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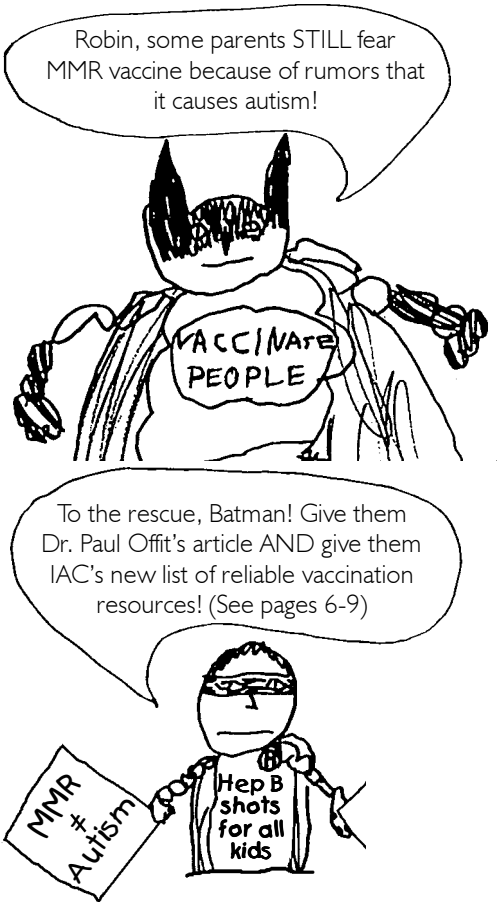
NEEDLE TIPS

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

Editor's note: The Immunization Action Coalition thanks William L. Atkinson, MD, MPH; Stephen C. Hadler, MD; and Linda A. Moyer, RN, of the Centers for Disease Control and Prevention (CDC) for answering the following questions for our readers. Dr. Atkinson, medical epidemiologist at the National Immunization Program, serves as CDC liaison to the Coalition. Dr. Hadler has been acting director of the Division of Viral Hepatitis during Dr. Margolis' special assignment. Ms. Moyer is an epidemiologist at the Division of Viral Hepatitis.

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

General vaccine questions

by William L. Atkinson, MD, MPH

Where can I find the most up-to-date information about vaccine shortages?

The vaccine shortage/supply situation changes frequently. The most current information can be found on CDC's National Immunization Program website at www.cdc.gov/nip/news/shortages

What's new in the ACIP statement "General Recommendations on Immunization" and how do I obtain a copy?

New or revised material in the 2002 revision of the *General Recommendations on Immunization* includes an expansion of the discussion of vaccine spacing and timing; recommendations for vaccines administered by an incorrect route or site; an expanded discussion of contraindications and precautions; and recommendations for vaccination of internationally adopted children, stem cell transplant recipients, and premature infants. Other new sections include a discussion of latex allergy, prevention of adverse events, immunization registries, and risk communication. The document can be downloaded from the *MMWR* website at www.cdc.gov/mmwr or a paper copy can be ordered using the National Immunization Program online system at www.cdc.gov/nip/publications or by calling CDC's Immunization Information Hotline at (800) 232-2522.

What is the "4-day grace period" for vaccine administration and when can I use it?

Since 1994, ACIP has recommended that doses of vaccine separated by less than the recommended minimum interval should not be considered part of a primary series. ACIP continues to recommend that vaccine doses should not be given at intervals less than the minimum interval or earlier than the minimum age. An extensive listing of recom-

(continued on page 19)

NEEDLE TIPS

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Hepatitis B Coalition

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IAC EXPRESS is the Coalition's e-mail news and announcement service. To sign up for this service, send an e-mail message to express@immunize.org with the word SUBSCRIBE in the "Subject:" field.

The Immunization Action Coalition (IAC), a 501(c)3 nonprofit organization, publishes practical immunization information for health professionals to help increase immunization rates and prevent disease.

The Hepatitis B Coalition, a program of IAC, 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 chronically infected with hepatitis B.

IAC welcomes new associate director for IZ projects

Diane Peterson

Diane Peterson simply does not have a retiring personality. Ms. Peterson joined the Immunization Action Coalition (IAC) as Associate Director for Immunization Projects on May 16, 2002, just one year short of her hard-earned retirement from the Minnesota Department of Health, where she worked on immunization for more than 28 years in numerous capacities. According to IAC's Executive Director Dr. Deborah Wexler, "Diane brings to IAC an incredible amount of information about the workings of state immunization programs, knowing many of them well. I think she will truly enhance IAC's already good relationships with states."

Ms. Peterson says about her new position: "I realized this was an opportunity I couldn't pass on. I'm excited about working more with individuals at the national level and working on new issues." Many *NEEDLE TIPS* readers and other immunization proponents already know Diane Peterson through her work in redesigning the widely used harmonized schedule of childhood immunization. (The Advisory Committee on Immunization Practices, or ACIP, accepted her design as the national model in 2001.) Those of you who are involved in the National Association of Immunization Managers (AIM) know Diane through her work on the executive committee of AIM and, last year, as chair. A select group of immunization historians also knows Diane as a trusted source of factual knowledge on the evolution of the vaccine schedule, vaccine products, and the smallpox and polio eradication programs. Perhaps Ms. Peterson's most esoteric—yet very important—immunization interest is terminology for vaccine-preventable diseases and vaccines in different languages. (She claims to be "pretty good at translating Russian immunization records.")

At IAC, Diane has hit the ground running on several research and information-management projects. Neat stacks of paper and project notes cover the long desktop in her office, all overseen by the smiling faces in the framed photographs of family members that surround her. She and her husband, also involved in health issues at the Minnesota Department of Health as chief regulator of HMOs, have two grown children and one grandchild. The golden retriever is the family dog. Notes Ms. Peterson, "We are all up-to-date on our immunizations." ♦

Welcome new board member!

Thomas Stenvig, RN, PhD, MPH, CNAA, is the Immunization Action Coalition's new liaison to the American Nurses Association. He is associate professor with the College of Nursing at South Dakota State University in Brookings. He also is president of the National Network of Immunization Nurses and Associates. Professor Stenvig's research program focuses on nursing behavioral issues related to immunizing children. In 2000, he published "Nurses are key to countering fears, ensuring timely vaccines" in the journal *The American Nurse*. Previously, he was involved in immunization programs for the Indian Health Service for many years while a U.S. Public Health Service Commissioned Officer. ♦

Letter to the Editor

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.

Public health nurse compliments IAC

First of all, as immunization program manager for our health department, I would like to compliment you on your newsletter *NEEDLE TIPS*. . . always informative, interesting, and concise. I have recently received the video "Immunization Techniques: Safe, Effective, Caring," which I ordered from your website. It is a terrific video, one our health department will now use to orient new nurses. Keep up the good work!

—Mary Jane McRae, RN
County Health Nurse Supervisor
Clay County Public Health, FL Dept. of Health

Editor's note: The video "Immunization Techniques: Safe, Effective, Caring," was created by the State of California's Immunization Branch in 2001. For just $15, this is the best investment in nursing education your practice can make. To order a copy, use the form on page 27, or visit www.immunize.org/iztech

Immunization record card for adults!

Give all your adult patients a permanent vaccination record card from IAC. With this card, they'll always know their vaccination status—and next-dose due dates.

The bright canary yellow card comes pre-folded to fit in a wallet alongside other important cards. Printed on rip-proof, smudge-proof, water-proof paper, it's meant to last.

Finally, a high-quality vaccination record card for adults.

To view a full-color version of both sides of this card visit:
www.immunize.org/adultizcards/pictures.htm

How to Order

Adult Immunization Record Cards are available by the box, 250 cards/box.
(Includes a 30-day money back guarantee for your first order of a 250-card box)

There are three ways to order:

1. Order online at https://www.immunize.org/adultizcards
2. Complete this form and fax your order to (651) 647-9131.
3. Complete this form and mail to: **Immunization Action Coalition, 1573 Selby Ave., Suite 234, St. Paul, MN 55104**

Circle the quantity you wish to order.

1 box (250 cards)–$25	2 boxes (500 cards)–$45	3 boxes (750 cards)–$60	4 boxes (1000 cards)–$70

(Please minimize use of abbreviations and print clearly.)

Name: _____

Organization: _____ Dept: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: ( ) _____ E-mail: _____

Make checks or money orders payable to: **Immunization Action Coalition**

Method of payment: ❑ **Check enclosed** ❑ **Purchase order #** _____

Exp. date _____ ❑Visa ❑Mastercard ❑Am. Express ❑Discover

Card # | | | | | | | | | | | | | | | | |

Questions? Call (651) 647-9009.

Vaccine highlights

Latest recommendations and schedules

Editor's note: The information on these pages is current as of July 5, 2002.

The next ACIP meetings

The Advisory Committee on Immunization Practices (ACIP) is a committee of 15 national experts that provides advice and guidance to CDC regarding the most appropriate use of vaccines. ACIP meetings are held three times a year in Atlanta, Ga., and are open to the public. The next meetings will be held Oct. 16-17 and Feb. 26-27, 2003.

ACIP statements

All practices should have a set of these recommendations on vaccines, which are published in the *Morbidity and Mortality Weekly Report (MMWR)*. Continuing education credits are available for reading the statement and completing the brief test at the end of the statement.

To obtain ACIP statements:

- Download individual statements from CDC's website: www.cdc.gov/mmwr
- Visit IAC's website to download individual statements: www.immunize.org/acip
- E-mail your request to nipinfo@cdc.gov
- Call CDC's Immunization Information Hotline at (800) 232-2522.

Recently published ACIP statements:

- "Draft Supplemental Recommendations of ACIP on the Use of Smallpox (Vaccinia) Vaccine" (6/20/02)
- "Prevention & Control of Influenza" (4/12/02)
- "General Recommendations on Immunization" (2/8/02)

Vaccine supply news

On June 26, 2002, the following information was reported on the National Immunization Program's website (www.cdc.gov/nip/news/shortages):

- MMR supply is sufficient to return to the routine schedule as recommended by the ACIP/AAP. However, additional vaccine is not available for ambitious recall or special initiative programs at this time.
- The expected duration of the varicella vaccine shortage is August 2002.

  Editor's note: Until the varicella vaccine supply is restored, ACIP recommends that all vaccine providers in the U.S. delay administration of the routine childhood varicella vaccine dose from age 12–18 months until age 18–24 months. See MMWR, Vol. 51, No. 9.
- DTaP supply is sufficient to return to a 5-dose immunization schedule. However, additional vaccine is not available for ambitious recall or special initiative programs at this time. There are now three DTaP vaccines (Tripedia, Infanrix, and Daptacel) distributed in the U.S.
- PCV supplies are at critically low levels. Expect increased delays into the last quarter of 2002.
- During these periods of shortages, records and tracking systems should be maintained for children who miss any dose of vaccine so that they can be recalled when supplies return to normal.

On July 5, 2002, *MMWR* announced in a notice to readers the FDA's approval of Daptacel, a second DTaP vaccine manufactured by Aventis Pasteur, for use in infants and young children 6 weeks through 6 years of age. Daptacel was licensed by FDA on May 14, 2002.

On June 21, 2002, "Resumption of Routine Schedule for Tetanus and Diphtheria Toxoids" was published in *MMWR*. The notice reinstated the routine schedule for Td boosters for adolescents and adults.

