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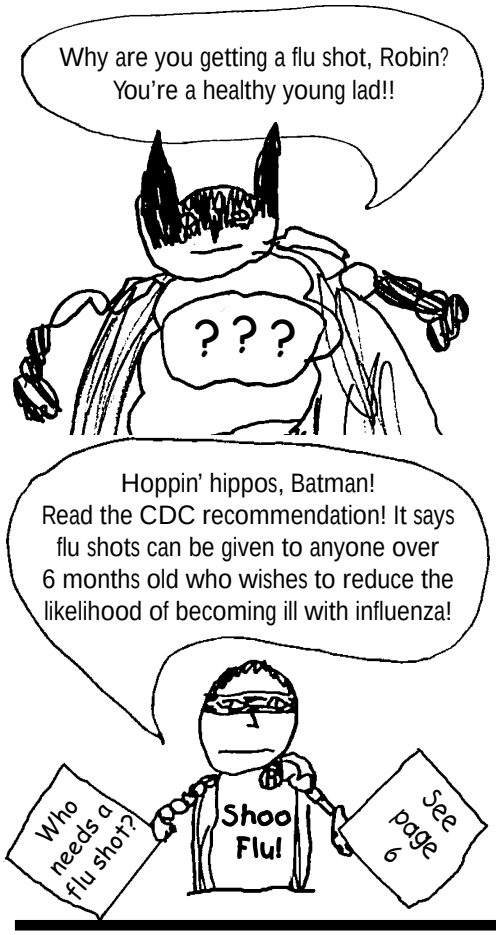
NEEDLE TIPS

and the Hepatitis B Coalition News

Published by the Immunization Action Coalition for individuals and organizations concerned about vaccine-preventable diseases.



WHAT'S ON THE INSIDE:

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, serve as CDC liaisons to the Coalition. Ms. Moyer is an epidemiologist at the Hepatitis Branch.

Immunization questions?

- E-mail nipinfo@cdc.gov
- Call your state health department (phone numbers on page 23)
- Call CDC's Immunization Information Hotline at (800) 232-2522

Thimerosal

by William L. Atkinson, MD, MPH

What is thimerosal and why has it been in the news recently?

Thimerosal is an effective preservative that contains ethyl mercury. It has been used in small amounts to reduce the chance of bacterial growth in vaccines and other products since the 1930s. On July 9, 1999, the U.S. Public Health Service (USPHS) and the American Academy of Pediatrics (AAP) released a joint statement urging vaccine manufacturers to eliminate or reduce the mercury content of their vaccines as expeditiously as possible.

Does the presence of thimerosal in vaccines present any danger to children?

From 1990 through 1998, 45 reports alleging adverse reactions due to thimerosal were received by the Vaccine Adverse Events Reporting System (VAERS). Most of these reports concerned allergic reactions. Although thimerosal contains ethyl mercury, there is no evidence that mercury received through vaccines is harmful to a child.

Are vaccines available that do not contain thimerosal?

Yes. For routine childhood vaccines there is at least one brand of each vaccine that does not contain thimerosal. A complete list of vaccines that do and do not contain thimerosal can be obtained from the Immunization Action Coalition's website at www.immunize.org (The information on this table is current as of 8/11/99.) USPHS agencies including the Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC) and the AAP are working with vaccine manufacturers to reduce or eliminate the use of thimerosal in vaccines.

(continued on page 15)

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NEEDLE TIPS

"To keep at your fingertips"

Immunization Action Coalition
Hepatitis B Coalition

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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.

Letters to the Editor...

Editors' note: IAC welcomes letters of interest to readers. Please send your letters by mail, fax, or e-mail to the address in the box at the left.

Chinese physician urges continuation of newborn hepatitis B vaccination

Amidst the current turmoil about hepatitis B vaccine and thimerosal, I urge your readers to maintain perspective and continue vaccinating our children against hepatitis B virus (HBV) infection — especially those at high risk such as Asians, Pacific Islanders, and others whose parents come from moderately and highly endemic areas of the world.

The Centers for Disease Control and Prevention's recent recommendation to remove thimerosal from hepatitis B vaccine was made to safeguard our children by making a safe vaccine even safer. Unfortunately, panicked reactions now threaten to undermine years of progress in reducing acute and chronic HBV infections as well as long-term sequelae of chronic liver disease and cancer.

As a Chinese immigrant, I have seen too many relatives, friends, and community members suffer and die from HBV-related liver disease. Despite perinatal screening and prophylaxis, there are vaccine failures and horizontal transmission in high-prevalence immigrant communities.

Several studies around the country have documented chronic HBV infection rates as high as 25 percent in young immigrant Asians. The risk of transmission from an HBsAg-positive father or other household member is not small. Since the risk of developing a chronic HBV infection is higher the younger the age, protection should be provided as early as possible.

As a family physician who cares for pregnant mothers and their children, I have seen the significant difference that newborn hepatitis B vaccination has made in series completion. I cannot wait for the day when all the vaccination efforts succeed in breaking the cycle of infection and tragedy; when I never again will have to comfort an anguished patient trying to come to grips with his or her own or a relative's chronic HBV infection; when I never again will have to hold the hand and look into the sallow, emaciated face of a patient dying from liver cancer.

Clinicians must keep several facts in perspective. Thimerosal has been safely used in biologics and vaccines since the 1930s. Aggressive universal newborn hepatitis B vaccination programs began in Taiwan, Hong Kong, and in other countries 10 years before the United States. Other commonly used vaccines, such as DTaP and Hib, contain twice the amount of thimerosal as found in single-antigen hepatitis B vaccines.

Hepatitis B vaccination of newborns prior to hospital discharge should continue to be the preferred policy. There should be no exceptions for infants born to HBsAg-positive mothers or for infants whose mothers' HBsAg status is unknown. I also believe, because of horizontal transmission and risk of early childhood infection, that all children born to HBsAg-negative mothers who are from moderately and highly endemic areas of the world such as Asia, the Pacific Islands, and sub-Saharan Africa need to be vaccinated as newborns. Parents of low-risk infants wishing to delay vaccination should be encouraged to have their infant vaccinated at the two-month, well-child visit and not wait until the six-month visit.

—Anthony L-T Chen, MD
Int'l Community Health Services, Seattle, WA
Past-Chair, National Task Force on Hepatitis B Immunization, Focus on Asians & Pacific Islanders

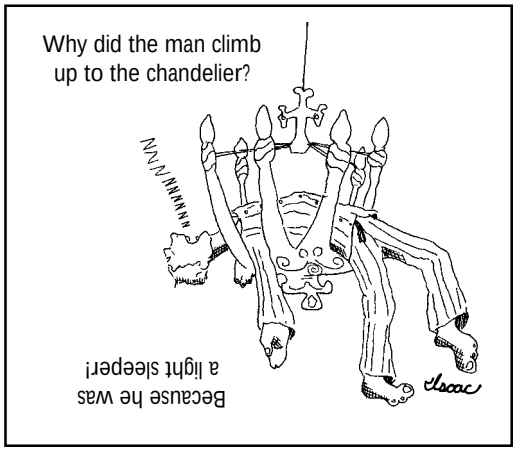
ACIP says goodbye to OPV

On June 17, 1999, the Advisory Committee on Immunization Practices (ACIP) voted 10-0 to use only inactivated polio vaccine (IPV) for routine prevention of paralytic polio in the United States. The recommendation, which was published as a "Notice to Readers" in the July 15, 1999, issue of the *MMWR*, reads in part:

"The ACIP recommended an all-IPV schedule for routine childhood polio immunization in the United States. As of January 1, 2000, all children should receive four doses of IPV at 2 months, 4 months, 6–18 months, and 4–6 years."

This vote represents the beginning of the end of an almost 50-year odyssey of polio vaccines in this country. The story began in 1955 with the introduction of the first inactivated polio vaccine ("Salk" vaccine). At that time about 10,000 to 15,000 people were paralyzed by poliovirus every year. The Salk vaccine was an important first step in polio prevention, but was only about 70 percent effective in preventing paralysis caused by type 1 poliovirus—the serotype that most commonly caused paralysis. By 1960, after five years of IPV use, it was estimated that the incidence of paralysis had decreased to about 1,000 cases per year. However, several hundred of those paralyzed had received at least two doses of IPV. Also at that time, immunization rates in the United States were low, only about 60 percent of children were fully immunized with IPV.

So, the United States was anxious for better vaccine. That vaccine came in the form of the oral polio vac-



cine (OPV) developed by Albert Sabin. OPV, first introduced in the United States in 1961, was better than IPV at inducing protective immunity, easily administered, and caused contact immunity. Given our low rates of immunization, contact immunity was desirable (similar to the situation in some developing countries today). As a result of the use of OPV, the United States eliminated wild-type poliovirus by 1979.

However, our choice of OPV included a Faustian bargain. The type 3 poliovirus contained in OPV confers immunity and doesn't cause paralysis, but it differs from neurovirulent, natural poliovirus by only 6 base pairs. Because OPV replicates well in the human intestine, it has a chance to actually mutate back to wild-type virus and cause paralysis that is indistinguishable from natural polio (termed vaccine-associated paralytic polio or VAPP). Four to 10 children or their contacts are paralyzed by OPV every year. Indeed, since 1979, the only poliovirus-induced paralysis in this country has been that caused by OPV.

Fortunately, three things have changed since the early 1960s. First, our immunization rates for polio have increased from 60 percent to about 90 percent. Second, taking advantage of recent advances in protein chemistry and ion-exchange chromatography, the inactivated vaccine developed by Salk has been replaced by an "enhanced" IPV. This vaccine contains greater quantities of poliovirus proteins than Salk's IPV, and induces protection against polio after two doses that is virtually indistinguishable from OPV. Third, the incidence of polio in the world has dramatically decreased in the last several years.

Recently, we were reassured that switching to a sequential polio vaccine schedule, where the first two doses of vaccine are IPV, does not decrease immunization rates. With this knowledge, we can now safely move to an all-IPV schedule and finally eliminate the last few cases of paralysis caused by poliovirus from this country.

—Paul A. Offit, MD
Chief, Infectious Diseases
Children's Hospital of Philadelphia

Eds.' note: Dr. Offit chairs the ACIP working group that is updating the polio vaccine recommendations.

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* 1995:3333:889–893).

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

NEEDLE TIPS is a valuable teaching tool says national nurses' board

The National Certification Board of Pediatric Nurse Practitioners and Nurses (NCBPNP/N) is proud to support the clinical education efforts of the Immunization Action Coalition (IAC). As a primary source for current news and clinical information related to vaccine-preventable diseases, this newsletter is of special benefit to practicing pediatric nurses and PNPs as they plan and implement care to meet the health promotion needs of children and their families.

We are pleased that the IAC has agreed to provide this special resource to all pediatric nurses and pediatric nurse practitioners certified through the NCBPNP/N. We hope that all pediatric nurses will share this valuable information with other members of the health care team and recommend this free resource to all pediatric nursing educational programs.

—Janet S. Wyatt, PhD, RN, CRNP
Executive Director, The National Certification Board of Pediatric Nurse Practitioners and Nurses

Join the Coalition today!

Vaccine highlights

Latest recommendations and schedules

The next ACIP meetings...

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

The Advisory Committee on Immunization Practices (ACIP) is a committee of 10 national experts that provides advice and guidance to CDC regarding the most appropriate use of vaccines and immune globulins. ACIP meetings are held three times a year in Atlanta, GA, and are open to the public. The next meetings will be held on October 20–22, 1999, and February 16–17, 2000.

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 (phone numbers on page 23).
- Request them from your medical library.
- Call (781) 893-3800 to subscribe to the *MMWR*.

The ACIP statements published in 1999 are:

- *Lyme Disease Vaccine Recommendations (6/4/99)*
- *Updated Varicella Recommendations (5/28/99)*
- *Combination Vaccines (5/14/99)*
- *Prevention and Control of Influenza (4/30/99)*
- *Rotavirus Vaccine (3/19/99)*
- *Human Rabies Prevention – U.S. (1/8/99)*

Hooray for vaccine news!

