risk during cruises), and destination. Influenza can occur throughout the year in the tropics. In the Southern Hemisphere, influenza activity peaks in April–September. If not vaccinated the previous fall/winter, persons (especially those in high-risk groups) preparing to travel to the tropics at any time of the year or to the Southern Hemisphere during April–September, should be considered for influenza vaccination before travel. The most current available vaccine should be used.

Because influenza vaccine might not be available during the summer in North America, physicians may want to consider advising their at-risk patients to carry anti-viral medications for either prophylaxis or treatment for influenza.

Finally, anyone who wishes to lessen his/her chance of acquiring influenza infection may be vaccinated.

Is flu vaccine contraindicated for people with lupus or fibromyalgia?

No.

Are there recommendations for the prevention of institutional outbreaks of influenza?

The most important factor in preventing outbreaks is annual vaccination of all occupants of the facility, and all persons in the facility who share the same air as the high-risk occupants. Groups that should be targeted include physicians, nurses, and other personnel in hospitals and outpatient settings who have contact with high-risk patients in all age

groups, and providers of home care to high-risk persons (e.g., visiting nurses, volunteers).

Lyme disease

by William L. Atkinson, MD, MPH

Who should receive Lyme disease vaccine?

Lymerix (SmithKline Beecham) is licensed for persons 15–70 years of age. Lyme disease vaccine should be considered for persons who reside, work, or recreate in areas of high or moderate risk during Lyme disease transmission season, and who engage in activities that result in frequent or prolonged exposure to tick-infested habitat. The vaccine may be considered for persons in areas of high or moderate risk but whose exposure to tick-infested habitats is neither frequent nor prolonged. ACIP recommendations for the use of Lyme disease vaccine were published in June 1999.

What is the dosing schedule for Lyme disease vaccine?

Maximum protection from the vaccine requires three doses. The first two doses are given a month apart, and the third dose should be given 11 months after the second. Ideally, all 3 doses should be completed one month prior to the anticipated tick-exposure. However, if your patient hasn't planned a year in advance, dose #1 is recommended 2 months before the anticipated tick exposure and dose #2 one month later. (Dose #3 should be given 11 months later.)

Is there a shorter dosing schedule for Lyme disease vaccine so that people can complete the immunization schedule in 6 months?

No. Studies are underway.

How effective is Lyme disease vaccine?

Vaccine efficacy of Lymerix against clinical Lyme disease in clinical trials was 49% after two doses and 76% after three doses.

Are booster doses needed every year?

The need for booster doses has not yet been determined. Studies are ongoing.

Is it safe to vaccinate a pregnant woman against Lyme disease?

The safety of Lyme disease vaccine administered during pregnancy has not been established. Vaccination of women who are known to be pregnant is not recommended.

(continued on page 10)



Hepatitis B

by Harold Margolis, MD, and Linda Moyer, RN

There are several physicians in our group who have no documentation of having received hepatitis B vaccine but are relatively sure they received the doses many years ago. What do we do now?

Unfortunately, inadequate documentation of vaccination is common. Even if these physicians think they may have been fully vaccinated, but it is not documented, the three-dose vaccination series should be administered and post-vaccination testing should be performed 1–2 months after the three-dose series. There is no harm in receiving extra doses of vaccine.

Some might suggest giving only one dose of vaccine followed by post-vaccination testing. Although 30% of previously unvaccinated healthy adults will have a protective antibody response after only one dose of vaccine, these individuals will not have the long-term protection afforded by the three-dose series.

Each organization (hospital, clinic, etc.) should develop policies or guidelines as to the documentation required to ensure valid hepatitis B vaccination. If policies are in place and documentation is not present, revaccination should be instituted. Care should always be taken to document vaccine lot, date, manufacturer, route, and vaccine dosages. Postvaccination testing results should also be documented, including the date testing was performed.

ATTENTION HEALTH PROFESSIONALS! Make sure you keep a record of your immunization history and your post-vaccination serology results.

A 28-year old received 3 doses of hepatitis B vaccine in 1995. Because his current sex partner is a hepatitis B carrier, he was tested for anti-HBs in April 1998 and the result was <10 mIU/mL. He received a booster dose in May 1998 and was tested one month later at which time his titer was 120 mIU/mL. Now his titer is <10. What should I do?

Nothing. This person was obviously a responder to hepatitis B vaccine in the past. Data show that adequate response (≥ 10 mIU/mL) to hepatitis B vaccine provides long-term immunologic memory that gives long-term protection. A person

exposed to the virus would mount an antibody response that would protect him/her from infection. Many people who receive a booster dose of vaccine will have a significant drop in antibody level within 6 months. The laboratory results noted above are normal and do not equate with non-protection. Only immunocompromised persons (e.g., hemodialysis patients, patients with AIDS) need to have booster doses of vaccine to maintain anti-HBs concentrations of at least 10mIU/mL in order to be protected against HBV infection.

HBV Clinical Trials

The National Institute of Allergy and Infectious Diseases has information about adult HBV clinical trials being conducted in the U.S. for the treatment of chronic HBV infection. For information, contact Lanette Sherrill, CRNP, MSN, at 205-934-2424.

My patient will be leaving for Southeast Asia in 15 days and will be staying for at least 6 months. I gave dose #1 of hepatitis B vaccine today. Can I give dose #2 in 15 days?

There is no clear guidance for this situation. The ACIP recommends that there be at least 4 weeks between dose #1 and dose #2 for routine hepatitis B vaccination. Approximately 30% of young healthy adults will develop protective antibody concentrations with one dose of vaccine. Some published studies suggest that shorter dosing intervals can be used (e.g., completion of the 3-dose series in 21 days), but only one study was performed using a hepatitis B vaccine licensed in the United States. If a shorter dosing interval is used, a fourth dose given 12 months after the first dose should be provided to assure long-term immunity.