On Feb. 25, 2002, GlaxoSmithKline (GSK) discontinued the manufacturing of Lymerix, the Lyme disease vaccine, and requested that practices return any remaining vaccine. For more information, call GSK at (866) 475-8222.

General vaccine news

On Feb. 8, 2002, the ACIP statement "General Recommendations on Immunization" was published in *MMWR* (Vol. 51, No. RR-2).

This statement was previously published in 1994. The principal changes include expansion of the discussion of vaccination spacing and timing, recommendations for vaccinations administered by an incorrect route, information regarding needle-free injection technology, vaccination of children adopted from countries outside the U.S., timing of live-virus vaccination and tuberculosis screening, expansion of the discussion and tables of contraindications and precautions regarding vaccinations, and the addition of a directory of immunization resources. To obtain a copy, call CDC's Immunization Information Hotline at (800) 232-2522 or visit www.cdc.gov/mmwr/pdf/rr/rr5102.pdf

Editor's note: IAC strongly recommends that all health care settings with vaccination services keep a copy of the General Recommendations with their other essential immunization reference materials.

In March 2002, *Epidemiology and Prevention of Vaccine-Preventable Diseases,* 7th edition (*The Pink Book*), was released by CDC. In addition to updated epidemiologic data and vaccine recommendations, chapters have been added on anthrax and smallpox. You can download *The Pink Book's* chapters and slide sets free from CDC's website at www.cdc.gov/nip/publications/pink To order a hard copy, call the Public Health Foundation at (877) 252-1200 or visit www.phf.org

Influenza vaccine news

On April 12, 2002, the ACIP statement "Prevention and Control of Influenza" was published in *MMWR* (Vol. 51, No. RR-3). The primary target groups recommended for vaccination beginning in October are 1) groups who are at increased risk for influenza-related complications (e.g., all persons aged ≥65 years and persons aged 6 months to 64 years of any age with certain chronic medical conditions); 2) residents of nursing homes; 3) children and adolescents (6 months–18 years of age) who are on long-term aspirin therapy; 4) women who will be in their second or third trimester of pregnancy during the influenza season; 5) household contacts of high-risk persons (including contacts of infants <6 months who are not eligible for vaccine); and 6) children 6 months to

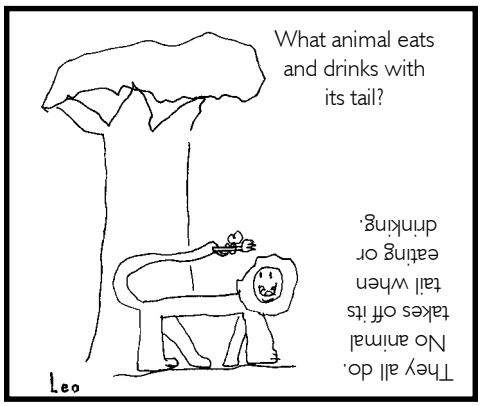
9 years of age who are receiving vaccine for the first time (because they will need a second dose). Because young, otherwise healthy children are at increased risk for influenza-related hospitalization, vaccination of all healthy children aged 6–23 months is encouraged, when feasible, beginning in October. Vaccination of all other groups, primarily healthy persons 2 years of age and older, may begin in November (www.cdc.gov/mmwr/pdf/rr/rr5103.pdf). A new influenza Vaccine Information Statement (VIS), dated June 26, 2002, has also been issued and is on IAC's website at www.immunize.org/vis/2flu.pdf

Hepatitis A & B vaccine news

On June 28, 2002, the 20th anniversary of the licensure of the first vaccine against hepatitis B was highlighted in the *MMWR* article "Achievements in Public Health: Hepatitis B Vaccination—U.S., 1982–2002." Prior to the licensure of the vaccine, an estimated 200,000–300,000 persons in the U.S. were infected annually with HBV, including approximately 20,000 children. The use of the vaccine over the last 20 years has contributed to a decline to an estimated 79,000 new infections in 2001. Despite this success, however, efforts to vaccinate adults at increased risk for HBV infection need to be greatly expanded to achieve complete elimination of HBV transmission.

On May 10, 2002, CDC published "Sexually Transmitted Diseases Treatment Guidelines 2002" in *MMWR*. The statement includes sections on hepatitis A and B, both of which can be transmitted sexually. CDC recommends that every person seeking treatment for an STD should be considered a candidate for hepatitis B vaccination, and some persons should also be considered for hepatitis A vaccination. To obtain a copy, visit www.cdc.gov/mmwr/pdf/rr/rr5106.pdf

On March 15, 2002, the *Journal of Infectious Diseases* published "Incidence and Risk Factors for Acute Hepatitis B in the U.S., 1982–1998: Implications for Vaccination Programs." The article states, "Over half of all patients (55%) reported treatment for a sexually transmitted disease (STD) or incarceration in a prison or jail prior to their illness [with hepatitis B], suggesting that more than half of the acute hepatitis B cases might have been prevented through routine hepatitis B immunization in STD clinics and correctional health care programs." According to the article, only 25% of STD clinics currently offer hepatitis B vaccination.



Smallpox vaccine news

On June 19-20, 2002, the ACIP met and deliberated on the use of smallpox (vaccinia) vaccine following increased concern about use of the virus in a bioterrorist attack. The committee reviewed information gathered from a joint Working Group of the ACIP, the National Vaccine Advisory Committee, and a series of public meetings and forums that had been held in the preceding months.

Under current circumstances, with no confirmed smallpox and the risk of an attack assessed as low, the ACIP decided that vaccination of the general population is not recommended, as the potential benefits of vaccination do not outweigh the risks of vaccine complications.

The ACIP expanded its previous statement, however, to include vaccination of two new groups of persons that would be pre-designated by the appropriate bioterrorism and public health authorities: 1) smallpox response team members who would have responsibility to conduct investigation and follow-up of initial smallpox cases that would necessitate direct patient contact and 2) selected personnel in facilities pre-designated to serve as referral centers to provide care for the initial cases of smallpox.

The ACIP will review these recommendations periodically, or more urgently if necessary. Revisions will be developed as needed. For a copy of the draft statement, visit www.cdc.gov/nip/smallpox/supp_recs.htm

Rubella

On Dec. 14, 2001, "Revised ACIP Recommendation for Avoiding Pregnancy After Receiving a Rubella-Containing Vaccine" was published in *MMWR*. In a review of data on 680 live births from several sources, no cases of congenital rubella syndrome (CRS) were identified among infants born to women who were vaccinated inadvertently against rubella within 3 months of pregnancy or early in pregnancy. ACIP has now shortened its recommended waiting period in which to avoid pregnancy after receipt of rubella-containing vaccine from 3 months to 28 days.

Vaccine safety

On May 30, 2002, the IOM Immunization Safety Committee released its report titled "Immunization Safety Review: Hepatitis B Vaccine and Demyelinating Neurological Disorders." The report concludes that the hepatitis B vaccine does not cause or trigger multiple sclerosis in adults. For a copy of this and other IOM reports, visit www.iom.edu/iom/iomhome.nsf/pages/immunization +safety+review

On March 6, 2002, the IOM's report titled "The Anthrax Vaccine: Is It Safe? Does It Work?" was published. The report concludes that the current anthrax vaccine is both effective and safe but has "drawbacks" that include a 6-dose schedule over 18 months. For information about the report, visit www.nap.edu/catalog/10310.html

On February 20, 2002, the IOM released its report titled "Multiple Immunizations and Immune Dysfunction." According to the report, the current infant and childhood immunization schedule does not increase the risk of contracting Type I diabetes or infections such as pneumonia or meningitis.

Needle safety

OSHA has issued a new Compliance Directive for enforcing the Bloodborne Pathogens Standard, which took effect in April 2002. The directive is titled "Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens." According to an OSHA statement, "The directive highlights the major new requirements of the standard including: (1) evaluation and implementation of safer needle devices as part of the re-evaluation of appropriate engineering controls during an employer's annual exposure control plan; (2) documentation of the involvement of non-managerial, frontline employees in choosing safer devices; and (3) establishment and maintenance of a sharps injury log for recording injuries from contaminated sharps." To read or download the OSHA Directive, visit www.osha-slc.gov/OshDoc/Directive_pdf/CPL_2-2_69.pdf

Current VISs

Here are the most current VISs and the issue date that is printed at the bottom of each. Make sure you are using the current ones. Recycle your old copies.

anthrax	11/6/00	meningococcal	3/31/00
DTaP/DT/DTP	7/30/01	MMR (interim)	6/13/02
hepatitis A	8/25/98	polio	1/1/00
hepatitis B	7/11/01	pneumo (PCV7)	7/9/01
Hib	12/16/98	pneumo (PPV23)	7/29/97
influenza	6/26/02	Td	6/10/94
		varicella	12/16/98

VISs and instructions on how to use them can be obtained from CDC's website: www.cdc.gov/nip/publications/vis or from your state health department (see page 23). The VISs, some in 27 languages, and the VIS instruction sheet are also available on IAC's website: www.immunize.org/vis

Vaccines and Autism

*By **Paul A. Offit, MD,** Director, Vaccine Education Center, Children's Hospital of Philadelphia*

Dr. Offit is the Chief of Infectious Diseases, the Director of the Vaccine Education Center, and the Henle Professor of Immunologic and Infectious Diseases at the Children's Hospital of Philadelphia. In addition, Dr. Offit is a Professor of Pediatrics at the University of Pennsylvania School of Medicine. Dr. Offit has published over 90 papers in medical and scientific journals in the areas of virology and immunology and is a member of the Advisory Committee on Immunization Practices to the Centers for Disease Control and Prevention. He is also the co-author of two books, Vaccines: What Every Parent Should Know *and* Breaking the Antibiotic Habit: A Parent's Guide to Coughs, Colds, Ear Infections, and Sore Throats. *Since Dr. Offit wrote this article, the Institute of Medicine released its report concluding that evidence does not exist to support a link between MMR and autism.*

Andrew Wakefield has embarked on a multi-city tour to promote his idea that the MMR vaccine causes autism. Media coverage surrounding this tour may increase parents' fears about the vaccine, and parents may come to you with questions. This article may be used as a resource for talking points. It provides a concise summary of the studies used to support the hypothesis that MMR causes autism, the studies that refute this hypothesis, and other investigations into the causes of autism.

The "Wakefield" Studies: Studies Hypothesizing That MMR Causes Autism

Those who claim that MMR causes autism often cite two papers by Andrew Wakefield and colleagues. This section summarizes those studies and lists their critical flaws.

The first Wakefield paper

In 1998, Andrew Wakefield and colleagues published a paper in *The Lancet* titled "Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children."[1] Wakefield's hypothesis was that the MMR vaccine causes a series of events that include intestinal inflammation, loss of intestinal barrier function, entrance into the bloodstream of encephalopathic proteins, and consequent development of autism. In support of his hypothesis, Dr. Wakefield described 12 children with neurodevelopmental delay (8 with autism). All of these children had gastrointestinal complaints and developed autism within 1 month of receiving MMR.