On April 2, 1999, "Achievements in Public Health, 1900–1999: Impact of Vaccines Universally Recommended for Children – United States, 1990–1998" and "Ten Great Public Health Achievements – United States, 1900–1999" were published in the *MMWR*. If you need a boost to realize just how important vaccines are in reducing disease and death, then read these articles!

Rotavirus vaccine news

On July 16, 1999, an article entitled "Intussusception Among Recipients of Rotavirus Vaccine – United States, 1998–1999" was published in the *MMWR*. From September 1, 1998, to July 7, 1999, 15 cases of intussusception (a type of bowel obstruction that occurs when the bowel folds in on itself) among infants who had received rotavirus vaccine were reported to the Vaccine Adverse Event Reporting System (VAERS). The article summarizes the clinical and epidemiologic features of these cases and preliminary data from ongoing studies of intussusception and rotavirus vaccine.

On July 15, 1999, CDC announced that health care providers and parents should postpone use of the rotavirus vaccine for infants, at least until November 1999. This decision was based on early surveillance reports of intussusception among some infants who had received rotavirus vaccine.

On March 19, 1999, "Rotavirus Vaccine for the Pre-vention of Rotavirus Gastroenteritis Among Children," the ACIP recommendations for rotavirus vaccine use in infants, was published in the *MMWR*.

Thimerosal and vaccines

On July 9, 1999, "Thimerosal in Vaccines: A Joint Statement of the American Academy of Pediatrics (AAP) and the U.S. Public Health Service (USPHS)" was published in the *MMWR* as a "Notice to Readers." This statement urges vaccine manufacturers to eliminate or reduce the thimerosal content of their vaccines as expeditiously as possible.

Thimerosal is an effective preservative that contains ethyl mercury. It has been used in small amounts to reduce the chance of bacterial growth in vaccines and other products since the 1930s. Manufacturers agree that thimerosal content in vaccines should be removed as soon as possible. However, the USPHS and AAP continue to recommend that all children should be immunized against the diseases indicated in the recommended childhood immunization schedule because the risk of not vaccinating children far outweighs the unknown and much smaller risk, if any, of exposure to thimerosal-containing vaccines during the first six months of life.

For the most up-to-date information on thimerosal and vaccines, call CDC's Immunization Hotline at (800) 232-2522, or visit CDC's website: www.cdc.gov/nip

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.

(continued on page 5)

On June, 1, 1999, the 1999–2000 Influenza Vaccine Information Statement (VIS) became available. A camera-ready copy is on page 7 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 (phone numbers are on page 23).

Polio vaccine news

On July 16, 1999, "Revised Recommendations for Routine Poliomyelitis Vaccination" was published as a "Notice to Readers" in the *MMWR*. The ACIP recommends the use of an all-IPV schedule for routine childhood polio vaccination in the United States by January 1, 2000. All children will need to get IPV at 2, 4, 6–18 months, and 4–6 years of age. OPV should only be used for the following special circumstances: 1) mass vaccination campaigns to control outbreaks of paralytic polio; 2) unvaccinated children who will be traveling in <4 weeks to areas where polio is endemic; and 3) children of parents who do not accept the recommended number of vaccine injections. These children may receive OPV only for doses #3 and/or #4, and only after the clinician has discussed the risk of vaccine-associated paralytic polio with the parent or caregiver.

Hepatitis B vaccine & HBIG

On June 16, 1999, the ACIP voted to approve the revised statement, "Hepatitis B Virus Infection: A Comprehensive Immunization Strategy to Eliminate Transmission in the U.S." The anticipated publication date is late fall 1999.

On March 24, 1999, the FDA licensed Nabi-HB, a hepatitis B immune globulin (HBIG) manufactured by Nabi. Nabi-HB is indicated for the treatment of acute exposure to HBsAg, perinatal exposure of infants born to HBsAg-positive mothers, sexual exposure to HBsAg-positive persons, and household exposure of infants to persons with acute HBV infection.

Varicella vaccine news

On May 28, 1999, "Prevention of Varicella – Update Recommendations" was published in the *MMWR*. In the updated statement, the ACIP recommends that states should establish child care and school entry varicella vaccine requirements. Also included are recommendations for the use of the vaccine following exposure and for outbreak control, use of the vaccine for some children infected with the human immunodeficiency virus, 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.

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.

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. Lymerix 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.

Combination vaccine news

On May 14, 1999, "Combination Vaccines for Childhood Immunization," the joint recommendations of the ACIP, AAP, and the American Academy of Family Physicians, was published in the *MMWR*. These recommendations provide information concerning the optimal use of existing and anticipated parenteral combination vaccines, along with relevant background, rationale, and discussion of questions raised by the use of these products.

VISs (vax info statements)

June 1, 1999, was the date by which health professionals must be using the most current Vaccine Information Statements. Check the dates in the lower right hand corner of the VISs you are using to make sure you have the most current versions.

Following is a table of the most current VISs and the date that is at the bottom of each one. Use only the current ones and recycle your old ones.

Current VISs

DTaP/DT/DTP	8/15/97	MMR	12/16/98
Td	6/10/94	varicella	12/16/98
polio	2/1/99	Hib	12/16/98
hepatitis A	8/25/98	hepatitis B	12/16/98
pneumococcal	7/29/97	influenza	6/1/99

VISs and the instructions on how to use them can be obtained from CDC's website: www.cdc.gov/nip/far.htm or from your state health department (phone numbers on page 23). The VISs, in 18 languages, and the VIS instruction sheet are available on IAC's website: www.immunize.org/vis

VFC coverage in 1999

Vaccines For Children (VFC) provides free vaccines to providers for children who meet the VFC-eligibility guidelines. If you would like information on how to become a VFC provider, contact your state VFC coordinator (phone numbers are on page 23).

As of August 1, 1999, the age guidelines (for children who are VFC-eligible) are as follows:

- Children 1 through 18 years of age are eligible to receive two doses of MMR vaccine and one or two doses of varicella vaccine (depending on the child's age at the time of vaccination).
- Children 0 through 18 years of age are eligible to receive three doses of hepatitis B vaccine.
- Children 11 through 18 years of age are eligible to receive a Td vaccine booster if at least 5 years have elapsed since the previous dose.
- Children 2 through 18 years of age are eligible to receive two doses of hepatitis A vaccine if they live in one of the eleven high-risk states: AK, AZ, CA, ID, NV, NM, OK, OR, SD, UT, and WA. Hepatitis A vaccine may be available for use in these moderate-risk states: AR, CO, MO, MT, TX, and WY. Hepatitis A vaccine may also be available in communities with increased rates of hepatitis A infection. Check with your local or state health department for more information.
- Children 0 through 18 years of age who need routine or catch-up doses are eligible to receive DTaP, DT, Td, polio, and Hib vaccines.
- Children 6 months of age through 18 years of age are eligible for influenza vaccine if they are in an ACIP-recommended risk group.
- Children 2 through 18 years of age are eligible for pneumococcal vaccine if they are in an ACIP-recommended risk group.

NOTE: Some states have used state funding to expand these age limits. Check with your state immunization program (phone numbers on page 23). ♦

What do you get when you cross a cocker spaniel, a poodle, and a rooster?

A cock-a-poodle-doo!

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

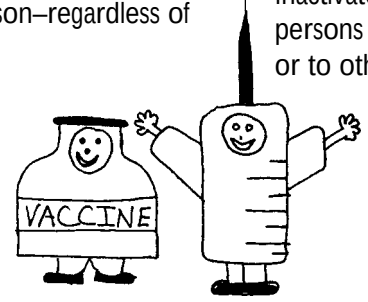
☐ travelers (the risk during travel depends on the time of year, the destination, and if traveling with others from places where influenza viruses are circulating)

☐ 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**

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention
National Immunization Program

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)
Influenza *"flu shot"* Give IM	• 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.	• 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.	• Previous anaphylactic reaction to this vaccine, to any of its components, or to eggs. • Moderate or severe acute illness.
Pneumococcal Give IM or SQ	• 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.	• 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.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness.
Hepatitis B (Hep-B) Give IM Brands may be used interchangeably.	• 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. 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. *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.*	• 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.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness.
Hepatitis A (Hep-A) Give IM Brands may be used interchangeably.	• 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. Note: Prevaccination 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.	• 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.	• 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	• 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.	• 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: • 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.	• 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	• 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. Note: Adults born before 1957 are usually considered immune but proof of immunity may be desirable for health care workers.	• 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.	• 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. 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.
Varicella (Var) *"Chickenpox shot"* Give SQ	• 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). 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.	• 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.	• 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. Note: Manufacturer recommends that salicylates be avoided for 6 weeks after receiving varicella vaccine because of a theoretical risk of Reye's syndrome.
Polio IPV Give IM or SQ	• Not routinely recommended for persons 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. Previously vaccinated adults should receive one booster dose if traveling to polio endemic areas.	• Refer to ACIP recommendations regarding unique situations, schedules, and dosing information. • May be given with all other vaccines but at a separate site.	• Refer to ACIP recommendations.
Lyme disease Give IM	• 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.	• 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.	• 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.

What's your state doing?

Empty boxes in this table mean "NO"

Check out what states are doing to protect schoolchildren from hepatitis B virus infection and varicella disease

State	Hep B prenatal screening law?	Any hep B childhood vaccination law?	Hep B daycare law? Who is covered &/or date implemented.	Hep B kindergarten &/or 1st grade law? Date implemented.	Hep B middle school law? Date implemented.	Varicella vaccine or immunity law for daycare entry? Date implemented.	Varicella vaccine or immunity law for school entry? Date implemented. For whom?
AL							
AK							
AZ	yes	yes	yes 97	yes 97			
AR	yes	yes	yes 97				
CA	yes	yes	yes 97	yes 97	yes 9/99		
CO		yes	yes 97	yes 97	yes 97	yes 9/00: ≥18 mos of age	yes 9/00: K
CT		yes	yes 95	yes 96			
DE		yes		yes 9/99	yes 9/99		
DC		yes	yes 97	yes 97	yes 97	yes 97	yes 97: pre K - 9th
FL	yes	yes		yes 98	yes 97		yes 9/01: K
GA		yes	yes 97	yes 97			
HI	yes	yes	yes 98	yes 98			
ID		yes	yes, born after 11/91	yes, born after 11/91	yes, born after 11/91		
IL	yes	yes	yes 98		yes 98 (grade 5)		
IN		yes		yes 7/99			
IA		yes		yes 1/99			
KS	yes						
KY	yes	yes	yes 98	yes 98			
LA	yes	yes	yes 98	yes 98			
ME							
MD		yes	yes 95	yes 9/01		yes 98	yes 9/00: pre K
MA	yes	yes	yes 92	yes 96	yes 9/99	yes 98	yes 9/99: K and 7th
MI	yes	yes	yes 97	yes 1/00		yes 1/00	yes 1/02: school enterers
MN		yes		yes 9/00	yes 9/01		
MS		yes		yes 8/99			
MO	yes	yes	yes 95	yes 96	yes 9/99		
MT							
NE		yes		yes 7/99	yes 7/00		
NV							
NH		yes	yes 96	yes 96			
NJ							
NM		yes	yes 9/00	yes 9/02	yes 9/99		
NY	yes	yes	yes 95	yes 98	yes 9/00		
NC	yes	yes	yes, born after 7/94	yes, born after 7/94	yes, born after 7/94		
ND	yes	yes		yes 9/00			
OH		yes	yes 8/99	yes 8/99			
OK		yes	yes 99	yes 97	yes 97	yes 98	yes 98: K
OR		yes	yes 98	yes 98	yes 9/00	yes 9/00	yes 9/00: K and 7th
PA		yes		yes 97			
RI		yes	yes 98	yes 8/99	yes 8/00	yes 1/99	yes 8/99: K; 9/00: 1st & 7th
SC		yes	yes 94	yes 98	yes 98		
SD							
TN	yes	yes	yes 98	yes 7/99		yes 9/99	
TX	yes	yes	yes 98	yes 98	yes 8/00	yes 8/00	yes 8/00: K & middle sch.
UT		yes		yes 7/99			
VT		yes			yes 8/99		
VA	yes	yes	yes 94	yes 94	yes 7/01	yes, born on or after 1/97	yes, born on or after 1/97
WA		yes	yes 97	yes 97			
WV	yes						
WI		yes	yes 97	yes 97	yes 97		
WY		yes	yes, born after 1/96	yes 8/99	yes 98		

This table was compiled by the Immunization Action Coalition. If you have any updated information concerning this table, please call (651) 647-9009.