Another option besides using a shorter dosing interval would be to have the person receive subsequent doses at his/her destination. In addition, persons who are not fully vaccinated should be counseled to avoid risks for acquiring HBV infection.

Hepatitis A

by Harold Margolis, MD, and Linda Moyer, RN

For whom is hepatitis A vaccine recommended?

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 15 years of age over a 5-year period.*
- Men who have sex with men.*

- Illicit drug users – injecting and non-injecting 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 (this does not include the routine health care worker).
- 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 those awaiting or those who have had a liver transplant.

* In outbreak situations when immune globulin (IG) is used, an opportunity should not be missed to give hepatitis A vaccine to persons in these groups at the same time that IG is administered.

A contact of a patient with hepatitis A was given hepatitis A vaccine at his clinic and the next day received immune globulin (IG) for postexposure prophylaxis at the health department. Was this interval between hepatitis A vaccine and IG acceptable?

Yes. IG given at the same time or near the same time as hepatitis A vaccine has no clinical impact on the immunogenicity of hepatitis A vaccine. ♦

Where to get adult immunization resources

Contact these organizations for immunization and/or hepatitis B resources:

Centers for Disease Control & Prevention

- Immunization Information Hotline: (800) 232-2522
- Immunization website: www.cdc.gov/nip
- Hepatitis Information Hotline: (888) 443-7232
- Hepatitis website: www.cdc.gov/hepatitis

Immunization Action Coalition (IAC)

Immunization and hepatitis B information
• (651) 647-9009 • www.immunize.org

IAC EXPRESS

Timely immunization and hepatitis news via e-mail. Sign up at www.immunize.org/express

Hepatitis Foundation International

• (800) 891-0707 • www.hepfi.org

Hepatitis B Foundation

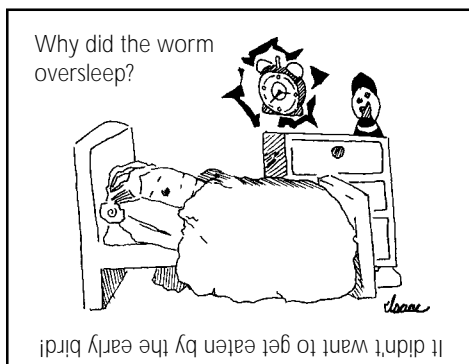
• (215) 489-4900 • www.hepb.org

Nat'l Coalition for Adult Immunization

• (301) 656-0003 • www.nfid.org/ncai

Health Care Financing Administration

• (816) 426-5233



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___ P4041	Shots for adults with HIV	\$1
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___ P4070	Chickenpox isn't just an itchy, contagious rash: <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Vietnamese	\$1/ea
___ P4080	Hepatitis A is a serious disease. Should you be vaccinated? <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Vietnamese	\$1/ea
___ P4090	Questions frequently asked about hepatitis B: <input type="checkbox"/> English <input type="checkbox"/> Spanish	\$1/ea
___ P4112	Every week thousands of sexually active people get hep B: <input type="checkbox"/> English <input type="checkbox"/> Spanish	\$1/ea
___ P4113	If you have sex, read this	\$1
___ P4115	Hepatitis B is 100 times easier to catch than HIV (a brochure for men who have sex with men)	\$1
___ P4116	You don't have to go all the way to get hepatitis A (a brochure for men who have sex with men)	\$1
___ P4120	If you are a hepatitis B carrier: <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Chinese <input type="checkbox"/> Hmong	\$1/ea
___ P4170	Hep B information for adults & children from endemic areas: <input type="checkbox"/> English <input type="checkbox"/> Cambodian <input type="checkbox"/> Chinese <input type="checkbox"/> Hmong <input type="checkbox"/> Korean <input type="checkbox"/> Laotian <input type="checkbox"/> Russian <input type="checkbox"/> Vietnamese	\$1/ea
Materials for your clinic staff		
___ P2011	REVISED! Summary of rules for adult immunization	\$1
___ P2013	NEW! Give these people influenza vaccine	\$1
___ P2015	Pneumococcal vaccine: who needs it, who needs it again?	\$1
___ P2020	Vaccine handling, storage, and transport	\$1
___ P2021	Ask the experts: compilation of past immunization Q & A	\$5
___ P2023	Vaccine administration record for adults	\$1
___ P2027	It's federal law! You must give VISs	\$1
___ P2045	Tips to improve your clinic's immunization rates	\$1
___ P2058	Vaccinate don't vacillate! Varicella kills	\$1
___ P2060	Hospitals & doctors sued for failing to immunize	\$1
___ P2081	Recommended dosages of hep A & hep B vaccines	\$1
___ P2100	No risk?? No way!!	\$1
___ P2109	Hepatitis B and the health care worker	\$1
___ P2110	Basic knowledge about hepatitis B	\$1
___ P2112	Basic facts about adult hepatitis B	\$1
___ P2164	Management of chronic hepatitis B	\$5
___ P2180	Tracking hepatitis B patients and contacts	\$1
___ P4065	Screening questionnaire for adult immunization: <input type="checkbox"/> English <input type="checkbox"/> Spanish	\$1/ea
___ P4140	Sample letter explaining hep B test results to patients	\$1
Videos, posters, and slides for your clinic		
___ V2010	Video "How to Protect Your Vaccine Supply"	\$10
___ V2020	Video "Vaccine Administration Techniques"	\$10
___ O2020	Poster "Immunizations...not just kids' stuff,"	10/\$1
___ S3010	Slides 31 slides of vaccine-preventable diseases, script included: <input type="checkbox"/> English <input type="checkbox"/> Spanish	\$25
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