Critical flaws

- About 90% of children in England received MMR at the time this paper was written. Because MMR is administered at a time when many children are diagnosed with autism, it would be expected that most children with autism would have received an MMR vaccine, and that many would have received the vaccine recently. The observation that some children with autism recently received MMR is, therefore, expected. However, determination of whether MMR causes autism is best made by studying the incidence of autism in both vaccinated and unvaccinated children. This wasn't done.
- Although the authors claim that autism is a consequence of gastrointestinal inflammation, gastrointestinal symptoms were observed after, not before, symptoms of autism in all 8 cases.
- Children with autism were claimed to have low levels of circulating immunoglobulin A (IgA). However, levels reported were within the normal range for that age group.
- Intestinal nodular hyperplasia (like enlarged tonsils in young children) is considered to be a variant of normal.

The second Wakefield paper

In 2002, Wakefield and coworkers published a second paper examining the relationship between measles virus and autism.[2]

The authors tested intestinal biopsy samples for the presence of measles virus genome from children with and without autism. Measles virus genome was detected by reverse-transcriptase polymerase chain reaction (RT-PCR) and in situ hybridization. Seventy-five of 90 children with autism were found to have measles virus genome in intestinal biopsy tissue as compared with only 5 of 70 control patients.

Critical flaws

- Measles vaccine virus is live and attenuated. After inoculation, the vaccine virus probably replicates 15-20 times. Measles vaccine virus is likely to be taken up by specific cells responsible for virus uptake and presentation to the immune system (termed antigen-presenting cells or APCs). Macrophages, B cells, and dendritic cells (DC) are different types of APCs. Because all APCs are mobile, and can travel throughout the body (including the intestine), it is plausible that a child immunized with MMR would have measles virus genome detected in intestinal tissues using a very sensitive assay (such as RT-PCR). To determine if MMR is associated with autism one must determine if the finding is specific for children with autism. Therefore, children with or without autism must be identical in two ways. First, children with or without autism must be matched for immunization status (i.e., receipt of the MMR vaccine).

  Second, children must be matched for the length of time between receipt of MMR vaccine and collection of the biopsy specimen. Although this information was clearly available to the investigators and critical to their hypothesis, it was specifically omitted from the paper.
- Because natural measles virus is still circulating in England, it would have been important to determine whether the measles virus genome detected in these samples was natural measles virus or vaccine virus. Although primers are available to distinguish these two types of virus, the authors chose not to use them.
- RT-PCR is a very sensitive assay. Laboratories that work with natural measles virus (such as the lab where these studies were performed) are at high risk of getting false positive results. No mention is made in the paper as to how this problem was avoided.

www.immunize.org/catg.d/p2065.pdf • Item #P2065 (6/02)

- As is true for all laboratory studies, the person who is performing the test should not know whether the sample is obtained from a case or a control (blinding). Because no statement is made in the method section, it is unclear that blinding of samples occurred.

Studies Showing That MMR Vaccine Does Not Cause Autism

Four studies have been performed to refute a causal association between receipt of MMR and autism.

1. The first Taylor paper

In 1999, Brent Taylor and coworkers examined the relationship between receipt of MMR and development of autism in an excellent, well-controlled study.[3] Taylor examined the records of 498 children with autism or autism-like disorder. Cases were identified by registers from the North Thames region of England before and after the MMR vaccine was introduced into the United Kingdom in 1988. Taylor then examined the incidence and age at diagnosis of autism in vaccinated and unvaccinated children. He found the following: 1) the percentage of children vaccinated was the same in children with autism as in other children in the North Thames region; 2) no difference in the age of diagnosis of autism was found in vaccinated and unvaccinated children; and 3) the onset of "regressive" symptoms of autism did not occur within 2, 4, or 6 months of receiving the MMR vaccine.

2. The JAMA paper

In 2001, Natalie Smith and coworkers examined the relationship between the increase in the number of cases of autism in California and receipt of the MMR vaccine.[4]

The percentage of children immunized with MMR vaccine between 1980 and 1994 was compared with the incidence of autism during the same period. Although a dramatic increase in the incidence of children with autism was reported, the percentage of children that received MMR vaccine remained the same.

3. The British Medical Journal paper

In a study that supported the findings in the JAMA paper, Hershel Jick and coworkers examined the incidence of autism in England between 1988 and 1993 and compared this with MMR immunization rates.[5] Although the incidence of autism increased, MMR immunization rates remained the same.

4. The second Taylor paper

A second study by Brent Taylor and coworkers examined the relationship between MMR vaccine and "new variant autism" (Wakefield's claim that autism is associated with inflammation of the small intestine).[6] Children with autism diagnosed between 1979 and 1998 were examined. The authors compared the number of children with autism and intestinal symptoms before 1988 and after 1988 (MMR was introduced into England in 1988). There was no difference. They concluded that there was, therefore, no evidence for "new variant autism" and provided further evidence that MMR vaccine was not associated with autism.

Studies On The Etiology of Autism

Studies have focused on the genetics of autism and the timing of the first symptoms of autism.

Genetics of autism

One of the best ways to determine whether a particular disease or syndrome is genetic is to examine the incidence in identical (monozygotic) and fraternal (dizygotic) twins. Using a strict definition of autism, when one twin has autism, 60% of monozygotic and 0% of dizygotic twins have autism. Using a broader definition of autism (i.e., autistic spectrum disorder), when one twin has autism, approximately 92% of monozygotic and 10% of dizygotic twins have autism. [7,8]

Therefore, autism clearly has a genetic basis.

Timing of development of autism

- **Autism symptoms are present before 1 year of age**

  Perhaps the best data examining when symptoms of autism are first evident are the "home-movie studies." These studies took advantage of the fact that many parents take movies of their children during their first birthday (before they have received the MMR vaccine). Home movies from children who were eventually diagnosed with autism and those who were not diagnosed with autism were shown to blinded neurodevelopmental specialists. Investigators were, with a very high degree of accuracy, able to separate autistic from non-autistic children at 1 year of age.[9-13]

  These studies found that subtle symptoms of autism are present earlier than some parents had suspected, and that receipt of the MMR vaccine did not precede the first symptoms of autism.

- **Autism symptoms are present before 4 months of age**

  Other investigators extended the home-movie studies of 1-year-old children to include videotapes of children taken at 2-3 months of age. Using a sophisticated movement analysis, videos from children eventually diagnosed with autism or not diagnosed with autism were coded and evaluated for their capacity to predict autism. Children who were eventually diagnosed with autism were predicted from movies taken in early infancy.[14]

  This study supported the hypothesis that very subtle symptoms of autism are present in early infancy and argue strongly against vaccines as a cause of autism.

- **Evidence that autism occurs in utero**

  Toxic or viral insults in utero as well as certain central nervous system disorders are associated with an increase in the incidence of autism.

  For example, children exposed to thalidomide during the first or early second trimester were found to have an increased incidence of autism.[15] However, autism occurred in children with ear, but not arm or leg, abnormalities. Because arms and legs develop after 24 days gestation, the risk period for autism following receipt of thalidomide must be before 24 days gestation. In support of this finding, Rodier and colleagues[16] found evidence for structural brainstem abnormalities in children with autism. These abnormalities could only have occurred during brainstem development in utero.

(continued on page 8)

Similarly, children with congenital rubella syndrome are at increased risk for development of autism.[17-23] Risk is associated with exposure to rubella prenatally, but not postnatally.

Finally, children with fragile X syndrome or tuberous sclerosis are also at increased risk of developing autism.

Taken together, these findings indicate that autism is likely due to abnormalities of the central nervous system that occur in utero.

Summing Up

Studies of 1) the genetics of autism, 2) the timing of the first symptoms of autism (home-movie studies), 3) the relationship between autism and the receipt of the MMR vaccine, 4) the histopathology of the central nervous system of children with autism, and 5) thalidomide, natural rubella infection, fragile X syndrome, and tuberous sclerosis all support the fact that autism occurs during development of the central nervous system early in utero.

Unfortunately, for parents who will someday bear children diagnosed with autism, the controversy surrounding vaccines has diverted attention and resources away from a number of promising leads.

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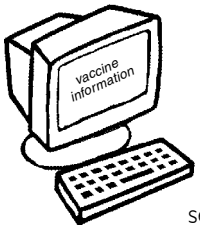
Reliable Sources of Immunization Information: Where to go to find answers!



Websites

Allied Vaccine Group
www.vaccine.org
The Allied Vaccine Group is composed of select organizations dedicated to presenting valid scientific information about vaccines.

CDC's Division of Viral Hepatitis
www.cdc.gov/hepatitis
The Division of Viral Hepatitis is part of the Centers for Disease Control and Prevention. This website provides a substantial amount of information on the prevention of viral hepatitis.

CDC's National Immunization Program
www.cdc.gov/nip
The National Immunization Program provides leadership for the planning, coordination, and implementation of immunization activities nationwide.

Childhood Immunization Support Program
www.cispimmunize.org
Created by the American Academy of Pediatrics, this is an immunization website for parents and health professionals.

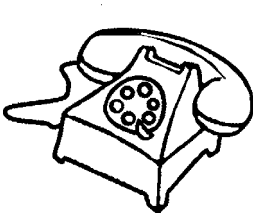
Immunization Action Coalition
www.immunize.org
The Coalition is a nonprofit organization that promotes immunization for all people against vaccine-preventable diseases. The website offers educational pieces for parents, health professionals, and the public.

Nat'l Network for Immunization Information (NNii)
www.immunizationinfo.org
NNii provides current, science-based, extensively reviewed information to health professionals, the media, policy makers, and the public.

Nat'l Vaccine Program Office (NVPO)
www.cdc.gov/od/nvpo
NVPO is a federal program that provides pertinent information about childhood, adolescent, and adult immunization policy.

Vaccine Education Center at Children's Hospital of Philadelphia
www.vaccine.chop.edu
The goal of the Vaccine Education Center is to accurately communicate the facts about each childhood vaccine as well as how vaccines are made, how and why vaccines work, who recommends them, and more.

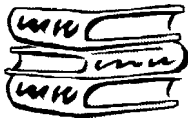
Phone Numbers



CDC's Hepatitis Hotline
Get information by recording, fax, or voice. (888) 443-7232 (4HEPCDC)

CDC's Immunization Information Hotline
A toll-free number for consumers and health professionals who have questions about vaccine-preventable diseases.
English: (800) 232-2522; Spanish: (800) 232-0233;
TTY: (800) 243-7889 (teletypewriter)

Books for Parents



Vaccines: What Every Parent Should Know
By Paul Offit, MD, and Louis Bell, MD, IDG Books, 1999.
To purchase, visit your local bookstore, call John Wiley & Sons, Inc. at (800) 225-5945, or visit www.wiley.com

Vaccinating Your Child: Questions and Answers for the Concerned Parent
By Sharon Humiston, MD, MPH, and Cynthia Good, Peachtree Publishers, 2000. To purchase, visit your local bookstore or call Peachtree Publishers at (800) 241-0113.