Unprotected people...

Infant dies of congenital rubella syndrome

The Immunization Action Coalition collects stories and case reports such as the one below of people who have suffered or died from vaccine-preventable diseases. Stories and case reports can help get out an urgent message about the importance of vaccination. Please help! Send us your stories, news items, or case reports about ANY vaccine-preventable disease. E-mail this information to the Immunization Action Coalition to <deborah@immunize.org> or fax your information to (651) 647-9131.

Don't miss the diagnosis of congenital rubella syndrome!

Classical findings include congenital heart defects, cataracts, and hearing loss

Rubella infection is usually a mild rash illness; however, during the first trimester of pregnancy, it can result in miscarriage, stillbirth, or an infant with a pattern of birth defects (i.e., congenital rubella syndrome [CRS]) as described in the following case report.

Case report: On April 15, 1999, a case of CRS was reported to the Arizona Department of Health Services in a 1½-month-old Hispanic infant. The infant was born prematurely at 34 weeks gestation. Complications noted at birth included pulmonary valve stenosis, patent ductus arteriosus, thrombocytopenia, congenital cataracts, intracranial calcifications, and probable hearing deficits. The 19-year-old foreign-born mother (gravida 1, para 0) had been living in the United States for two years prior to her pregnancy. She first obtained prenatal care at four months gestation, at which time she was rubella immune. She reported no rash during the first four months of pregnancy.

This is the fifth case of CRS reported in Arizona since 1994. In all five cases, the mothers were unimmunized, Hispanic, and foreign born.

Although the neonate's rubella IgM test was positive shortly after birth, cytomegalovirus was suspected as the cause of the infant's congenital complications, in part due to the mother's rubella immune status.*

There was a three-week delay in reporting this CRS case to the county health department. The Maricopa County Department of Public Health immunized household contacts immediately after receiving this report. The day following vaccination, two of the household contacts, who had recently moved into the home and participated in the care of the infant, developed rubella-like rash. The duration between the receipt of vaccine and the rash onset was too short for the rash to be caused by the vaccine. These contacts, however, could have been infected by the infant since infants with CRS can shed rubella virus for up to one year and can be the source for rubella outbreaks.

The infant died on June 9, 1999. The cause of death was listed as acute pulmonary hemorrhage as a consequence of complex congenital heart disease.

This is the fifth case of CRS reported in Arizona since 1994. In all five cases, the mothers were unimmunized, Hispanic, and foreign born.

Susan Goodykoontz
Epidemiology Specialist
Arizona Department of Health Services

*Due to the timing of the mother's routine prenatal serology, it could not be determined when her infection in pregnancy occurred. The infant's defects, however, were consistent with rubella infection during the first trimester of pregnancy.

Rubella & CRS are vaccine preventable

Since the licensure of the rubella vaccine in 1969 in the United States, the incidence of rubella and congenital rubella syndrome (CRS) has decreased substantially. Reported rubella and CRS cases have been at record low levels since the mid 1990s.

Most of the reported rubella cases in the United States since the mid 1990s, have occurred among young Hispanic adults who were born in countries either without a national rubella vaccination program or where such programs were recently implemented. Since 1996, several rubella outbreaks have occurred in work places such as meat packing plants where a majority of the employees are foreign born.

Almost all countries in the world have measles vaccination programs; however, in a World Health Organization survey of member countries in 1996, only 78 (36%) of the 214 member countries had national rubella vaccination programs representing only 20% of the global population. Because both are rash illnesses, many people confuse rubella and measles. In several of the recent outbreaks, many people thought they had been vaccinated for rubella, but instead they had been vaccinated for measles.

Susan E. Reef, MD
Leader, Mumps Rubella Team
National Immunization Program, CDC

Action you can take to prevent rubella and the subsequent tragic consequences of CRS

- **Vaccinate persons who do not have documented proof of immunity to rubella.** In the United States, children should receive the first dose of MMR vaccine at age 12–15 months and the second dose at 4–6 years of age. Persons who are born after 1957 and who do not have a medical contraindication should receive at least one dose of MMR vaccine unless they have documentation of vaccination with at least one dose of measles-, rubella-, and mumps-containing vaccine.
- **Make sure your foreign-born patients are vaccinated.** Rubella and CRS are at record low levels in the United States, primarily due to the success of the rubella vaccination program. However, rubella vaccination programs have only recently been introduced in many developing countries and many foreign-born persons may not be immune to rubella.
- **Think rubella when you see suspicious rashes.** Even though rubella is at record low levels, it still is introduced and it spreads in the United States. If someone presents with a rash illness that may be consistent with rubella or measles, rubella needs to be ruled out. Obtaining a rubella-specific IgM blood test is critical.
- **Think CRS when you see ANY congenital malformation consistent with CRS.** CRS is rare in the United States, however, it does occur. In an infant born with ANY congenital malformation consistent with CRS, do not assume that a positive rubella titer drawn during pregnancy rules out CRS. If you suspect CRS, obtain a rubella-specific IgM blood test.
- **Report all cases of rubella and CRS to your local or state health department.** Once a case of rubella or CRS has been identified, the health department must be contacted immediately. All cases should be investigated and control measures implemented.

SE Reef, MD

TWO "handy" resources

For practical immunization information

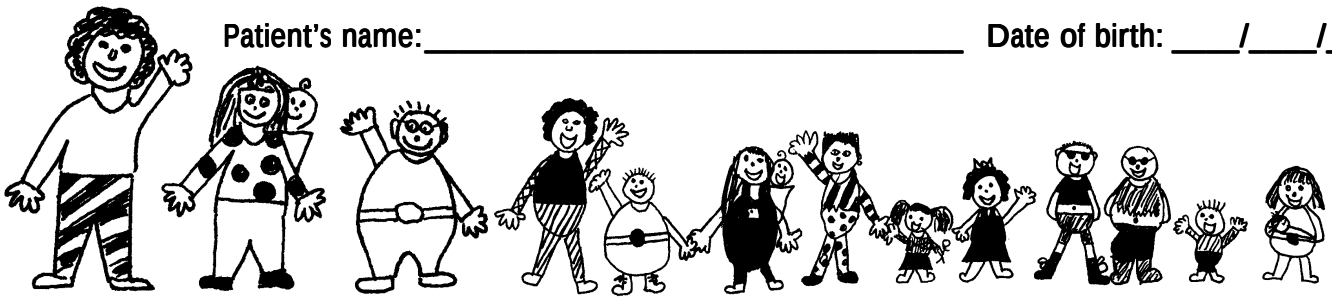
IAC EXPRESS

- 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)

Immunization Action Coalition • 1573 Selby Avenue, St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org



Patient's name:_____ Date of birth: ____/____/____

Screening Questionnaire for Child and Teen Immunization

For parents/guardians: The following questions will help us determine which vaccines may be given in clinic today. Please answer these questions by checking the boxes. If the question is not clear, please ask the nurse or doctor to explain it.

	Yes	No	Don't Know
1. Is the child sick today?	☐	☐	☐
2. Does the child have allergies to medications, food, or any vaccine?	☐	☐	☐
3. Has the child had a serious reaction to a vaccine in the past?	☐	☐	☐
4. Has the child had a seizure or a brain problem?	☐	☐	☐
5. Does the child, or any person who lives with or takes care of the child, have cancer, leukemia, AIDS, or any other immune system problem?	☐	☐	☐
6. Has the child, or any person who lives with or takes care of the child, taken cortisone, prednisone, other steroids, anticancer drugs, or x-ray treatments in the past 3 months?	☐	☐	☐
7. Has the child received a transfusion of blood or plasma, or been given a medicine called immune (gamma) globulin in the past year?	☐	☐	☐
8. Is the child/teen pregnant or is there a chance she could become pregnant in the next three months?	☐	☐	☐

Parent/guardian signature: _____ Date : _____

Did you bring your child's immunization record card with you? **yes** ☐ **no** ☐

It is important for you to have a personal record of your child's shots. If you don't have a record card, ask the child's doctor or nurse to give you one! Bring this record with you every time you bring your child to the clinic. Make sure your clinic records all your child's vaccinations on it. Your child will need this card to enter daycare, kindergarten, junior high, etc.

Item #P4060 (8/99)

If we don't have a thimerosal-free brand of vaccine in stock, should we defer vaccination of the child?
Absolutely not. It is critical that children continue to be vaccinated on time, even if a thimerosal-free vaccine is not immediately available. There is no evidence that thimerosal in vaccine is harmful to children. If vaccines are deferred, coverage levels could drop which could result in outbreaks.

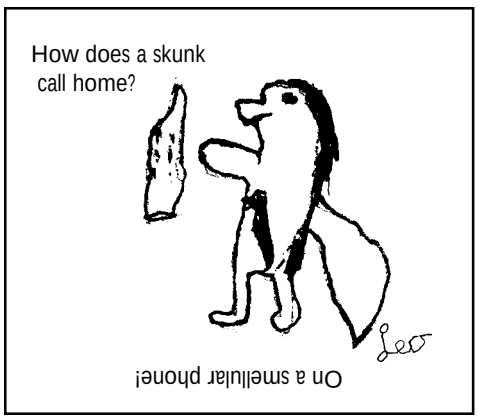
Rotavirus

by William L. Atkinson, MD, MPH

Why did CDC recommend that we stop using rotavirus vaccine?
On July 15, 1999, CDC recommended that the use of rotavirus vaccine be postponed, pending additional studies. Several infants who developed intussusception (an unusual type of intestinal obstruction) within a month after receiving rotavirus vaccine were reported to the Vaccine Adverse Events Reporting System (VAERS). The number of reported cases of intussusception among vaccinated children, to date, is small. It has not been established whether rotavirus vaccine causes intussusception. CDC will be collecting additional data during the next several months that may indicate more clearly whether rotavirus vaccine increases the risk of this bowel disorder.

What should I do about my patients who have already received rotavirus vaccine?
The risk of intussusception appears to be the highest during the three weeks following vaccination. Parents of recently vaccinated infants should be instructed to watch for signs that might indicate intestinal obstruction (e.g., bloody or black stools, abdominal distension, or severe colic pain).

Should I report intussusception to CDC? How do I report this?
If a child develops intussusception or any other serious adverse event following receipt of rotavirus vaccine or any other vaccine, whether or not it is thought to be related to the vaccine, the adverse event should be reported to VAERS. VAERS reporting forms and information can be requested 24 hours a day by calling (800) 822-7967 or via the Internet at: www.cdc.gov/nip/vaers.htm



Where can I get more information about rotavirus vaccine and intussusception?
A Q&A on rotavirus vaccine and intussusception is available on the National Immunization Program's website: www.cdc.gov/nip or by calling CDC's Immunization Hotline at (800) 232-2522.

General vaccine questions

by William L. Atkinson, MD, MPH

What length of needle should be used to give infants IM injections? One of our clinical coordinators says a 1" needle and another says a 5/8" needle.
ACIP recommends that a 7/8" to 1" needle be used to administer intramuscular injections to infants.

A patient of mine inadvertently received MMR vaccine two weeks after receiving varicella vaccine? What is recommended now?
ACIP recommends that, whenever possible, injected live virus vaccines, like MMR and varicella vaccines, be separated by 30 days because of possible interference of the vaccine given first with the vaccine given second. There is no evidence that this interference actually occurs with vaccines currently in use. ACIP does not have a recommendation to repeat live injected vaccines that are separated by less than 4 weeks.

Should you administer vaccine to a child who is taking antibiotics?
Treatment with antibiotics alone is not a valid reason to defer vaccination. If the child or adult is otherwise well, or has only a minor illness, vaccines should be administered. But if the person has a moderate or severe acute illness, regardless of antibiotic use, one should defer vaccination until the person's condition has improved.