Parents' Guide to Childhood Immunization
A 94-page booklet from CDC's National Immunization Program at www.cdc.gov/nip/publications/Parents-Guide/default.htm
Call (800) 232-2522 or complete the online order form at: www.cdc.gov/nip/publications

Plain Talk About Childhood Immunizations
An online booklet, also available in Spanish, from Public Health–Seattle & King County, Washington at www.metrokc.gov/health/immunization/childimmunity.htm Hard copies may be ordered by calling (360) 236-3569.

www.immunize.org/catg.d/p4012.pdf • Item #P4012 (7/02)

How to Administer Intramuscular (IM) Injections

Administer these vaccines via intramuscular (IM) route: DTaP, DT, Td, Hib, hepatitis A, hepatitis B, influenza, PCV7. Administer IPV and PPV23 either IM or SC.

Patient age	Site	Needle size
Infants (birth to 12 mos. of age)	Vastus lateralis muscle in anterolateral aspect of middle or upper thigh	7/8" to 1" needle, 23–25 gauge
Young children (12 to 36 mos. of age)	Vastus lateralis muscle preferred until deltoid muscle has developed adequate mass	7/8" to 1" needle, 23–25 gauge
Older children (>36 mos. of age) and adults	Thickest portion of deltoid muscle—above level of armpit and below acromion	1" to 2" needle, 23–25 gauge

Needle insertion

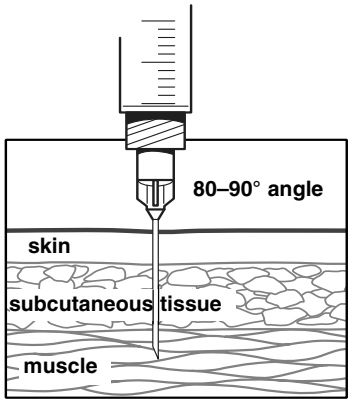
Use a needle long enough to reach deep into the muscle.

Insert needle at an 80–90° angle to the skin with a quick thrust.

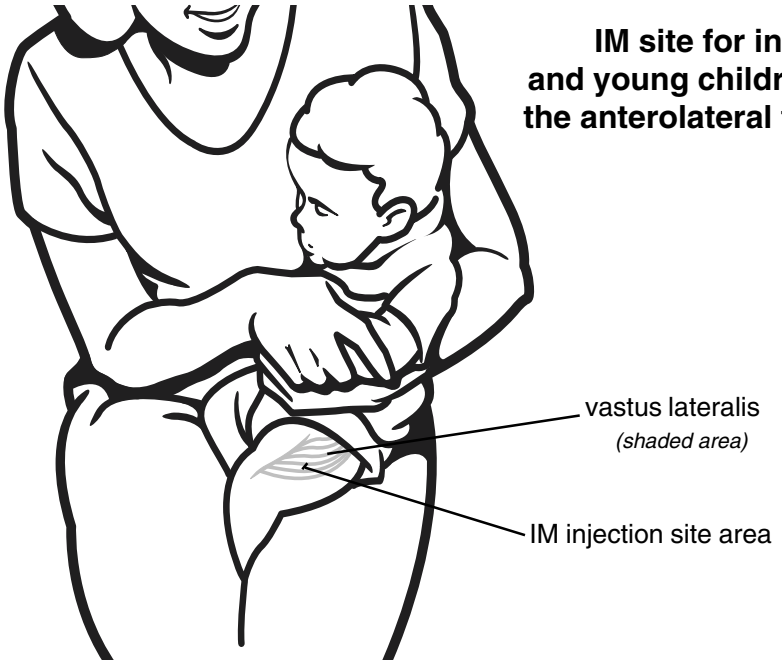
There are no data to document the necessity of aspiration.*

Multiple injections given in the same extremity should be separated by a minimum of 1".

*American Academy of Pediatrics. *2000 Red Book: Report of the Committee on Infectious Diseases*: p.18.

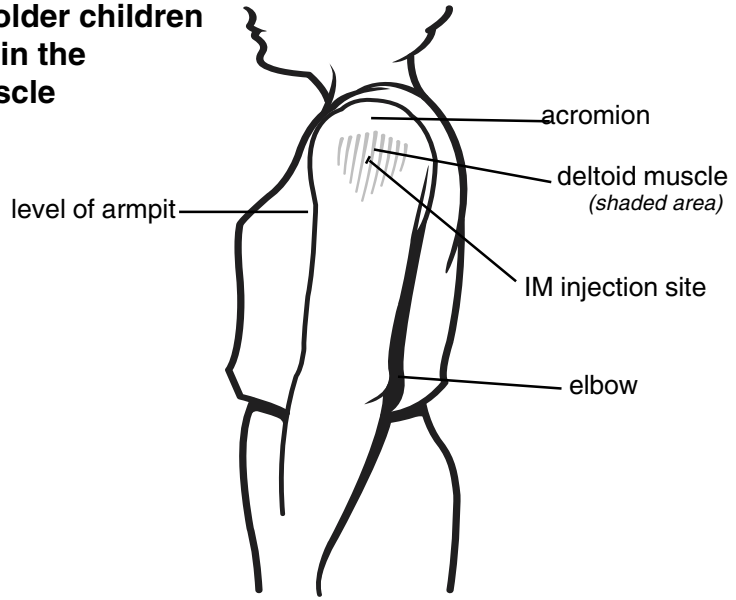


IM site for infants and young children in the anterolateral thigh



Insert needle at an 80–90° angle into vastus lateralis muscle in the anterolateral aspect of middle or upper thigh.

IM site for older children and adults in the deltoid muscle



Insert needle at an 80–90° angle into densest portion of deltoid muscle—above the level of armpit and below the acromion.

Adapted by the Immunization Action Coalition courtesy of the Minnesota Department of Health

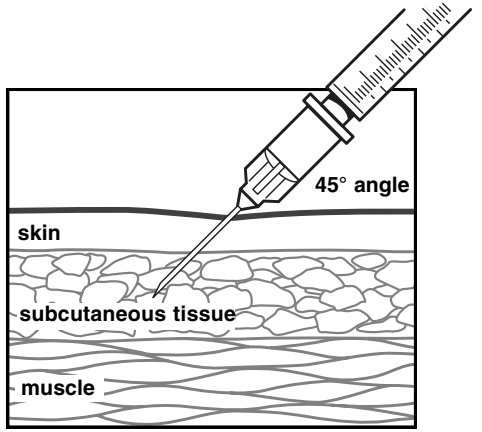
www.immunize.org/catg.d/p2020.pdf • Item #P2020 (07/02)

How to Administer Subcutaneous (SC) Injections

Administer these vaccines via subcutaneous (SC) route: MMR, varicella, meningococcal. Administer IPV and PPV23 either SC or IM.

Patient age	Site	Needle size	Needle insertion
Infants (birth to 12 mos. of age)	Fatty area of the thigh	5/8" to 3/4" needle, 23–25 gauge	Pinch up on SC tissue to prevent injection into muscle. Insert needle at 45° angle to the skin. There are no data to document the necessity of aspiration.* Multiple injections given in the same extremity should be separated by a minimum of 1".
Young children (12 to 36 mos. of age)	Fatty area of the thigh or outer aspect of upper arm (see both illustrations below)	5/8" to 3/4" needle, 23–25 gauge	
Older children (>36 mos. of age) and adults	Outer aspect of upper arm	5/8" to 3/4" needle, 23–25 gauge	

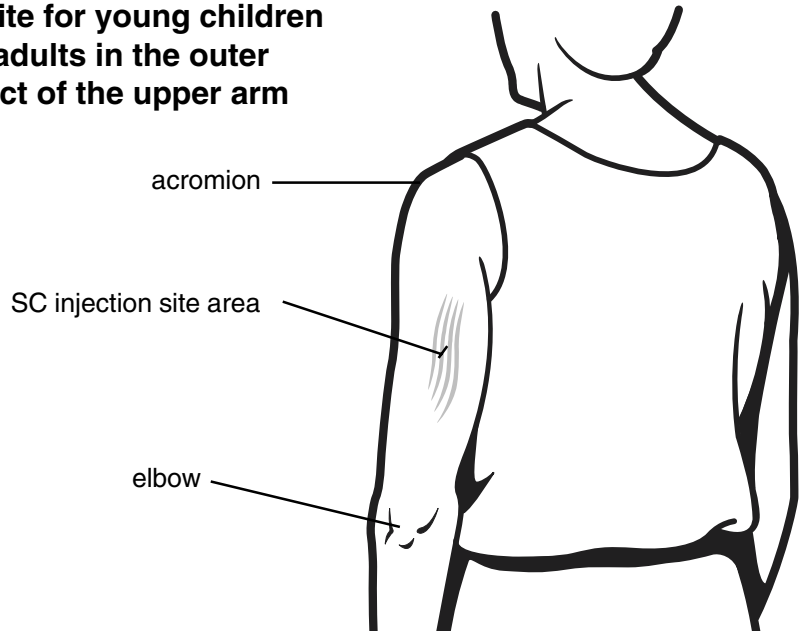
*American Academy of Pediatrics. *2000 Red Book: Report of the Committee on Infectious Diseases*: p.18.



SC site for infants and young children in the anterolateral thigh

Insert needle at a 45° angle into fatty area of anterolateral thigh. Make sure you pinch up on SC tissue to prevent injection into the muscle.

SC site for young children and adults in the outer aspect of the upper arm



Insert needle at a 45° angle into outer aspect of upper arm. Make sure you pinch up on the SC tissue to prevent injection into the muscle.

Adapted by the Immunization Action Coalition courtesy of the Minnesota Department of Health

www.immunize.org/catg.d/p2020.pdf • Item #P2020 (07/02)

Protect Your Vaccines: Check Temperatures Twice a Day! Mo./Yr.:_____ Days 1–15

Instructions: Place an "X" in the box that corresponds with the temperature. The hatched zones represent unacceptable temperature ranges. If the temperature recorded is in the hatched zone: 1. **Store the vaccine** under proper conditions as quickly as possible, 2. **Call the vaccine manufacturer(s)** to determine whether the potency of the vaccine(s) has been affected, 3. **Call the immunization program at your local health department** for further assistance: (_____) _____, and 4. **Document the action taken** on the reverse side of this log.

Day of Month		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
Exact Time																															
°F Temp		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
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Room temp																															
Staff Initials																															

Adapted by the Immunization Action Coalition courtesy of the Michigan Department of Community Health

www.immunize.org/catg.d/p3039.pdf • Item #P3039 (7/02)

Protect Your Vaccines: Check Temperatures Twice a Day!

Mo./Yr.:_____ **Days 16–31**

Instructions: Place an "X" in the box that corresponds with the temperature. The hatched zones represent unacceptable temperature ranges. If the temperature recorded is in the hatched zone: 1. **Store the vaccine** under proper conditions as quickly as possible, 2. **Call the vaccine manufacturer(s)** to determine whether the potency of the vaccine(s) has been affected, 3. **Call the immunization program at your local health department** for further assistance: (_____) _____, and 4. **Document the action taken** on the reverse side of this log.

	Day of Month	16		17		18		19		20		21		22		23		24		25		26		27		28		29		30		31	
	Exact Time																																
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Adapted by the Immunization Action Coalition courtesy of the Michigan Department of Community Health

The Truth about Using VISs

Many health care providers have heard misconceptions about the use of Vaccine Information Statements (VISs). A VIS is a two-sided information sheet developed by the Centers for Disease Control and Prevention (CDC) informing vaccine recipients (or, if a minor, the parents or legal representatives), of the benefits and risks of a vaccine. The National Childhood Vaccine Injury Act of 1986, a federal law, requires VISs be given out whenever certain vaccines are given. Here are true statements about VISs to counter the most common myths.