Who is responsible for reporting cases of vaccine-preventable diseases to the state? Which cases are reportable?
Reporting requirements vary from state to state but, in general, the responsibility for submitting a disease report is with the provider who diagnoses the disease. Most states prefer to receive reports of suspected as well as confirmed diseases, particularly for diseases in which prompt containment activities are needed to prevent further spread of the disease (e.g., measles, pertussis). While some diseases (e.g., measles, pertussis) are reportable in all states, some diseases are not. Your state health department can supply a list of reportable diseases and specific reporting procedures.

I've heard there is a pentavalent vaccine for infants in use in Canada. When will a pentavalent vaccine be available in the U.S.?
The Canadian vaccine is a combination of whole cell DTP vaccine, Hib, and inactivated polio vaccines. It is unlikely that this particular vaccine will ever be licensed in the United States, since the use of acellular pertussis vaccine is strongly recommended over whole cell pertussis vaccine. Trials of new combination vaccines are in progress and some of these may be licensed in the future. SmithKline Beecham has recently applied to the FDA for approval of a new DTaP-IPV-Hep B combination vaccine.

VISs

by William L. Atkinson, MD, MPH

In which circumstances must I give parents/guardians or adult patients Vaccine Information Statements (VISs)?
A VIS must be given to parents/guardians or adult patients before any dose of a vaccine for diphtheria, tetanus, pertussis, hepatitis B, measles, mumps, rubella, varicella, Hib, polio, or rotavirus.

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 (phone numbers on page 23).

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, diphtheria, pertussis

by William L. Atkinson, MD, MPH

A dose of DTaP was given SQ instead of IM. Should the dose be repeated IM? What about the other vaccines?
ACIP recommends that any dose of vaccine given at a nonstandard route or site of administration should not be counted, and the person should be revaccinated according to age.

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) as soon as possible. A person with a documented series of three Td doses, with a booster dose 10 years ago is less

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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 that 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 then 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.

Haemophilus influenzae type b

by William L. Atkinson, MD, MPH

If a 13-month old received Hib #1 at 8 months of age and Hib #2 today, does s/he still need a booster in 2 months?
ACIP recommendations have not addressed interrupted Hib vaccine schedules. The AAP *(1997 Red Book,* p. 230) recommends a child in this situation receive one additional dose of any conjugate Hib vaccine 2 months after the dose at 13 months of age.

I've just evaluated a 7-year old who does not have a record of receiving Hib vaccine. Would a dose be indicated now?
ACIP does not recommend routine Hib vaccination of healthy children 59 months of age or older, even if they have no prior history of Hib vaccination.

Polio

by William L. Atkinson, MD, MPH

If a child receives IPV at 2m, and OPV at 4m, should OPV or IPV be used for subsequent doses?
At its meeting in June 1999, the ACIP voted to recommend the exclusive use of IPV in the United States. As a result, ACIP now recommends that IPV be used for all doses of the polio series. You can use your remaining stock of OPV as part of the sequential schedule, but the conversion to an all-IPV schedule should be complete by January 2000.

A 4-year old's vaccine records show that she had 4 IPVs, given at 2m, 4m, 6m, and age 2. Should she have a booster dose?
Seroconversion rates following 3 doses of IPV at 2, 4, and 6 months of age are 99%–100% for all three polio vaccine viruses. A "booster" dose is usually recommended at school entry (4–6 years of age), mainly to assure long-term protection. From the standpoint of protection it isn't necessary to give a fifth dose of IPV to a child who received 4 doses before 2 years of age. HOWEVER, many states mandate a dose of polio vaccine to be administered on or after 4 years of age as a requirement for school entry. In this situation just give a fifth dose at school entry. There is no harm in giving an additional dose.

Rubella, measles, mumps

by William L. Atkinson, MD, MPH

A box of MMR vaccine (undiluted) was left at room temperature for 3 hours. Is it okay to use?
If you suspect that this vaccine or any vaccine has been mishandled, you should contact the manufacturer for guidance on its use. This is particularly important for labile live virus vaccines like MMR and varicella. Unfortunately, errors in vaccine storage and handling are common.

An 18-year-old college student says he had measles and mumps at ages 4 and 5, but never had MMR vaccine. Is rubella vaccine recommended in such a situation?
Actually, this student should receive two doses of MMR, separated by at least 28 days. (It is recommended that all persons attending school receive two doses of MMR vaccine.) A personal history of measles and mumps is NOT acceptable as proof of immunity. Acceptable evidence of measles and mumps immunity includes a positive serologic test for antibody, physician diagnosis of diseases, birth before 1957, or written documentation of vaccination. For rubella, only serologic evidence or documented vaccination should be accepted as proof of immunity. Additionally, persons born prior to 1957 may be considered immune to rubella unless they are women who have the potential to become pregnant.

CDC presents via satellite:

"Immunization Update 1999"

With William L. Atkinson, MD, MPH, and Sharon G Humiston, MD, MPH

Thursday, September 16, 1999
Two Broadcasts: 9–11:30 am ET
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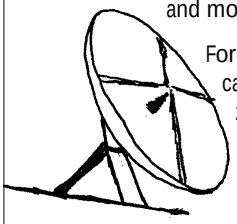

For more information, call your state immunization program (see phone numbers on page 23) or visit: www.cdc.gov/nip

Is there a link between autism and MMR vaccine?
There is no scientific evidence of an association between autism and MMR vaccine. For more information, visit NIP's vaccine safety website: www.cdc.gov/nip/vacsafe

Can single antigen preparations for measles and rubella vaccines be mixed together? We have MMR vaccine and single antigen vaccines for those who only need one.
Absolutely not. Vaccines should NEVER be mixed except when specifically approved by the FDA. Also, ACIP recommends use of combined MMR whenever one or more of the antigens is indicated, so there is little need to stock single antigen vaccines.

Varicella

by William L. Atkinson, MD, MPH

If a child has a very mild case of chickenpox (e.g., only 5–10 pox), is s/he immune or should s/he be vaccinated?
A mild case of chickenpox produces immunity to varicella as does a moderate or severe case. A child with a reliable history of chickenpox does not need to receive varicella vaccine. However, if there is any doubt that the mild illness really was chickenpox, it is best to vaccinate the child. There is no harm in vaccinating a child who is already immune.

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 vac-

cine for use in susceptible persons following exposure to varicella.

Will varicella vaccine be mandatory in the year 2000 for daycare and kindergarten for every state or just some states?
ACIP recommends that states begin to implement daycare and school requirements for varicella immunity. ACIP also recommends consideration of a policy to require evidence of varicella immunity for entry into middle school. This recommendation is intended to prevent susceptible older children from entering adulthood without varicella immunity. It is likely that many, but not all, states will have daycare and school requirements in place or under consideration by 2000.

What are the new recommendations for the use of varicella vaccine in children with HIV or other immunodeficiencies?
ACIP now recommends varicella vaccination of children with humoral (but not cellular) immunodeficiencies. In addition, vaccination should be considered for children with HIV infection in CDC class N1 or A1 who have CD4+ T-lymphocyte percentages of 25% or higher. Additional details of these new recommendations can be found in *MMWR* 1999;48 (RR-6).

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.

Gotta good riddle?

Coalition artist seeks riddles to illustrate. The funniest ones will appear in the next *NEEDLE TIPS!*

Send your riddle to:
Isaac c/o IAC
1573 Selby Ave. #234
St. Paul, MN 55104
or e-mail it to
isaackwm@aol.com

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.

Where can I get information on influenza and its surveillance?
Information regarding influenza surveillance is available October through May from the CDC Fax Information Service by calling (888) 232-3299 and entering document #361100 or visit the Influenza Branch's website: www.cdc.gov/ ncidod/diseases/flu/weekly.htm

In addition, periodic updates about influenza are published in the *MMWR*. State and local health departments should be consulted regarding availability of influenza vaccine, access to vaccination programs, information about state or local influenza activity, and for reporting influenza outbreaks and receiving advice regarding their control.

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

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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

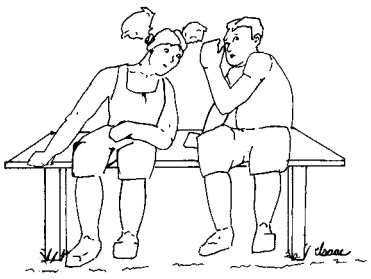
by William L. Atkinson, MD, MPH

Who should receive Lyme disease vaccine?
Lymerix (SmithKline Beecham) is licensed for persons 15–70 years of age. It should not be given to children younger than 15 years of age until approved by the FDA for this age group. Safety and efficacy studies in children are in progress now. 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.

Why can't you tell secrets on the farm?



Because the corn has ears, the potatoes have eyes, and the beans talk (beanstalk).

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.

Meningococcal disease

by William L. Atkinson, MD, MPH

Is meningococcal vaccine recommended for college students?
Neither ACIP nor the AAP recommends that college students be routinely given meningococcal vaccine. In 1997, the American College Health Association recommended that college students should "consider vaccination to reduce their risk" of meningococcal disease.

Are college students at increased risk for meningococcal disease?
A recent study in Maryland *(JAMA* 1999;281: 1906–10) found that the risk of meningococcal disease in college students was similar to that for persons of the same age in the general population (1.4–1.7 cases per 100,000 population). However, in that study, the risk among students who lived in on-campus housing was about 3 times higher (about 3 per 100,000 population) than students who lived off campus (about 1 per 100,000 population), and about twice as high as the general population of the same age.

Should I vaccinate college-bound students with meningococcal vaccine?
As noted above, neither ACIP nor the AAP recommends that college students be routinely given meningococcal vaccine. Providers, however, should be prepared to provide the vaccine to students who want to receive it, or if the vaccine has been suggested by the college or university. Meningococcal vaccine is reasonably effective against the serogroups included in the vaccine, and is safe.

What is the schedule for meningococcal vaccine and how is it administered?
Meningococcal vaccine contains the purified polysaccharide of four serogroups of N. meningitidis (A, C, Y, and W-135). The vaccine is given as a single subcutaneous dose. It may be administered at the same time as other vaccines. Protective levels of antibody are usually achieved 7–10 days after vaccination. Revaccination after 3–5 years may be indicated for some persons at high risk of infection.

Hepatitis B

by Harold Margolis, MD, and Linda Moyer, RN

Why is it recommended to give hepatitis B vaccine to infants when the greatest number of cases occur in young adults?
Prior to the implementation of routine infant hepatitis B immunization in the United States, about 45,000 children under 10 years of age were infected with hepatitis B virus (HBV) annually. Two-thirds of these children who became infected with HBV during childhood did not have HBV-infected mothers. These infections would not have been prevented by perinatal prevention programs that identify hepatitis B surface antigen (HBsAg)-positive mothers and provide immunoprophylaxis to their infants.

In contrast to other vaccine-preventable diseases of childhood, HBV infections in infants and young children are usually asymptomatic. Thus, the small number of reported cases of hepatitis B among children represents the tip of the iceberg of all HBV infections in children. For every child with symptoms of hepatitis B there are at least 100 children with asymptomatic infection.

HBV infection during childhood carries a high risk of chronic infection. Based on the age-specific risk of chronic HBV infection, it is estimated that about one-third of the 1.25 million Americans with chronic HBV infection acquired their infection as infants or young children. Children who become chronically infected have a 25% risk of dying prematurely from liver cancer or cirrhosis.

On average, how much protection is available for babies, teens, and adults after each dose of hepatitis B vaccine?

Dose #	Infants*	Teens and Adults**
#1	16-40%	20-30%
#2	80-95%	75-80%
#3	98-100%	90-95%

*Pre-term infants under 2 kg have been shown to respond to vaccination less often.
**Factors that may lower vaccine response rates are age >40 years, male gender, smoking, obesity, and immune deficiency.

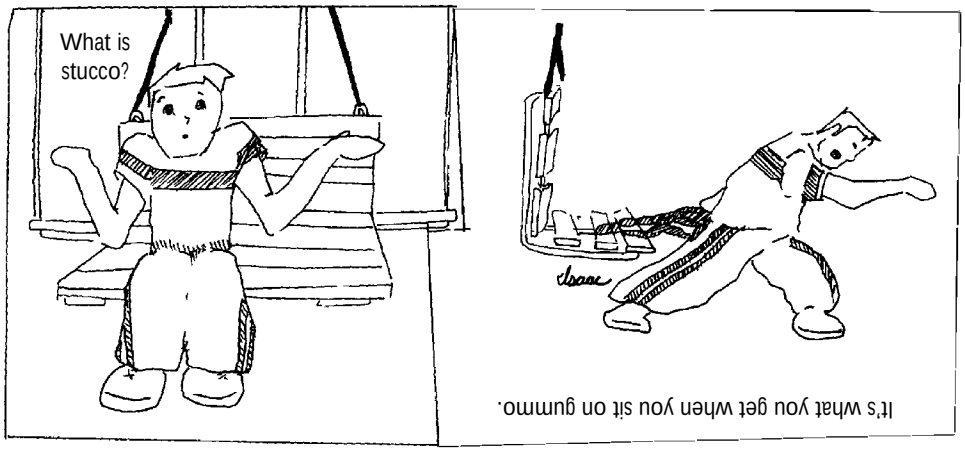
What is the recommended hepatitis B vaccination schedule for infants?

Patient history	When to administer HBIG and hepatitis B vaccine to your infant patients			
	HBIG	Hep B dose #1[1]	Hep B dose #2	Hep B dose #3
Infant born to HBsAg-positive mother	Give within 12 hours of birth.	Give within 12 hours of birth.	Give at 1-2 mos of age.	Give at 6 mos of age.
Pre-term infant born to HBsAg-positive mother	Give within 12 hours of birth.	Give dose #1 within 12 hours of birth. If infant weighs less than 2 kg at birth, repeat dose #1 when infant weighs 2 kg or is 2 mos of age.	Give 1-2 mos after the previous dose.	Give at 6 mos of age.
Infant born to HBsAg-negative mother and at high risk of early childhood infection[2]	No.	Preferably give dose #1 at birth but give no later than 2 mos of age.	Give at 1-4 mos of age.	Give at 6 mos of age or no later than 12 mos of age.
Infant born to mother not tested for HBsAg[3] and mother is later found to be HBsAg positive	Give ASAP before 7 days of age.	Give within 12 hours of birth.	Give at 1-2 mos of age.	Give at 6 mos of age.
Infant born to mother not tested for HBsAg[3] and mother is later found to be HBsAg negative	No.	Give within 12 hours of birth.	Give at 1-2 mos of age.	Give at 6-18 mos of age.
Pre-term infant born to HBsAg-negative mother	No.	Give when infant weighs 2 kg or at 2 mos of age.	Give at 1-4 mos of age.	Give at 6-18 mos of age. Infants at high risk of infection need dose #3 no later than 12 mos of age.
Infant born to HBsAg-negative mother and at low risk of early childhood infection	No.	Give at birth-2 mos of age.	Give at 1-4 mos of age.	Give at 6-18 mos of age.

[1] Engerix-B, Recombivax HB, and Comvax are the hepatitis B vaccine products available for use in the United States. Engerix-B and Recombivax HB, single-antigen hepatitis B vaccines, are used for the birth dose and can also be used for all the remaining doses recommended for infants and children. Comvax, a combination vaccine which contains hepatitis B vaccine and Hib vaccine, cannot be used earlier than 6 weeks of age. The recommended schedule for the use of Comvax, is 2, 4, and 12–15m of age. Comvax can also be used to complete a hepatitis B vaccine series started at birth. (An extra dose of hepatitis B vaccine will not harm a child.)

[2] Infants born to HBsAg-negative mothers who are at risk of early childhood HBV infection include infants whose mothers belong to populations and groups from areas of moderate and high endemicity for HBV infection. Areas of high endemicity (≥8% hepatitis B carrier rate) include Africa; Southeast Asia including China, Korea, Indonesia, and the Philippines; the Middle East except Israel; South and Western Pacific Islands; interior Amazon Basin; and certain parts of the Caribbean, i.e., Haiti and the Dominican Republic. Alaska natives are also at high risk. Areas of moderate endemicity (2%–7% hepatitis B carrier rate) include South Central and Southwest Asia, Israel, Japan, Eastern and Southern Europe, Russia, and most of Central and South America. Also, any infant who lives in a household with a hepatitis B carrier should be considered at high risk for HBV infection.

[3] Mothers should have blood drawn for HBsAg testing ASAP.



An infant of an HBsAg-positive mother received appropriate postexposure prophylaxis and tested negative for anti-HBs and HBsAg at 12 months of age. How many more doses of hepatitis B vaccine do I need to give before I retest?

The recommended approach is to complete a second series of 3 doses of vaccine and test (both HBsAg and anti-HBs) 1–2 months after the last dose of vaccine.

If a 7-year old is in my office, should I vaccinate the child for hepatitis B now or wait until the 11- to 12-year-old visit? I'm not clear on the recommendation.

The prudent approach is to vaccinate the child. Child-to-child transmission of HBV infection is well documented and the opportunity for vaccination should not be missed or postponed. If the child is not in a high-risk group, the hepatitis B vaccination schedule for children and for adolescents is quite flexible. The second dose of vaccine can be given at the next routine office visit - it is not necessary to return in one month for the second dose of vaccine. Studies among teens have shown that schedules of 0, 12, and 24 months have worked well, and one would assume that such spacing would be applicable to younger age groups. However, there should be at least 4 weeks between dose #1 and dose #2; at least 8 weeks between dose #2 and dose #3; and at least 4 months between dose #1 and dose #3. Longer time periods between doses are acceptable in order to coincide with routine office visits.

My patient received dose #1 of hepatitis B vaccine 3 years ago at a middle school. Do I give her dose #2 now or do I start again with dose #1?

There is no need to restart the series. Give dose #2 now and be sure there is at least 8 weeks between dose #2 and dose #3.

If a pregnant woman has three documented doses of hepatitis B vaccine, why does she need to be tested for HBsAg?

Just because she is vaccinated does not assure that she is immune. Since routine pre-vaccination testing is not recommended, one cannot be certain that the patient was not a chronic carrier (or currently infected) at the time of vaccination.

I've identified a patient in my OB practice who is HBsAg positive. Should she be evaluated for liver disease during her pregnancy, or should the evaluation wait until the postpartum period? What should I recommend for her husband and her children, and how urgent is the time frame?

The earlier the evaluation is done, the better. Consultation with or referral to a hepatologist or gastroenterologist should be done. This consulting physician should be completely aware of the patient's obstetrical status. In addition, the

(continued on page 20)

patient's sex partner and children or other household contacts should be tested for markers of HBV infection (total anti-HBc and HBsAg) as soon as possible. If any are susceptible to HBV infection, they should be vaccinated. If any are HBsAg positive, they should also be referred to or have consultation with a liver disease specialist.

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 inviduals 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.

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.

HBV Clinical Trials

The National Institute of Allergy and Infectious Diseases has information about adult and pediatric HBV clinical trials in the U.S. for the treatment of chronic HBV infection. For information about adult trials, contact Lanette Sherrill, CRNP, MSN. For pediatric trials, contact Jan Kiell, RN, BS. Both can be reached at (205) 934-2424.

Parents of Kids with Infectious Diseases (PKIDS) has information about additional pediatric HBV clinical trials. Call 877-55-PKIDS (877-557-5437).

Hepatitis A

by Harold Margolis, MD, and Linda Moyer, RN

In which states or communities is hepatitis A vaccine recommended for children?
Routine vaccination of children is recommended in states where the average annual hepatitis A rate during 1987–97 was at least 20/100,000 population (i.e., approximately twice the national average). These states are Alaska, Arizona, California, Idaho, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Utah, and Washington. Routine vaccination of children is also recommended in counties and/or communities where the average annual hepatitis A rate during 1987–97 was at least 20/100,000 population (i.e., approximately twice the national average).

Routine hepatitis A vaccination of children may be considered in states where the average annual hepatitis A rate during 1987–97 was at least 10/100,000 population but less than 20/100,000. These states include Arkansas, Colorado, Missouri, Montana, Texas, and Wyoming. Routine hepatitis A vaccination of children may also be considered in counties and/or communities where the average annual hepatitis A rate during 1987–97 was at least 10/100,000 population but less than 20/100,000.

Possible strategies for childhood vaccination include vaccinating one or more single age cohorts of children or adolescents (e.g., children at the age of entry into pre-school, elementary school, and/or middle school), vaccination of children in selected settings (e.g., daycare entry), or vaccination of children over a wider range of ages in a variety of settings, such as when they seek health care for other purposes.

Does the Vaccines for Children (VFC) program cover the cost of hepatitis A vaccine in these states and communities?
Yes, for children who are VFC eligible.

Why isn't hepatitis A vaccine recommended for all children at this time?
Combination vaccines and new information regarding the immunization of children less than two years of age who are born to mothers previously infected with HAV are needed to integrate hepatitis A vaccine into existing childhood vaccination schedules. The initial approach of recommending vaccination for children (aged ≥2 years) in states with high rates of hepatitis A is another step in the movement toward routine childhood vaccination.

Does VFC cover the cost of hepatitis A vaccine for VFC-eligible children who are traveling to endemic areas?
Yes, if they are otherwise VFC eligible. It is important to remember that one-third of travel-related hepatitis A cases occur in children. Unfortunately, parents and physicians forget that children are travelers and are at risk for travel-related infections and forget to offer hepatitis A vaccine and/or immune globulin.

An 18-month old is going to live for a year in a country with significant risk for hepatitis A. Can I administer hepatitis A vaccine even though this child is less than the age at which the vaccine is recommended?
This situation does pose a dilemma for the clinician. Hepatitis A vaccine is not licensed for use in children under 2 years of age and there is concern of maternal antibody interference in children under 2 years of age whose mothers have had hepatitis A in the past. The current recommendation is to give high-dose IG and repeat every 5 months until the child is 2 years of age and can receive

hepatitis A vaccine. However, experience has shown us that this will most likely not occur. IG is usually not administered as recommended in this type of situation. The most prudent approach would be to give the child the first dose of vaccine even though the child is under 2 years of age since few children at 18 months of age would have maternal antibody. In addition, it is important that the second dose of vaccine be given 6–18 months later (depending on vaccine brand) to ensure long-term protection.

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 12–15 years of age over a 5-year period.* (Also, see first question in hepatitis A section.)
- 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. ♦

Vaccines Dramatically Reduce Disease in the 20th Century

Baseline 20th century annual morbidity and 1998 provisional morbidity from nine diseases with vaccines recommended before 1990 for universal use in children - United States.

Disease	Baseline 20th Century Annual Morbidity	1998 Provisional Morbidity	% Decrease
Smallpox	48,164[1]	0	100%
Diphtheria	175,885[2]	1	100%[3]
Pertussis	147,271[4]	6,279	95.7%
Tetanus	1,314[5]	34	97.4%
Polio (paralytic)	16,316[6]	0[7]	100%
Measles	503,282[8]	89	100%[3]
Mumps	152,209[9]	606	99.6%
Rubella	47,745[10]	345	99.3%
Congenital Rubella Syndrome	823[11]	5	99.4%
Haemophilus influenzae type b	20,000[12]	54[13]	99.7%

[1] Average annual number of cases during 1900–1904.
[2] Average annual number of reported cases during 1920–1922, 3 years before vaccine development.
[3] Rounded to nearest tenth.
[4] Average annual number of reported cases during 1922–1925, 4 years before vaccine development.
[5] Estimated number of cases based on reported number of deaths during 1922–1926, assuming a case-fatality rate of 90%.
[6] Average annual number of reported cases during 1951–1954, 4 years before vaccine licensure.
[7] Excludes one case of vaccine-associated polio reported in 1998.
[8] Average annual number of reported cases during 1958–1962, 5 years before vaccine licensure.
[9] Number of reported cases in 1968, the year reporting began and the first year after vaccine licensure.
[10] Average annual number of reported cases during 1966–1968, 3 years before vaccine licensure.
[11] Estimated number of cases based on seroprevalence data in the population and on the risk that women infected during a childbearing year would have a fetus with congenital rubella syndrome.
[12] Estimated number of cases from population-based surveillance studies before vaccine licensure in 1985.
[13] Excludes 71 cases of *Haemophilus influenzae* disease of unknown serotype.