Myth: VISs are only required when vaccinating children.
Truth: Federal law requires that VISs be used when vaccinating patients of all ages, not just children.

Myth: You must provide a VIS when giving the first dose of a vaccine series, but it's optional for subsequent doses.
Truth: The most current VIS must be provided before each dose of vaccine is given, including those given in a series. If three doses are required, then three VISs must be given. (A child or adult's medical history may have changed between doses and the information read earlier may no longer apply.)

Myth: VISs must be used for vaccines supplied via the public sector (e.g., VFC); they're optional for vaccines purchased privately.
Truth: VISs are required when certain vaccines are administered, regardless of their source. These vaccines include DTaP, Td, MMR, polio, hepatitis B, Hib, pneumococcal conjugate, and varicella.

Myth: VISs for influenza, hepatitis A, pneumococcal polysaccharide, meningococcal, and anthrax are completely optional.
Truth: While VISs for these diseases are available, they are not required by the federal law but are required if a provider is administering vaccine purchased through a CDC contract. For example, if a clinic gets flu vaccine from the state health department for VFC-eligible children, they must use the most current VIS for influenza.

Myth: If there isn't enough time to have the patient read the VIS before the shots are given, you can give him or her a copy to read at home.
Truth: The idea of a VIS is to provide information about the vaccine and the disease just before the patient will receive the vaccine. It is acceptable, however, to supplement the usual process by giving out VISs at additional times (e.g., pre-natal visits or at birth).

Myth: Federal law requires a signature of the patient (parent/legal representative) that he or she received the appropriate VIS.
Truth: Signatures are no longer required by federal law (although some states may have a separate requirement). To verify that a VIS was given, providers must record in the patient's chart (or permanent office log or file) the following information:

- Which VIS was given (that is, for which vaccine)
- Publication date on the VIS (must be the current version)
- Date the VIS was given

The biggest myth about VISs is that they are just "busy work" and don't have any real benefit. The truth is, by using the VISs with your patients, you are helping to foster **a better educated patient population** and you're doing the right thing.

Myth: Providers can modify a VIS to better suit their practices.
Truth: Providers should not change a VIS or write their own VISs. It is permissible to add a practice's name, address, or phone number to an existing VIS. Providers are encouraged to supplement the VIS with other educational materials.

Myth: It's too complicated to use the VISs with patients who don't read or speak English so it's okay to omit their use.
Truth: The law requires that providers ensure all patients (parents/legal representatives) receive the appropriate VIS, regardless of their ability to read English. You may also choose to read them aloud or play one of the videotapes that are available. VISs are also available in 27 languages from IAC's website at www.immunize.org/vis

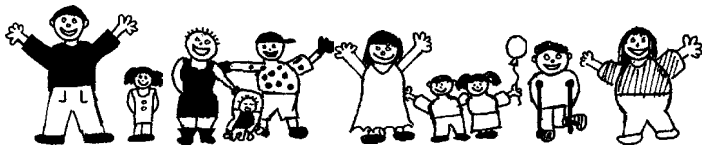
Myth: Since there aren't VISs for combination vaccines, a VIS can't be given when using these vaccines.
Truth: When giving combination vaccines for which no VIS exists (e.g., Comvax), give out all relevant single VISs. In the case of Comvax, give both Hepatitis B and Hib VISs.

Myth: Merely giving the patient or parent a laminated copy of the VIS to read prior to immunization is adequate under the law.
Truth: If you do this, you must also give the patient or parent a copy of the VIS to take home.

Myth: VISs are merely a bureaucratic hassle and complicate the provider's job in vaccinating his/her patients.
Truth: Providing VISs does take some work, but patients and providers both benefit. The patient/parent who is provided with a VIS feels he or she has a part in the decision-making process. The patient may also identify a valid personal contraindication to immunization after reading the VIS. Finally, the VIS provides many answers to patients' questions about common and uncommon side effects of each vaccine, thereby saving staff time.

Myth: It's too difficult to know the most current VIS information and requirements and it's not all that important anyway.
Truth: The federal law requires that you give the patient the most current version. All current VISs are available from CDC's National Immunization Program (www.cdc.gov/nip), the CDC's Immunization Information Hotline at (800) 232-2522, and your state health department. And, of course, you can always find the most up-to-date information on VISs by visiting the IAC website: www.immunize.org/vis

www.immunize.org/catg.d/p2028.pdf • Item #P2028 (07/02)



Summary of Rules for Childhood Immunization*

Adapted from ACIP, AAP, and AAFP by the Immunization Action Coalition, July 2002

Vaccine	Ages usually given and other guidelines	If child falls behind	Contraindications
DTaP (Diphtheria, tetanus, acellular pertussis) *Give IM*	• Give at 2m, 4m, 6m, 15–18m, 4–6yrs of age. • May give dose #1 as early as 6wks of age. • May give #4 as early as 12m of age if 6m have elapsed since #3 and the child is unlikely to return at age 15–18m. • Do not give DTaP to children ≥7yrs of age (give Td). • May give with all other vaccines. • It is preferable but not mandatory to use the same DTaP product for all doses.	• #2 & #3 may be given 4wks after previous dose. • #4 may be given 6m after #3. • If #4 is given before 4th birthday, wait at least 6m for #5 (4–6yrs of age). • If #4 is given after 4th birthday, #5 is not needed. • Do not restart series, no matter how long since previous dose.	Do not give if patient (1) has had an anaphylactic reaction to a prior dose or to any vaccine component or (2) has a moderate or severe acute illness. (Minor illness is not a reason to postpone vaccination.) **Contraindication for DTaP only:** Previous encephalopathy within 7d after DTP/DTaP. **Precautions for DTaP:** The following are precautions, not contraindications. When these conditions are present, the individual child's disease risk should be carefully assessed. In situations when the benefit outweighs the risk (e.g., community pertussis outbreak), vaccination should be considered. • T≥105°F (40.5°C) within 48hrs after previous dose. • Continuous crying lasting ≥3hrs within 48hrs after previous dose. • Previous convulsion within 3d after immunization. • Pale or limp episode or collapse within 48hrs after previous dose. • Unstable progressive neurologic problem (defer until stable).
DT *Give IM*	• Give to children <7yrs of age if child had a serious reaction to "P" in DTaP/DTP or if parents refuse the pertussis component. • May give with all other vaccines.		
Td *Give IM*	• Use Td, not TT, for persons ≥7yrs of age for all indications. • A booster dose is recommended for children 11–12yrs of age if 5yrs have elapsed since last dose. Then boost every 10yrs. • May give with all other vaccines.	• For those never vaccinated or with unknown vaccination history: give dose #1 now, give 2nd dose 4wks later, give 3rd dose 6m after #2, then give booster every 10yrs. • Do not restart series, no matter how long since prior dose.	
MMR (Measles, mumps, rubella) *Give SC*	• Give #1 at 12–15m of age. Give #2 at 4–6yrs of age. • Make sure that all children (and teens) over 4–6yrs of age have received both doses of MMR. • If a dose was given before 12m of age, it doesn't count as the first dose, so give #1 at 12–15m of age with a minimum interval of 4wks between these doses. • May give with all other vaccines. • If MMR and Var (and/or yellow fever vaccine) are not given on the same day, space them ≥28d apart.	• 2 doses of MMR are recommended for all children ≤18yrs of age. • Dose should be given whenever it is noted that a child is behind. Exception: If MMR and Var (and/or yellow fever vaccine) are not given on the same day, space them ≥28d apart. • Dose #2 can be given at any time if at least 28d have elapsed since dose #1 and both doses are administered after 1yr of age. • Do not restart the series, no matter how long since previous dose.	• Pregnancy or possibility of pregnancy within 4 weeks (use contraception). • If blood, plasma, and/or immune globulin were given in past 11m, see ACIP statement *General Recommendations on Immunization* regarding time to wait before vaccinating. • HIV is NOT a contraindication unless severely immunocompromised. • Immunocompromised persons (e.g., because of cancer, leukemia, lymphoma). **Note:** For patients on high-dose immunosuppressive therapy, consult ACIP recommendations regarding delay time. **Note:** MMR is not contraindicated if a PPD test was recently applied. If PPD and MMR weren't given on same day, delay PPD for 4–6wks after MMR.
Varicella (Var) (Chickenpox) *Give SC*	• Routinely give at 12–18m of age. • Vaccinate all children ≥12m of age including all adolescents who have not had chickenpox. • May use as postexposure prophylaxis if given within 3–5d. • May give with all other vaccines. • If Var and MMR (and/or yellow fever vaccine) are not given on the same day, space them ≥28d apart. • Do not withhold vaccine from children of pregnant women.	• Do not give to children <12m of age. • Susceptible children <13yrs of age should receive 1 dose. • Susceptible persons ≥13yrs of age should receive 2 doses 4–8wks apart. • Do not restart series, no matter how long since previous dose.	• Pregnancy or possibility of pregnancy within 4 weeks. • If blood, plasma, and/or immune globulin (IG or VZIG) were given in past 11m, see ACIP statement *General Recommendations on Immunization* regarding time to wait before vaccinating. • Persons immunocompromised due to high doses of systemic steroids, cancer, leukemia, lymphoma, or immunodeficiency. **Note:** For patients with humoral immunodeficiency, HIV infection, or leukemia, or for patients on high doses of systemic steroids, see ACIP recommendations. • For children taking salicylates, see ACIP recommendations.
Influenza *Give IM*	Vaccinate children ≥6m of age with risk factors and encourage vaccination of all children aged 6-23m when feasible. Consult the current year's ACIP statement *Prevention and Control of Influenza* for details.		
Meningococcal *Give SC*	Vaccinate children ≥2yrs of age with risk factors. Discuss disease risk and vaccine availability with college students. Consult ACIP statement on meningococcal disease (6/30/00) for details.		