Adapted from MMWR, *April 2, 1999, Vol. 48, No. 12.*

Gary Schatz, PhD

Dec. 31, 1943 – Aug. 2, 1999

Our friend and colleague who worked to protect the world's children from hepatitis B virus infection.

Dr. Schatz was killed in an automobile accident while working on a World Health Organization assignment in Zanzibar. He will be sadly missed by those who had the privilege to enjoy his fine sense of humor and his passion for his work.

National Resources

There are many places that can help you!

If you know of other resources, call us at (651) 647-9009 or e-mail us at medinfo@immunize.org

To obtain a longer list of national resources, see past issues of *NEEDLE TIPS* or visit: www.immunize.org

The latest resources

Videotapes of the 1999 satellite broadcast "Epidemiology and Prevention of Vaccine-Preventable Diseases" (CDC, 1999). A set of 4 tapes: VC0018-Principles of vaccination, general recommendations, and strategies; VC0019-Diphtheria, tetanus, pertussis, polio, rotavirus; VC0020-Measles, mumps, rubella, varicella; and VC0021-Hepatitis B, Hib, influenza, pneumococcal disease. Each tape is approximately 2 hours long and accredited for CME, CNE, and CEU credit (no limit to the number of persons who may receive CE credit from each tape). $15 each, or $50 for the set. Call the Public Health Foundation at (877) 252-1200. (This is also where you can order *The Pink Book* which is the course textbook for the four videotapes.)

National Immunization Program's Resource Request List (CDC). A list of all CDC's free immunization resources – ACIP statements, VISs, videos, posters, brochures, etc. Call (888) 232-3299, request document #130011, and you will receive the list by fax, or download it from www.cdc.gov/nip/publications/resource.pdf

1999–2000 Edition of CDC's *Health Information for International Travel* (The Yellow Book). Contains vaccine information and requirements for foreign travel. $22. Call the Superintendent of Documents at (202) 512-1800 (stock number is 017-023-00202-3). You can also download it from www.cdc.gov/travel

1999 Edition of Shoreland's *Travel & Routine Immunizations – A Practical Guide for the Medical Office*. $25 plus $5 shipping. More info? Call (800) 433-5256 or visit www.shoreland.com

Guidelines for Vaccinating Pregnant Women (CDC, 1998). Do you know which vaccines a pregnant woman can or can't receive? These guidelines were abstracted from ACIP recommendations. Download from the IAC's website at www.immunize.org/genr.d/pregguid.htm or call CDC at (404) 639-8226 and request a copy.

Fourth Edition of *Resource Guide for Adult and Adolescent Immunization* (NCAI, 1999). A list of educational materials to order from other organizations. Download from www.nfid.org/ncai or fax your request for a free copy to (301) 907-0878 or call (301) 656-0003.

How to Develop Easy Reading Immunization Materials (IEAC, 1999). This guide can help you develop materials for individuals with limited literacy skills. Call IEAC at (703) 836-6110.

Organizations with immunization and hepatitis information

Routine Immunization

All Kids Count (www.allkidscount.org)	404-687-5615
American Academy of Pediatrics (www.aap.org) ★	800-433-9016
Association of Teachers of Preventive Medicine (www.atpm.org)	800-789-6737
CDC's Immunization Information Hotline	800-232-2522
CDC's Voice and Fax Immunization Information Line	888-232-3228
CDC's Nat'l Immunization Program website	www.cdc.gov/nip
CDC's Vaccine Safety website	www.cdc.gov/nip/vacsafe
CDC's Vaccines For Children website	www.cdc.gov/nip/vfc
CDC's National Vaccine Program Office	www.cdc.gov/od/nvpo
CDC's Immunization Registry website	www.cdc.gov/nip/registry
CDC's Travel website	www.cdc.gov/travel
Congress of National Black Churches	202-371-1091
COSSMHO (Nat'l Coalition of Hispanic Health Orgs.) (www.cossmho.org) ★	202-387-5000
Every Child by Two (www.ecbt.org)	202-783-7030
Immunization Action Coalition (www.immunize.org) ★	651-647-9009
Immunization Education and Action Committee (www.hmhb.org)	703-836-6110
Immunization Gateway website	www.immunofacts.com
Nat'l Coalition for Adult Immunization (www.nfid.org/ncai)	301-656-0003
Nat'l Council of La Raza (www.nclr.org) ★	202-785-1670
Nat'l Vaccine Injury Compensation Program (www.hrsa.gov/bhpr/vicp)	800-338-2382
Roll Up BOTH Sleeves (a manual on how to vaccinate in middle schools)	330-678-1601
Albert B. Sabin Vaccine Institute (www.sabin.georgetown.edu)	202-687-9145
Vaccine Adverse Events Reporting System (www.fda.gov/cber/vaers/vaers.htm)	800-822-7967
Vaccine Page (for the latest vaccine news, etc., on the web)	www.vaccines.com
Your health department's immunization program manager (see page 23)	_____

Hepatitis Information

American Liver Foundation (www.liverfoundation.org) ★	800-223-0179
CDC's Hepatitis Information Hotline ★	888-443-7232
CDC's Hepatitis website	www.cdc.gov/hepatitis/
Hepatitis B Coalition (www.immunize.org) ★	651-647-9009
Hepatitis B Foundation (www.hepb.org)	215-489-4900
Hepatitis B Online Support Group	send a blank e-mail to: hepatitis-b-on@mail-list.com
Hepatitis Control Report (www.hepatitiscontrolreport.com)	610-664-2793
Hepatitis Foundation International (www.hepfi.org) ★	800-891-0707
Nat'l Task Force on Hepatitis B: Focus on APIA (www.aapihp.com/hepbtf/) ★	614-766-5219
Parents of Kids with Infectious Diseases (www.pkids.org)	877-55-PKIDS (877-557-5437)
PEPLine: 24-hr hotline to advise clinicians re: occupational blood exposures	888-448-4911
Plexus Health Group (calls are being taken by Immunization Action Coalition)	651-647-9009
Your health department's hepatitis coordinator (see page 23)	_____

Pharmaceutical Companies

Aviron (www.aviron.com)	650-919-6500
Chiron Corporation (www.chiron.com)	800-244-7668
Merck & Co., Inc. (www.merck.com)	800-672-6372
Nabi (www.nabi.com)	800-458-4244
North American Vaccine (www.nava.com)	410-309-7100
Pasteur Merieux Connaught, Inc. (www.us.pmc-vacc.com)	800-822-2463
SmithKline Beecham (www.sb.com)	800-366-8900
Wyeth-Lederle Vaccines & Pediatrics (www.ahp.com)	800-358-7443
professional services:	800-395-9938

★ materials available in other languages as well as English

Need Help?

Call your immunization, hepatitis, and VFC coordinators

Your governmental resource people are there to help you! Find out what kind of educational materials they have including posters, brochures, and videos. Call them to register for the excellent immunization conferences that CDC broadcasts by satellite. They may also be able to help you audit your clinic's immunization rates or develop immunization tracking systems. Give them a call!

State Coordinators

Alabama
Iz: Gary Higginbotham 334-206-5023
Hep B (So. AL): Sue Balsamo 334-947-6206
Hep B (No. AL): Janet Mitchell 256-582-3174
VFC: Cynthia Lesinger 800-469-4599

Alaska
Iz: Laurel Wood 907-269-8000
Hep B: Ken Browning 907-269-8000
VFC: Laurel Wood 907-269-8000

Arizona
Iz: Kathy Fredrickson 602-230-5855
Hep B: Linda Faris 602-230-5858
VFC: Betty Finch 602-230-5832

Arkansas
Iz: Kaleem Sayyed 501-661-2169
Hep B: Sherry Ahring 501-661-2053
VFC: Ruby Jones 501-661-2170

California
Iz: Natalie Smith, MD 510-540-2065
Hep B: Les Burd 510-540-2879
VFC: John Scott 510-704-3750

CA, Los Angeles
Hep B: Bridget Beeman 213-580-9810

Colorado
Iz: Gerrit Bakker 303-692-2668
Hep B: Amy Warner 303-692-2673
VFC: Rosemary Spence 303-692-2798

Connecticut
Iz: Vincent Sacco 860-509-7929
Hep B: Aaron Roome 860-509-7900
VFC: Richard Carney 860-509-7929

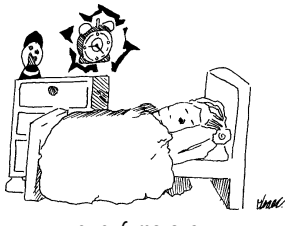
Delaware
Iz: Kathleen Russell 302-739-4746
Hep B: Laura Gannon 302-739-4746
VFC: William Baker 302-739-4746

District of Columbia
Iz: James Giandelia 202-576-7130 x25
Hep B: Ethel Holland 202-442-9141
VFC: Jacob Mbafor 202-576-7130 x21

Florida
Iz: Henry Janowski 850-487-2755
Hep B: Vacant 850-487-2755
VFC: Al Sulkes 850-487-2755

Georgia
Iz: Michael Chaney 404-657-3158
Hep B: Peggy Monkus 404-657-3158
VFC: Stephanie Boatenreiter 404-657-3158

Why did the worm oversleep?



It didn't want to get eaten by the early bird!

Hawaii
Iz: Lin Watson 808-586-8330
Hep B: Mits Sugi 808-586-8338
VFC: Charles Miller 808-586-8311

Idaho
Iz: Vacant 208-334-5931
Hep B: Merlene Fletcher 208-334-5974
VFC:Bob Salisbury 208-334-4949

Illinois
Iz: Karen McMahon (acting) 217-785-1455
Hep B: Susan Williams 217-785-1455
VFC: Mark Amerson (acting) 217-785-1455

IL, Chicago
Iz: Cheryl Byers 312-746-6120
Hep B: Monty Dobzyn 312-746-7147
VFC: Stan Owens 312-746-5940

Indiana
Iz: Dave Ellsworth 317-233-7010
Hep B: Vacant
VFC: Thomas Hicks 317-233-7435

Iowa
Iz: Pamela Lutz 515-281-4917
Hep B: Tina Patterson 515-281-7053
VFC: Don Callaghan 515-281-7301

Kansas
Iz: Monica Mayer 785-296-5591
Hep B: Sheryl Bañaz 785-296-8156
VFC: Patti Smith 785-827-9639

Kentucky
Iz: Sandra Gambescia 502-564-4478
Hep B: Gena Gilbert 502-564-4478
VFC: Gary Bevill 502-564-4478

Louisiana
Iz: Reuben Tapia 504-483-1900
Hep B: Cathy Scott 318-345-1700
VFC: Patricia Simon 504-483-1900

Maine
Iz: Linda Huff (acting) 207-287-3746
Hep B: Jennifer Gunderman-King (acting) 207-287-3746
VFC: Linda Huff 207-287-3746

Maryland
Iz: Gregory Reed 410-767-6672
Hep B: Gail Schmidt 410-767-6380
VFC: Vacant

MD, Baltimore
Hep B: Vacant

Massachusetts
Iz: Bob Goldstein 617-983-6800
Hep B: Vacant
VFC: Marie O'Donnell 617-983-6824

Michigan
Iz: Dr. Gillian Stoltman 517-335-8159
Hep B: Nancy Fasano 517-335-8159
VFC: Susan Wright 517-335-8159

MI, Detroit & SE Michigan
Iz: Melinda Dickson 313-876-4720
Hep B: Therese McGratty 313-256-1873

Minnesota
Iz: Alan Lifson, MD 612-676-5237
Iz Hotline: 800-657-3970
Hep B: Margo Roddy 612-676-5237
VFC: Barbara Ottis 612-676-5237

Mississippi
Iz: Joy Sennett 601-576-7751
Hep B: Joyce Booth 601-576-7751
VFC: Katy Surkin 601-576-7751

Missouri
Iz: Vic Tomlinson 573-751-6133
Hep B: Ruby McPherson 800-699-2313
VFC: Ruby McPherson 800-699-2313

Montana
Iz: Joyce Burgett, RN 406-444-0065
Hep B: Marci Eckerson 406-444-1805
VFC: Elizabeth Evans 406-444-0277

Nebraska
Iz: T. Grey Bordon 402-471-6423
Hep B: Molly Uden 402-471-0301
VFC: Molly Uden 402-471-0301