*Rules for combination vaccines consist of those applicable to each of the components. For detailed information, see the ACIP statements which are published in the *MMWR*. To obtain them, visit www.cdc.gov/nip/publications/ACIP-list.htm or visit the Immunization Action Coalition's (IAC) website at www.immunize.org/acip For recommendations of the American Academy of Pediatrics (AAP), consult AAP's *2000 Red Book* and the journal *Pediatrics,* or visit www.immunize.org/aap For information about vaccine shortages in the United States, visit www.cdc.gov/nip/news/shortages

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Summary of Rules for Childhood Immunization (continued)

Vaccine	Ages usually given and other guidelines	If child falls behind	Contraindications
Polio (IPV) *Give SC or IM*	• Give at 2m, 4m, 6–18m, and 4–6yrs of age. • May give #1 as early as 6wks of age. • Not routinely recommended for those ≥18yrs of age (except certain travelers). • May give with all other vaccines.	• All doses should be separated by at least 4wks. • If #3 of an all-IPV or all-OPV series is given at ≥4yrs of age, dose #4 is not needed. • Those who receive a combination of IPV and OPV doses must receive all 4 doses. • Do not restart series, no matter how long since previous dose.	Do not give if patient (1) has had an anaphylactic reaction to a prior dose or to any vaccine component or (2) has a moderate or severe acute illness. (Minor illness is not a reason to postpone vaccination.)
Hib *Give IM*	• HibTITER (HbOC) & ActHib or OmniHib (PRP-T): give at 2m, 4m, 6m, 12–15m (booster dose). • PedvaxHIB or Comvax (containing PRP-OMP): give at 2m, 4m, 12–15m. • Dose #1 of Hib vaccine may be given as early as 6wks of age but no earlier. • The last dose (booster dose) is given no earlier than 12m of age and a minimum of 8wks after the previous dose. • May give with all other vaccines. • Hib vaccines are interchangeable; however, if different brands of Hib conjugate vaccines are administered, a total of three doses are necessary to complete the primary series in infants. • Any Hib vaccine may be used for the booster dose. • Hib is not routinely given to children ≥5yrs of age.	**Rules for all Hib vaccines:** • If #1 was given at 12–14m, give a booster dose in 8wks. • Give only 1 dose for unvaccinated children ≥15m and <5yrs of age. • Do not restart series, no matter how long since previous dose. **Rules for HibTITER, ActHib, and OmniHib:** • #2 and #3 may be given 4 wks after previous dose. • If #1 was given at 7–11m, only 3 doses are needed; #2 is given 4–8wks after #1, then boost at 12–15m. **Rules for PedvaxHiB:** • #2 may be given 4wks after dose #1	
Hepatitis B *Give IM*	• Vaccinate all newborns prior to hospital discharge. Give dose #2 at 1–4m, and dose #3 at 6–18m. After the first dose, the series may be completed with single-antigen vaccine or up to 3 doses of Comvax, e.g., 2m, 4m, 12m of age. Dose #1 can be given as late as 2m of age if the mother is assured to be HBsAg negative, but this is not the preferred schedule. • Vaccinate all children 0 through 18yrs of age. • For older children/teens, schedules include: 0-, 1-, 6-m; 0-, 2-, 4-m; 0-, 1-, 4-m. • Children born (or whose parents were born) in countries of high HBV endemicity or who have other risk factors should be vaccinated ASAP. • **If mother is HBsAg-positive:** give HBIG + dose #1 within 12hrs of birth, #2 at 1–2m, and #3 at 6m of age. • **If mother's HBsAg status is unknown:** give dose #1 within 12hrs of birth, #2 at 1–2m, and #3 at 6m of age. If mother is later found to be HBsAg positive, give infant HBIG within 7d of birth. • **Note:** For premature infants, hepatitis B vaccination recommendations may be different. Consult the *2000 Red Book* (p. 54). • May give with all other vaccines.	• Do not restart series, no matter how long since previous dose. • 3-dose series can be started at any age. • Minimum spacing for children and teens: 4wks between #1 & #2, and 8wks between #2 & #3. Overall there must be ≥16wks between #1 & #3. • The last dose in infant hepatitis B series should not be given earlier than 6m of age. **Dosing of hepatitis B vaccines:** Vaccine brands are interchangeable for 3-dose schedules. For Engerix-B, use 10mcg for 0 through 19yrs of age. For Recombivax HB, use 5mcg for 0 through 19yrs of age. **Alternative dosing schedule for unvaccinated adolescents aged 11 through 15yrs:** Give Recombivax HB two 10mcg doses (adult dosage) spaced 4–6m apart. (Engerix-B is not licensed for a 2-dose schedule.)	
Hepatitis A *Give IM*	• Vaccinate children ≥2yrs old who live in areas with consistently elevated rates of hepatitis A, as well as children who have specific risk factors. (See ACIP statement and column 3 of this table for details.) • Children who travel outside of the U.S. (except to Western Europe, New Zealand, Australia, Canada, or Japan). • Dose #2 is given a minimum of 6m after dose #1. • Dose #1 may not be given earlier than 2yrs of age. • May give with all other vaccines.	• Do not restart series, no matter how long since previous dose. • Hepatitis A vaccine brands are interchangeable. • Consult your local/state public health authority for information regarding your city, county, or state hepatitis A rates. States with consistently elevated rates (average ≥10 cases per 100,000 population from 1987-1997) include the following: AL, AZ, AK, CA, CO, ID, MO, MT, NV, NM, OK, OR, SD, TX, UT, WA, and WY.	
Pneumococcal — **PCV** *Give IM*	• Give at 2m, 4m, 6m, and 12–15m of age. • Dose #1 may be given as early as 6wks of age. • For unvaccinated high-risk children* 24–59m of age, give 2 doses. If PPV not previously given, administer ≥8wks after final dose of PCV. • For unvaccinated moderate-risk children† 24–59m of age, consider giving 1 dose. • May give 1 dose to unvaccinated healthy children 24–59m. • PCV is not routinely given to children ≥5 years of age. • May give with all other vaccines.	• Minimum interval for infants <12m of age is 4wks, for ≥12m of age is 8wks. • For infants 7–11m of age: If unvaccinated, give dose #1 now, give 2nd dose 4–8wks later, and boost at 12–15m. If infant has had 1 or 2 previous doses, give next dose now, and boost at 12–15m. • For infants 12–23 months: If not previously vaccinated or only one previous dose before 12m, give 2 doses ≥8wks apart. If infant previously had 2 doses, give booster dose ≥8 wks after previous dose. • Do not restart series, no matter how long since previous dose.	
	*High-risk children: Those with sickle cell disease; anatomic or functional asplenia; chronic cardiac, pulmonary, or renal disease; diabetes mellitus; CSF leak; HIV infection; or immunosuppression. †**Moderate-risk children:** Children aged 24–35m; children aged 24–59m who attend group daycare centers or are of Alaska Native, American Indian, or African American descent.		
Pneumococcal — **PPV** *IM or SC*	Give PPV to high-risk children ≥2yrs of age as recommended in the ACIP statement *Prevention of Pneumococcal Disease* (4/4/97).		

Labor & Delivery and Nursery Unit Guidelines to Prevent Hepatitis B Virus Transmission

The following guidelines may be used to help your hospital establish standing orders for preventing perinatal hepatitis B virus (HBV) transmission in your Labor & Delivery and Nursery Units. They have been reviewed for technical accuracy by the Centers for Disease Control and Prevention (CDC). ***NOTE:*** *Procedures* ***must be*** *in place to (1) review the hepatitis B surface antigen (HBsAg) test results of all pregnant women at the time of hospital admission and (2) give immunoprophylaxis within 12 hours after birth to infants of HBsAg-positive mothers and infants of mothers who do not have documentation of HBsAg test results in their charts. Administration of hepatitis B (HepB) vaccine at birth to <u>all</u> infants is recommended by CDC's Advisory Committee on Immunization Practices, the American Academy of Pediatrics, the American Academy of Family Physicians, and the American College of Obstetricians and Gynecologists.*

Labor & Delivery Unit Guidelines

1. Upon admission, review the HBsAg* lab report and copy the test result onto (1) the labor and delivery record and (2) the infant's delivery record. It is essential to examine a copy of the *original* lab report instead of relying only on the handwritten prenatal record due to the possibility of transcription error, misinterpretation of test results, or misordering of the test.
2. If the HBsAg result is not available, order the test ASAP. Instruct the lab to call the nursery with the result ASAP.
3. Alert the nursery if the mother is HBsAg positive or if the mother's HBsAg result is unknown. These infants require immunoprophylaxis within 12 hours of birth with HepB vaccine (and HBIG if the mother is HBsAg positive).
4. If the woman's HBsAg test result is positive or unknown at the time of admission, notify her of the need to give immunoprophylaxis to her infant within 12 hours of birth.

Nursery Unit Guidelines

♦ Infants born to HBsAg-negative mothers

1. Give HepB vaccine (0.5 mL, IM) before discharge from the nursery.§†
2. Give the mother an immunization record which includes the HepB vaccination date. Remind the mother to bring this personal record card with her each time she brings her baby to the doctor or clinic.
3. Instruct the mother about the importance of her baby completing the entire HepB vaccination series.
4. Make sure that the infant's hospital record clearly indicates the date of HepB vaccine administration and that the hospital record is *always* forwarded to the infant's primary care provider.

♦ Infants born to mothers with unknown HBsAg status

1. Give HepB vaccine (0.5 mL, IM) within 12 hours of birth.§ *Do not wait for test results before giving vaccine*. (For infants weighing <2kg, see special recommendations in item 6 of this section.)
2. Give the mother an immunization record card noting HepB vaccine date and explain the need for further doses to complete the series.
3. Confirm that the lab has drawn a serum specimen from the mother for an HBsAg test, verify when the result will be available and that it will be reported to the nursery ASAP. If the nursery does not receive the report at the expected time, call the lab for the result.
4. If the mother's HBsAg report is positive:
   a. Give HBIG (0.5 ml, IM) to the infant ASAP and alert the mother's and infant's physician(s) of the test result. There is little benefit in giving HBIG if >7 days have elapsed since birth.
   b. Follow instructions in the section **Infants born to HBsAg-positive mothers.**
5. If infant must be discharged before mother's HBsAg result is known:
   a. Clearly document how to reach the parents (addresses, telephone numbers, emergency contacts) as well as the infant's primary care provider, in case further treatment is needed.
   b. Notify the mother's and infant's doctor(s) that the HBsAg result is pending.
6. For infants weighing <2 kg, administer HepB vaccine *and* HBIG within 12 hours of birth. Do not count this as the first dose. Then initiate the full HepB vaccine series at 1–2 mos. of age.

♦ Infants born to HBsAg-positive mothers

1. Give HBIG (0.5 mL, IM) and HepB vaccine (0.5 mL, IM) at separate sites within 12 hours of birth.§ (For infants weighing <2 kg, see special recommendations in item 7 of this section.)
2. Give the mother an immunization record which includes the dates of the HepB vaccine and HBIG, and instruct her to bring this personal record card with her each time her baby sees a provider.
3. Encourage mothers who wish to breastfeed to do so, including following delivery, even if the infant has not yet been vaccinated.
4. Provide the mother with educational and written materials regarding:
   a. the importance of having her baby complete the HepB vaccination schedule on time (1–2 and 6 mos. for monovalent vaccine, and 2, 4, 12 mos. for Comvax);
   b. the importance of post-vaccination testing for the infant following the HepB series to assure immunity;
   c. the mother's need for ongoing medical follow-up for her chronic HBV infection; and
   d. the importance of testing household members for hepatitis B and then vaccinating if susceptible.
5. Notify your local or state health department that the infant has been born and has received post-exposure prophylaxis (include dates of receipt of HBIG and HepB vaccine).
6. Obtain the name, address, and phone number of the infant's primary care clinic and doctor. Notify them of the infant's birth, the receipt of post-exposure prophylaxis, and the importance of additional on-time vaccination and post-vaccination testing.
7. For infants weighing <2 kg, administer HepB vaccine and HBIG within 12 hours of birth. Do not count this dose as the first dose. Then initiate the hepatitis B vaccine series at 1–2 mos. of age.

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*Do not confuse the **HBsAg** test result with any of the following tests:
1. HBsAb or anti-HBs = antibody to hepatitis B surface antigen
2. HBcAb or anti-HBc = antibody to hepatitis B core antigen

Make sure you order the **hepatitis B surface antigen (HBsAg)** test for your patient, and that this test result is accurately recorded on the labor and delivery record and on the infant's delivery summary sheet.