NE, Douglas County
Iz: Bonnie Scholting 402-444-3588

NE, Lincoln
Hep B: Sally Cameron 402-441-6215

Nevada
Iz: Robert Salcido 775-684-5939
Hep B: Doug Banghart 775-684-5902
VFC: Vener DeFriez 775-684-5913

NV, Clark County
Hep B: Donna Clark 702-383-1494

NV, Washoe County
Hep B: Vacant 775-328-2487

New Hampshire
Iz: Paula Rosenberg 603-271-4482
Hep B: Sheila Lazzaro 603-271-4482
VFC: Sandra Kelsey 603-271-4634

New Jersey
Iz: Charles O'Donnell 609-588-7512
Hep B: Nancy Borsuk 609-588-7512
VFC: Barbara Giudici 609-588-7512

New Mexico
Iz: Charles Iddings (acting) 505-827-2415
Hep B: Vacant
VFC: Roger Brumley 505-827-2898

New York
Iz: David Lynch 518-473-4437
Hep B: Brenda Naizby 518-474-1944
VFC: Martha Newcomb 518-474-4578

NY, NYC
Iz: Arsenia Delgato 212-676-2253
Hep B: Davis Thanjan 718-520-8245
VFC: Dileep Sarecha 212-676-2298

North Carolina
Iz: Beth Rowe-West (acting) 919-715-6768
Hep B: Sheree Smith 919-715-6760
VFC: Barbara Laymon 919-715-6764

North Dakota
Iz: Barbara Frohlich 701-328-2035
Hep B: Patrick Flanagan 701-328-4556
VFC: Patrick Flanagan 701-328-4556

Ohio
Iz: Leonard Payton 614-466-4643
Hep B: Joseph Bronowski 614-466-4643
VFC: Kent Ware 614-466-4643

Oklahoma
Iz: Don Blose 405-271-4073
Hep B: Leonard Lang 405-271-4073
VFC: Dorothy Cox 405-271-4073

Oregon
Iz: Lorraine Duncan 503-731-4135
Hep B: Amanda Timmons 503-731-4564
VFC: Mimi Luther 503-731-4267

Pennsylvania
Iz: Alice Gray 717-787-5681
Hep B: Phuoc Tran 717-787-5681
VFC: Vickie Petrina 717-787-5681

PA, Philadelphia
Iz: James Lutz 215-685-6748
Hep B: Alice Yang 215-685-6740
VFC: James Lutz 215-685-6748

Rhode Island
Iz: Susan Shepardson 401-222-4603
Hep B: Patricia Raymond 401-222-5921
VFC: Ron Fielder 401-222-4628

South Carolina
Iz: Jesse Greene 803-898-0460
Hep B: Donna Weaver 803-898-0460
VFC: Jesse Greene 803-898-0460

South Dakota
Iz: Lori Koenecke 605-773-3737
Hep B: Lori Koenecke 605-773-3737
VFC: Lori Koenecke 605-773-3737

Tennessee
Iz: Jerry Narramore 615-741-7343
Hep B: Thomas Finke 615-532-8509
VFC: Diane Bass 615-532-8513

Texas
Iz: Robert Crider 512-458-7284
Hep B: Sharon Duncan 512-458-7284
VFC: Jack Sims 512-458-7284

TX, Houston
Iz: Vacant 713-794-9267
Hep B: Lupe Chronister 713-794-9266

TX, San Antonio
Iz: Mark Ritter 210-207-8794
Hep B: Nancy Walea 210-207-2087
VFC: Vivian Flores 210-207-2868

Utah
Iz: Linda Abel 801-538-6872
Hep B: Mary DeFond 801-538-9450
VFC: Kathy Hoenig 801-538-9450

Vermont
Iz: Jerry Harmon 802-863-7638
Hep B: Marilyn Proulx 802-863-7305
VFC: Jerry Harmon 802-863-7638

Virginia
Iz: James Farrell 804-786-6246
Hep B: Marie Krauss 804-786-6246
VFC: Susan Pollard 804-786-6246

Washington
Iz: Margaret Hansen 360-236-3595
Hep B: Trang Kuss 360-236-3555
VFC: Katherine Harris-Wollburg 360-236-3513

West Virginia
Iz: Samuel Crosby Jr. 304-558-2188
Hep B: Beverly Littman 304-558-2188
VFC: Vacant 304- 558-2188

Wisconsin
Iz: Dan Hopfensperger 608-266-1339
Hep B: Marjorie Hurie 608-266-8621
VFC: David King 608-266-3128

Wyoming
Iz: C. Phil Caves 307-777-6001
Hep B: David Baran 307-777-7466
VFC: Tammy Corrigan 307-777-7487

Territories

American Samoa
Iz: Sylvia Tauiliili 011-684-633-4606
Hep B: Sylvia Tauiliili 011-684-633-4606
VFC: Sylvia Tauiliili 011-684-633-4606

Federated States of Micronesia
Iz: Kidsen Iohp 011-691-320-2872
Hep B: Kidsen Iohp 011-691-320-2872

Guam
Iz: Ron Balajadia 671-735-7143
Hep B: Annie Lizama 671-735-7148
VFC: Michele Leon Guerrero 671-735-7143

Mariana Islands
Iz:Mariana Sablan 011-670-233-8953
VFC: Norma Sepeda 011-670-233-8953

Republic of the Marshall Islands
Iz: Nora Kilmaj-Saul 011-692-625-6091
Hep B: Kenner Brianb 011-692-625-3355

Puerto Rico
Iz: Esteban Calderon 787-274-5612
Hep B: Carmen Rodriguez 787-274-5532
VFC: Ivette Gonzales 787-274-5616

Republic of Palau
Iz: Rosemary Kiep 011-680-488-1757

Virgin Islands
Iz: Beverly Blackwell 340-776-8311 x2151
Hep B: Judy Rohan 340-776-8311 x2148

Coalition Catalog

Publications and resources

- **All of our materials are camera ready, copyright free, and reviewed by national experts!**
- **You can order one of any item and make as many copies as you need (including videos).**
- **Each item costs $1 (unless otherwise stated).**
- **★ Starred items are available in foreign languages.**
- **To order materials, see instructions on page 26.**
- **Join the Coalition for the year 2000 with a $50 membership and we will send you ALL of our print materials. See page 27 for details.**
- **We accept credit cards and purchase orders.**

REMEMBER...

A $50 annual membership brings you camera-ready copies of ALL of the Coalition's print materials. See the order form or the back page for information on how to join!

Brochures for your patients

Immunizations for babies. A picture of the shot schedule (3/99). *Item #P4010*

★ **After the shots...what to do if your child has discomfort.** English, Spanish, Cambodian, Chinese, Farsi, Hmong, Korean, Laotian, Russian, Tagalog, Vietnamese (2/97). *Item #P4015*

★ ***New translation!*** **Are you 11–19 years old? Then you need to be vaccinated!** Covers all vaccinations for teenagers. English, Spanish (4/98). *Item #P4020*

Questions parents ask about baby shots. A brochure about childhood vaccinations (3/99). *Item #P4025*

★ ***New translation!*** **Vaccinations for adults—you're never too old for shots!** A visual table covering all adult vaccinations. English, Spanish (10/97). *Item #P4030*

★ **Immunizations...not just kids' stuff.** Adult immunization brochure. English, Spanish, Chinese (2/97). *Item #P4035*

Shots for adults with HIV. A visual table of shots needed for HIV-positive adults (7/97). *Item #P4041*

Vaccinations for adults with hepatitis C. This one-page sheet describes vaccinations that HCV-positive adults need (10/98). *Item #P4042*

★ **When do children and teens need vaccinations?** A picture of the shot schedule. English, Spanish (3/99). *Item #P4050*

★ **All kids need hepatitis B shots.** A brochure that tells parents all children 0–18 years old need hepatitis B shots. English, Spanish, Armenian, Cambodian, Chinese, Farsi, Hmong, Japanese, Korean, Laotian, Portuguese, Romanian, Russian, Samoan, Somali, Tagalog, Vietnamese (4/98). *Item #P4055*

★ **Chickenpox isn't just an itchy, contagious rash.** A brochure for all ages. English, Spanish, Vietnamese (12/95). *Item #P4070*

★ **Hepatitis A is a serious disease... should you be vaccinated?** A brochure for all ages. English, Spanish, Vietnamese (10/97). *Item #P4080*

★ **Questions frequently asked about hepatitis B.** Four pages of commonly asked questions. English, Spanish (9/96). *Item #P4090*

★ **Every week hundreds of teens are infected with hepatitis B.** A brochure for teens and parents. English, Spanish, Cambodian, Chinese, Hmong, Korean, Laotian, Russian, Tagalog, Vietnamese (5/97). *Item #P4100*

★ **Hepatitis B shots recommended for all new babies.** A brochure for parents of newborns. English, Spanish, Cambodian, Chinese, Hmong, Korean, Laotian, Russian, Vietnamese (1/96). *Item #P4110*

★ **Every week thousands of sexually active people get hepatitis B.** A hepatitis B brochure for adults. English and Spanish (4/98). *Item #P4112*

If you have sex, read this...and stop a killer STD from sneaking up on you (reprinted from *Mademoiselle, 2/99).* Use this article to help convince young women to get vaccinated against hepatitis B. *Item #P4113*

Hepatitis B . . . 100 times easier to catch than HIV. A brochure for men who have sex with men (2/97). *Item #P4115*

You don't have to go all the way to get hepatitis A. A brochure for men who have sex with men (7/97). *Item #P4116*

You are not alone! Article for teens with chronic HBV infection. By S.J. Schwarzenberg, MD, U of MN; and K. Wainwright, RN, Alaska Area Native Health Service, Anchorage (10/98). *Item #P4118*

★ **If you are a hepatitis B carrier...** How hepatitis B carriers can take care of themselves and protect others. English, Spanish, Chinese, Hmong (12/95). *Item #P4120*

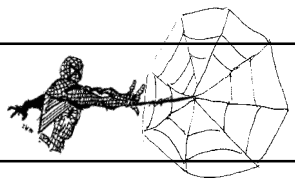
Packet of hepatitis B adoption information. Includes information from adoption specialists throughout the U.S. *Item #P4152 - $5*

★ **Hepatitis B information for adults and children from endemic areas.** Encourages testing and vaccination. English, Cambodian, Chinese, Hmong, Korean, Laotian, Russian, Vietnamese. *Item #P4170*

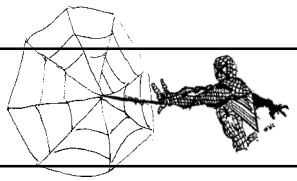
Materials for your clinic staff

★ ***New translation!*** **Summary of rules for childhood immunization.** A two-sided reference table on appropriate use, scheduling, and contraindications of vaccines. English, Spanish (3/99). *Item #P2010*

Revised! **Summary of recommendations for adult immunization.** A two-sided reference table on appropriate use, scheduling, and contraindications of vaccines (8/99). *Item #P2011*



FREE MATERIALS! All of our print items are available free on our website at www.immunize.org



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Ask the experts. Written by CDC experts. Questions and answers on routine immunization published in past issues of *NEEDLE TIPS* (3/99). *Item #P2021 - $5*

Vaccine administration record for children and teens. Keep children and teens' immunization records on this one-page sheet in the front of their medical charts (3/99). *Item #P2022*

Vaccine administration record for adults. Keep adult patients' immunization records on this one-page sheet in the front of their medical charts (8/98). *Item #P2023*

It's federal law! You must give your patients current Vaccine Information Statements (VISs). By Neal A. Halsey, MD, Institute for Vaccine Safety, Johns Hopkins School of Public Health. Everything you *NEED* to know about VISs (10/98). *Item #P2027*

Tips to improve your clinic's immunization rates. For use in both pediatric and adult health settings (2/97). *Item #P2045*

Vaccinate, don't vacillate! Varicella kills 100 people each year in the U.S. What are you waiting for? By Walter A. Orenstein, MD, Ass't Surgeon General, Director, NIP, CDC. If you aren't yet convinced that it's important to vaccinate for varicella, read this! (10/98). *Item #P2058*

Hospitals & doctors sued for failing to immunize. Seven lawsuits against physicians and hospitals (12/94). *Item #P2060*