§Federal law requires that you give parents a HepB Vaccine Information Statement (VIS) *prior* to vaccine administration. To obtain VISs, call CDC's Immunization Information Hotline at (800) 232-2522, call your state health department, or download them from IAC's website at: www.immunize.org/vis

†A delay of the initial HepB vaccination up to 2 months of age may *only* be considered for infants of mothers whose HBsAg test is assured to be negative. As of October 17, 2001, the CDC's recommendation is now consistent with the American Academy of Pediatrics (AAP) policy. Since 1992, AAP has recommended a birth dose for all infants and has referred to an alternative schedule beginning with a dose at 2 months as "acceptable."

www.immunize.org/catg.d/p2130per.pdf • Item #P2130 (07/02)

Unprotected people . . .

Young doctor learns he has liver cancer too late

By ***Joel P. Engardio***

A lack of information about how to appropriately screen patients with chronic hepatitis B for liver cancer puts many lives in jeopardy. The following story about a young doctor's death from hepatitis B-related liver cancer is a tragic example of the consequence of inadequate medical attention to people with chronic hepatitis B. For information about the management of patients with hepatitis B, consult a liver specialist experienced in the treatment of viral hepatitis.

To read more articles and case reports about unprotected people, visit IAC's website:

www.immunize.org/stories

From our table at a sidewalk cafe in August 2000, my partner Mark and I took turns pointing out things that made us smile: a young couple pushing a baby stroller, a rambunctious puppy tugging at his leash, an elderly couple holding hands. Our mood was sublime, like the day, as we headed to an open-air jazz festival near San Francisco with a blanket for napping on a grassy slope.

Until a sharp stomach pain made Mark wince and double over. Was it the ulcer he feared? At 30, Mark was a young doctor saddled with debt and the challenge of building a career after eight sleepless years of medical school and training. A life with dogs and kids was only a wistful thought. He crawled into the back seat of the car, cursing and writhing, as I sped him to the emergency room where he worked.

Mark didn't have an ulcer. An ultrasound of his abdomen showed an ominously patchy liver. A biopsy confirmed the worst: cancer. His liver was riddled with so many out-of-control cancerous lesions that neither surgery nor transplant was possible. Chemotherapy would only slow his inevitable, insufferable demise 14 months later. But the question remained, how did such an otherwise perfectly healthy young man, who had a gym-toned body and never drank, end up with the organ of a hard-living alcoholic twice his age? The answer was chronic hepatitis B, a virus that can silently harbor in a healthy liver for decades before unleashing its destructive power.

Mark knew about his hepatitis. He discovered it from blood tests required by his medical internship. But experts at the prestigious Midwestern hospital where Mark did his residency told the 26-year-old not to worry. He was a "healthy" carrier, they said. His symptom-free, nonactive kind of hepatitis wouldn't have to be monitored for liver cancer until he was in his 50s or 60s. Good advice, if Mark were not an Asian man. *(Editor's note: No hepatitis B carrier, regardless of ethnicity, should wait until age 50 or 60 for liver cancer screening. Screening people with chronic hepatitis B infection for liver cancer should generally be done every 6–12 months and should start at the time of hepatitis B diagnosis. Consult a liver specialist experienced in the treatment of viral hepatitis for appropriate monitoring guidelines.)* Had he or his doctors been trained to know that Asians are at accelerated risk because they are typically infected as children, he would have immediately gotten regular ultrasounds and blood tests to catch the cancer that killed him at 31.

Dr. Mark Lim (right) pictured with the author.

Soon after his diagnosis, Mark was shocked to see a sign on a city bus advertising Stanford University's "Jade Ribbon Campaign," a program to raise awareness of his disease. Was there really a chronic hepatitis B-fueled epidemic of liver cancer among young Asian-Americans? Are Asians really 10 times more likely to die from liver cancer than a white person? How come he hadn't heard this before? He was, after all, an Asian doctor practicing in a region with a population that is nearly one-third Asian. But as a victim among healers, what happened to Mark precisely illustrates the problem, says Dr. Samuel So, director of Stanford's Asian Liver Center. "Only in a medical world that relies almost entirely on a Caucasian model for diagnosis and treatment could such a great health disparity exist," says So, who lectures on ethnicity and medicine at Stanford in addition to his surgical and research duties.

Up to 10 percent of adult Asian-Americans have chronic hepatitis B and do not know it. Of those, a quarter will die from liver cancer or failure.

Liver cancer is rampant in Asia. The main culprit is chronic hepatitis B, a virus transmitted by blood or semen. Exposure to it at childbirth is the real problem, because that's when the risk of chronic or lifelong infection is greatest.

Unsanitary living and medical conditions throughout Asia have fueled hepatitis B infection rates there, as large percentages of mothers unknowingly pass the virus to their kids. Since it can take 30 years to manifest, all adult children of Asian immigrants—even those born in the United States—are at risk. Especially sons. The virus may infect the sexes equally, but it triggers deadly cancer more often in men.

Mark was born and raised in suburban Chicago by Chinese parents who had lived in the Philippines. While many newborns are vaccinated for viruses such as hepatitis in the U.S. today, an entire generation now entering adulthood was not. Stanford's Dr. So estimates that up to 10 percent of adult Asian-Americans have chronic hepatitis B and do not know it. Of those, a quarter will die from liver cancer or failure. That is an alarming number, since the Asian-American population is one of the country's fastest-growing minority groups. In California, 30 percent of San Francisco and 12 percent of Los Angeles is Asian. How many unaware young Asian men will double over in pain one day like Mark did?

Before Mark died last October, he became a spokesperson for the Jade Ribbon Campaign (http://liver.stanford.edu), urging all Asians to check their hepatitis status. Confronting his own mortality wasn't easy for him. "It's scary to think of your life in months, instead of years," he told me as his death approached, our dreams of that day at the sidewalk cafe shattered. I am still feeling the anger and despair that can engulf you when the person you love is taken away. It hurts most because Mark Steven Lim was such a vibrant and vital force to his family, friends, and patients. As a talented doctor and consummate human being, he had so much potential to do good. Yet his life was so short, and his death so horrible. In the end, the most he could do was hope his words might inspire his medical colleagues to offer—and his Asian peers to seek—the information that can save thousands like him from his fate. If only they listen. ♦

This article originally appeared in the May 1, 2002, issue of SF Weekly*, a San Francisco newspaper. It is reprinted in* NEEDLE TIPS *by permission of the author.*

mended and minimum intervals and ages for vaccination is included in the new *General Recommendations*. In an effort to increase the flexibility of the complicated childhood immunization schedule, ACIP now recommends that vaccine doses administered up to 4 days before the minimum interval or age can be counted as valid. ACIP believes that administering a dose a few days earlier than the minimum interval or age is unlikely to have a significant negative effect on the immune response to that dose.

The 4-day "grace period" should NOT be used when scheduling future vaccination visits, and should NOT be applied to the 28-day interval between live parenteral vaccines not administered at the same visit. It should be used primarily when reviewing vaccination records (for example, when evaluating a vaccination record prior to entry to daycare or school).

Use of the "grace period" may create a conflict with state daycare and school entry vaccination requirements. In particular, most states require MMR to be given on or after the first birthday. ACIP recommends that providers comply with state and local immunization requirements when scheduling and administering vaccines.

How often should temperatures be recorded for refrigerator and freezer compartments where vaccines are stored?

Temperatures should be recorded for refrigerator and freezer compartments used to store vaccine at least twice a day. Immediate action must be taken if the temperature falls outside the recommended range for either compartment. This is particularly important for refrigerator temperatures ≤32°F.

Editor's note: See IAC's new temperature logs on pages 12-13.

When is a "dormitory style" refrigerator not adequate for storing vaccines?

This type of unit is not acceptable for storing varicella vaccine because the freezer compartment cannot maintain 5°F consistently. A dormitory refrigerator may be used for storing small amounts of vaccines that require only refrigeration if the unit can maintain a consistent temperature of 35 –46°F.

At our clinic we've been giving some of our vaccines by the wrong route, e.g., MMR vaccine IM instead of SC. Do these doses need to be repeated?

ACIP addresses the issue of vaccines given by an incorrect route in the 2002 revision of the *General Recommendations on Immunization*. ACIP recommends that vaccines always be administered by the route recommended by the manufacturer. However, only hepatitis B vaccine should be repeated if given by an incorrect route. MMR and varicella vaccines should be administered by the SC route, but do not need to be repeated if given IM.

If a child is behind on both DTaP and Hib, can Trihibit (DTaP-Hib) be used in a 12-month-old regardless of the number of previous doses of DTaP and Hib?

Footnote #3 of the 2002 *Recommended Childhood Immunization Schedule* states that Trihibit may be used for the booster dose following any Hib vaccine series. Therefore, Trihibit may be used for the *last* dose of the Hib series in children 12 months of age or older who have received at least one prior dose of any Hib vaccine. Trihibit should not be used in children who have received no prior Hib doses or who are less than 12 months of age.

The DTaP VIS shows the 4th dose is given at 15-18 months. I thought you could give it at 12 months of age.

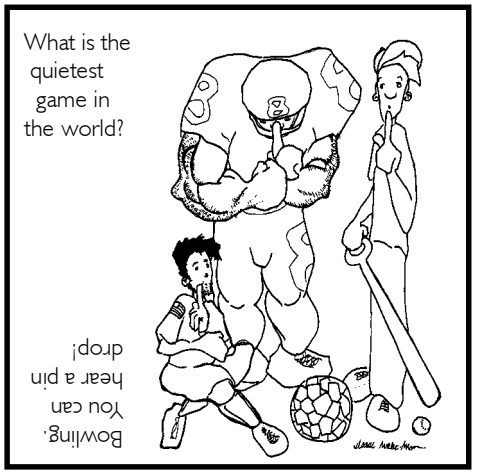
The fourth dose of DTaP may be given at 12 months of age if at least 6 months have passed since the third dose, and if, in the provider's opinion, the child might not return for another visit at 15–18 months of age.

If MMR and varicella vaccines are not given on the same day and are mistakenly given less than the 28-day minimum interval apart, what should be done?

The 2002 *General Recommendations on Immunization* says that if MMR and varicella vaccines are administered not on the same day and less than 28 days apart, the vaccine given second is invalid and should be repeated ≥4 weeks after it was initially given. This conservative approach helps assure that an adequate response to both vaccines will be obtained. The 4-day "grace period" should not be applied to the 28-day separation of live parenteral vaccines not administered on the same day.

A box of MMR vaccine (undiluted) was left at room temperature for 3 hours. Can I use it?

Unfortunately, serious errors in vaccine storage and handling occur too often. If you suspect that 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.



If a pregnant woman tests rubella "not immune" but she has a documented MMR on her chart from a previous pregnancy, does she need revaccination postpartum?

A negative serologic test for rubella antibody in a person with documented vaccination could represent either failure to respond to the vaccine or an antibody level too low to be detected by the screening test. ACIP does not provide guidance for this situation. Since the person may have failed to respond to the first dose, repeating the MMR vaccine after delivery is a reasonable approach.

Is influenza vaccine now recommended for 0- to 23-month-olds?