Recommended child and adult dosages of the two brands of hepatitis A and B vaccines (10/98). *Item #P2081*

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Hepatitis B and the health care worker. How to protect health care workers, includes post-exposure prophylaxis guidelines (4/98). *Item #P2109*

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Basic facts about adult hepatitis B. A list of adult high-risk groups, interpretation of the hepatitis B panel, and tests to diagnose chronic hepatitis B, C, and D (3/99). *Item #P2112*

Universal prenatal screening for hepatitis B. By D. Freese, MD, Mayo Clinic, Rochester, MN. Reviews neonatal transmission and screening rationale (2/93). *Item #P2120*

Sample hospital perinatal protocols. For HBsAg screening on labor and delivery units and hepatitis B immunization in newborn nurseries (12/95). *Item #P2130*

Management of chronic hepatitis B in children and/or adults. Four liver experts share their management guidelines for chronic hepatitis B. Authored by H. Conjeevaram, MD, University of Chicago (4/99); C. Smith, MD, Minnesota Gastroenterology, Minneapolis, MN (4/99); B.J. McMahon, MD, Alaska Area Native Health Service, Anchorage, AK (3/99); S.J. Schwarzenberg, MD, University of MN (8/94). *Item #P2164 - $5*

Tracking hepatitis B patients and household contacts. Manual tracking system for high-risk families (10/98). *Item #P2180*

Kid art. Immunization artwork (babies, bears, balloons, etc.) you can use to make your own brochures, posters, etc. (9/96). *Item #P3015 - $5*

How to operate a community-based shot clinic. Resource materials to help you run an immunization clinic (10/97). *Item #P3040 - $5*

★ **Screening questionnaire for child and teen immunization.** A form for the patient's parent/guardian to fill out to help staff evaluate which vaccines can be given at that day's visit (12/95). English, Spanish, Chinese, Hmong. *Item #P4060*

★ **Screening questionnaire for adult immunization.** A form your adult patients fill out to help you evaluate which vaccines can be given at that day's visit. English, Spanish (2/97). *Item #P4065*

Sample letter explaining hepatitis B test results to patients (10/97). *Item #P4140*

Videos for your clinic staff

How to Protect Your Vaccine Supply (**Ice, Champagne, and Roses**) (CA Dept. of Health, MN Dept. of Health, 1996, 15 min). This "how-to" video also covers varicella and hepatitis A vaccines. Comes with accompanying print material. *Item #V2010 - $10*

Vaccine Administration Techniques (CA Dept. of Health, 1989, 18 min). A refresher course on the correct techniques for administering vaccines. Comes with accompanying print material. *Item #V2020 - $10*

When to Immunize, When to Wait (CA Dept. of Health, 1995, 22 min). Features CDC's immunization expert, Dr. William Atkinson. Includes accompanying print materials. *Item #V2030 - $10*

In Praise of the Public Health Nurse! (IAC, 1994, 31 min). Features Margaret Morrison, MD, MS Dept. of Health, who stresses that immunization is a team effort. Comes with print material. *Item #V2040 - $10*

Videos for teens and pre-teens

PRICE BREAK! **Immunization Day!** (UCLA, 1997, 13 min). An attention-holding vaccination video for middle school students. *Item #V2050 - ~~$10~~ $5*

Partnership for Prevention (SKB, 1995, 6 min). A hepatitis B video for 11–12-year olds. May not be broadcast on television. *Item #V3012 - $10*

Get the Facts, Then Get the Vax (ASHA, 1995, 6 min). A hepatitis B video for high school students. *Item #V3015 - $10*

Resources for Asians and Pacific Islanders

Contact us! We have resources to help you conduct immunization and/or hepatitis B campaigns in Asian and Pacific Islander communities. We have resource manuals, videos (in English, Cambodian, Hmong, Laotian, Vietnamese, and Mien) and materials to train bilingual workers (videos, slides, training manuals, and more). Fax your request for our **"API Resource List/Order Form"** to (651) 647-9131 or call (651) 647-9009 for more information.

(continued on page 26)

HELP YOURSELF! All of our materials are copyright free! You can order one of any item listed and make as many copies as you need. Use the order form on page 27.

IAC Mouse Pad

A great way to brighten up your mouse's turf!

WARNING! This mouse pad is wildly colorful (7 bright colors) and irresistible! You might want to order more than one!

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Photos, slides, posters, and more

Teen poster! **Roll up your sleeves!** Full-color 11" x 17" poster of kids showing off their hepatitis B shots! Use it for your hepatitis B school vaccination campaigns. *Item #Q2010 - 10 posters for $1 (order in units of 10)*

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NEW! **IAC mousepad**. This mouse pad is wildly colorful and irresistible! You might want to order more than one! *Item #R2000 - $3*

Photo notebook of vaccine-preventable diseases. Includes 20 full-page color photos of children and adults with vaccine-preventable diseases and simple text that describes the diseases. Perfect for taking out into the community to give presentations. Outreach workers love it! (6/99). *Item #R2053 - $75*

Revised! **Unprotected People: Stories of people who have suffered or died from vaccine-preventable diseases.** Six new stories have been added to this collection of first-person stories, case reports, and newspaper articles. All stories illustrate tragedies that occurred because someone wasn't immunized (8/98-6/99). *Item #R2057* - $5

★ **Vaccine-preventable diseases slide set and script.** Includes 31 slides of children and adults with vaccine-preventable diseases. Suitable for use by public health departments, community outreach workers, nursing schools, and medical teaching programs. Comes with English and/or Spanish scripts. Every clinic should have a set of these slides (9/96). *Item #S3010 - $25*

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Join the Coalition for the year 2000! With a $50 membership, we will send you a complete package of all our print materials in the languages you specify.

Ordering Information

- All of our materials are camera ready, copyright free, and reviewed by national experts!
- You can order just one of any item and make as many copies as you need (including our videos).
- Minimum order/donation is $10, please.
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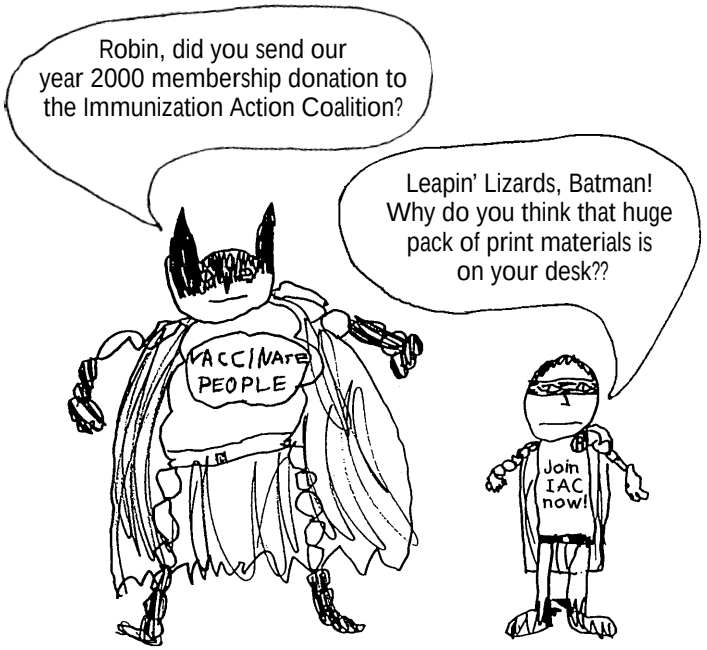

Coalition Order Form

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Before you order, remember: *A $50 annual membership includes camera-ready copies of ALL of the Coalition's print materials.*

Languages English, Spanish — **Ar:** Armenian, **Ca:** Cambodian, **Ch:** Chinese, **Fa:** Farsi, **Hm**: Hmong, **Ja:** Japanese, **Ko**: Korean, **La:** Laotian, **Po:** Portuguese, **Ro:** Romanian, **Ru:** Russian, **Sa:** Samoan, **So:** Somali, **Ta:** Tagalog, **Vi:** Vietnamese

Qty.			Amt.
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___	P4030	Vaccinations for adults: ☐English ☐Spanish $1	
___	P4035	Immunizations...not just kids' stuff: ☐English ☐Spanish ☐Ch $1/ea	
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___	P4050	When do children and teens need vaccinations: ☐English ☐Spanish $1/ea	
___	P4055	All kids need hepatitis B shots: ☐English ☐Spanish ☐Ar ☐Ca ☐Ch ☐Fa ☐Hm ☐Ja ☐Ko ☐La ☐Po ☐Ro ☐Ru ☐Sa ☐So ☐Ta ☐Vi $1/ea	
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___	P4110	Hepatitis B shots recommended for all new babies: ☐English ☐Spanish ☐Ca ☐Ch ☐Hm ☐Ko ☐La ☐Ru ☐Vi $1/ea	
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___	V3012	Partnership for Prevention $10	
___	V3015	Get the Facts, Then Get the Vax $10	
		Photos, slides, posters, and more	
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___	Q2020	"Immunizations..not just kids' stuff," adult poster ..... 10/$1	
___	R2000	IAC Mousepad $3	
___	R2053	Photo notebook of vaccine-preventable diseases $75	
___	R2057	Unprotected people stories $5	
___	S3010	31 slides of vaccine-preventable diseases-script included, check which language(s) you need: ☐English ☐Spanish $25	
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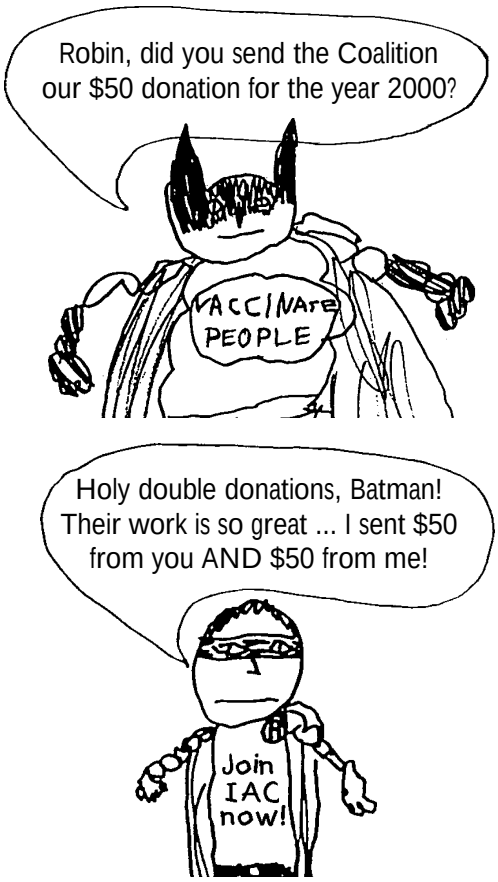

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Dear Colleague:

U.S. immunization policy is under attack. Organized anti-immunization groups are bringing reports of infant deaths and serious childhood illnesses to the media and to members of Congress, attributing these misfortunes to vaccines.

Two congressional hearings have been held since May concerning the safety of childhood vaccines. Vaccine experts, including U.S. Surgeon General Dr. David Satcher, have been called to testify before congressional committees on vaccine safety and the value of vaccines to the health of our nation.

What do we know for certain about the safety of vaccines? We know that all of us combined have delivered millions of doses of vaccines into the arms, legs, and mouths of our patients and that we rarely (if ever) have seen a serious adverse reaction. We also know that any medication and any vaccine carries a small risk of an adverse reaction. Nevertheless, we educate our patients about these small risks and we recommend these medications and vaccines to improve and protect the health of our patients.

Vaccine-preventable diseases and their resulting deaths are now rare in the United States. During the twentieth century, hundreds of thousands of lives have been saved in the United States thanks to vaccines.

- From 1958–1962, the U.S. averaged 503,282 cases of measles each year. In 1998, there were 89 reported cases of measles.
- From 1920–1922, the U.S. averaged 175,885 cases of diphtheria each year. In 1998, there was one case of diphtheria (for more statistics, see page 21).

Vaccines are our greatest public health achievement of the twentieth century. Let's continue to make every effort to educate and vaccinate our patients of all ages. The health of the public during the twenty-first century rests in our hands.

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

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