Healthy children 0–23 months of age are at substantially increased risk for influenza-related hospitalization. In its 2002 *Prevention and Control of Influenza* statement, ACIP encourages influenza vaccination of all children 6–23 months of age, when feasible. Because influenza vaccine is not approved for use in children less than 6 months of age, vaccination of their household contacts and out-of-home caretakers is encouraged. The 2002 influenza vaccine recommendations can be obtained from the *MMWR* website at www.cdc.gov/mmwr

Some influenza vaccine comes with a 5/8" needle attached. I thought we were supposed to use a 1-1½" needle for this IM vaccine in adults.

You're right. For intramuscular injection ACIP recommends the use of a 7/8–1" needle for in-

(continued on page 20)

NEEDLE TIPS correction policy

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IAC's "Ask the Experts" team from CDC

William L. Atkinson, MD, MPH

Linda A. Moyer, RN

Stephen C. Hadler, MD

fants less than 12 months of age, a 7/8–1¼" needle for children 12 months to 18 years of age, and a 1–1½" needle for persons 18 years of age and older. ACIP does not recommend a 5/8" needle for intramuscular injection.

Is influenza vaccine recommended for pregnant women?
The ACIP recommends that because of the increased risk for influenza-related complications, women who will be beyond the first trimester of pregnancy (>14 weeks of gestation) during the influenza season should be vaccinated. Certain providers prefer to administer influenza vaccine during the second trimester (rather than the first) to avoid a coincidental association with spontaneous abortion, which is common in the first trimester, and because exposures to vaccines traditionally have been avoided during the first trimester. 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.

If a child <9 years old is vaccinated against flu for the first time but doesn't receive the recommended second dose, does the child need to receive two doses the following year?
No. Only one dose is needed.

Why is a naughty little boy like the letter "d"?

Because he makes ma mad.

With the recent concerns about bioterrorism, are there data on the duration of immunity from previous smallpox vaccination?
Smallpox vaccine provides nearly 100% protection against smallpox for at least 3 years, and substantial but waning immunity for more than 10 years. The protection provided by smallpox vaccine received 30 or more years ago is uncertain.

Hepatitis A and B

by Linda Moyer, RN, and Stephen Hadler, MD

Are hepatitis A vaccine brands interchangeable?
Yes, a number of studies indicate that the two brands of hepatitis A vaccine are interchangeable.

Will one dose of hepatitis A vaccine protect a person who is unable to receive dose #2 prior to travel to a hepatitis A–endemic country?
The immunogenicity of one dose of hepatitis A vaccine is 94–100%. Immunogenicity is considered to be equal to efficacy. As long as dose #1 is given at least 4 weeks prior to travel, the person should be protected. The second dose is necessary to assure long-term protection. For both adult formulations, the second dose should be administered 6–12 months after dose #1. For pediatric vaccines, dose #2 of Havrix is administered 6–12 months after dose #1, and Vaqta at 6–18 months. If the second dose is delayed, do not start the series over again.

What was the rationale for the ACIP change in its recommendation (now in agreement with AAP's policy) that every infant should receive hepatitis B vaccine prior to hospital discharge? Where can I obtain a copy of this new ACIP recommendation?
The birth dose is a safety net to ensure optimal protection of infants of women at high risk for HBV infection. Many medical errors have been documented in prenatal HBsAg screening including ordering the wrong test, misinterpreting the test result, mistranscribing the result, otherwise miscommunicating test results to the newborn nursery, and/or not testing at all. In addition, some women acquire HBV later in pregnancy and the infection often is not clinically detected in time to administer the birth dose to their infants. Other infants whose mothers are HBsAg negative are exposed to HBV-infected caregivers once they arrive at home. Administering the birth dose provides protection in all these instances.

Giving the birth dose also increases likelihood of on-time completion of the hepatitis B vaccine series.

This ACIP recommendation is found in the *2002 Recommended Childhood Immunization Schedule* (approved by ACIP, AAP, and AAFP). Copies are available by accessing the online publication ordering system at: www.cdc.gov/nip/publications or by calling (800) 232-2522.

My practice has been vaccinating low-risk infants with Comvax beginning at age 2 months, but we would like to add the birth dose in the hospital. Can we continue to use Comvax as we currently do?
Yes. You can give monovalent hepatitis B vaccine at birth and then Comvax at 2, 4, and 12–15 months of age. This schedule will result in 4 doses of hepatitis B vaccine. The 4-month dose of hepatitis B vaccine cannot be counted as the final dose of the hepatitis B vaccine series, because the last dose in the series must be given no earlier than 6 months of age.

What is the optimal time to test infants of HBsAg-positive mothers to determine if they have been successfully prophylaxed?
The optimal age for testing infants who have completed the hepatitis B series at age 6–8 months is at 9–15 months. If the series is completed at an older age due to the use of Comvax or due to a delayed schedule, the optimal testing time is 1–2 months after the final dose of hepatitis B vaccine. The tests that should be performed are HBsAg and anti-HBs. Every effort should be made to ensure that infants of HBsAg-positive mothers are vaccinated on schedule and then tested for immunity.

If a mother's HBsAg test result is not available at the time of birth, how should the infant be managed?
Infants born to women who lack an HBsAg test result at the time of delivery should receive the first dose of hepatitis B vaccine within 12 hours of birth. HBsAg testing of women with unknown status should be drawn ASAP following hospital admission. Women without prenatal care are more likely to be HBsAg-positive than women who receive prenatal care, underscoring the importance of timely vaccination for their infants. If, upon testing, the mother is later found to be HBsAg-positive, her infant should receive the additional protection of HBIG as soon as possible but not more than 7 days after birth. Premature infants less than 2kg at birth who are born to women of unknown HBsAg status should be given HBIG in addition to hepatitis B vaccine within 12 hours of birth.

Please tell me about the new ACIP recommendation for preventing hepatitis B in high-risk preterm infants less than 2kg.

In the 2002 *General Recommendations on Immunization*, a preterm infant who weighs less than 2kg and whose mother's HBsAg status is unknown should receive both hepatitis B vaccine *and* HBIG within 12 hours of birth (now the same as for an infant whose mother's HBsAg status is known to be positive). This change makes ACIP's recommendation in this situation consistent with that of the *Red Book*. This recommendation was made because the immune response to hepatitis B vaccine may be lower in infants <2kg. For all preterm infants, the birth dose should not be counted, and these infants should receive 3 additional doses of either monovalent or combination vaccine (Comvax) beginning at 1–2 months of age for monovalent vaccine and no earlier than 6 weeks of age if using Comvax. A revised ACIP statement on hepatitis B vaccine, expected to be published in early 2003, will contain more information on this subject.

Should all children age 0–18 years be vaccinated against hepatitis B?

Yes. ACIP recommends that all children age 0–18 years who have not completed the hepatitis B vaccine series be vaccinated. This recommendation is also endorsed by AAP and AAFP and is published as part of the annual *Recommended Childhood Immunization Schedule*.

Does being chronically infected with HBV preclude one from becoming a health professional?

No. All health professionals should practice standard precautions! However, there is one caveat concerning HBV-infected health professionals. Those who are HBsAg-positive *and* HBeAg-positive should not perform exposure-prone procedures (e.g., gynecologic, cardiothoracic surgery) unless they have sought counsel from an expert review panel and been advised under what circumstances, if any, they may continue to perform these procedures. Such circumstances might include notifying prospective patients of the health professional's seropositivity before they undergo exposure-prone invasive procedures. For more information on this issue, see the *MMWR Recommendations and Report* "Recommendations for Preventing Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Patients During Exposure-Prone Invasive Procedures." This document is available at www.cdc.gov/mmwr/preview/mmwrhtml/00014845.htm.

Does giving hepatitis B vaccine to a chronically infected person cause any harm?

No, it will neither harm nor help the person.

How do I interpret some of the common hepatitis B panel results?

Tests	Results	Interpretation
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible
HBsAg anti-HBc anti-HBs	negative negative positive with ≥10mIU/mL*	immune due to vaccination
HBsAg anti-HBc anti-HBs	negative positive positive	immune due to natural infection
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected
HBsAg anti-HBc anti-HBs	negative positive negative	four interpretations possible†

*Postvaccination testing, when it is recommended, should be performed 1–2 months following dose #3.

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

Do you have patients who are HBsAg-positive?

They need medical monitoring, including liver cancer screening, and many can benefit from treatment.

There are two FDA-licensed treatment options available in the United States:

1. interferon alfa-2b, recombinant administered subcutaneously
2. lamivudine administered orally

Consult a liver specialist experienced in the treatment of viral hepatitis for appropriate monitoring guidelines and to help you determine which of your patients might benefit from treatment.

Hepatitis A and B lab tests

Hepatitis A lab nomenclature

anti-HAV: *Antibody to hepatitis A virus.* This diagnostic test detects total antibody of both IgG and IgM subclasses of HAV. Its presence indicates either acute or resolved infection, or vaccine-induced immunity.

IgM anti-HAV: *IgM antibody subclass of anti-HAV.* Its presence indicates a recent infection with HAV. It is used to diagnose acute hepatitis A.

Hepatitis B lab nomenclature

HBsAg: *Hepatitis B surface antigen* is a marker of infectivity. Its presence indicates either acute or chronic HBV infection.

anti-HBs: *Antibody to hepatitis B surface antigen* is a marker of immunity. Its presence indicates an immune response to HBV infection, an immune response to vaccination, or the presence of passively acquired antibody. (It is also known as ***HBsAb,*** but this abbreviation is best avoided since it is often confused with abbreviations such as HBsAg.)

anti-HBc: *Antibody to hepatitis B core antigen* is a marker of acute, chronic, or resolved HBV infection. It is *not* a marker of vaccine-induced immunity. It may be used in prevaccination testing to determine previous exposure to HBV infection. (It is also known as ***HBcAb,*** but this abbreviation is best avoided since it is often confused with other abbreviations.)

IgM anti-HBc: *IgM antibody subclass of anti-HBc.* Positivity indicates recent infection with HBV (≤6 mos). Its presence indicates acute infection.

IgG anti-HBc: *IgG antibody subclass of anti-HBc* is a marker of past or current infection with HBV. If it and HBsAg are both positive (in the absence of IgM anti-HBc), this indicates chronic HBV infection.

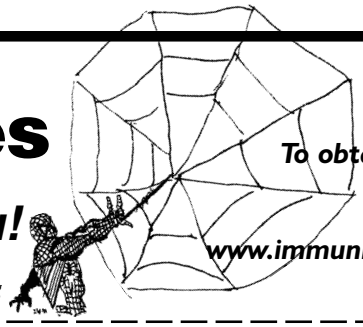
HBeAg: *Hepatitis B "e" antigen* is a marker of a high degree of HBV infectivity and it correlates with a high level of HBV replication. It is primarily used to help determine the clinical management of patients with chronic HBV infection.

Anti-HBe: *Antibody to hepatitis B "e" antigen* may be present in an infected or immune person. In persons with chronic HBV infection, its presence suggests a low viral titer and a low degree of infectivity.

HBV-DNA: *HBV Deoxyribonucleic acid* is a marker of viral replication. It correlates well with infectivity. It is used to assess and monitor the treatment of patients with chronic hepatitis B infection.

Immunization Resources

There are many places that can help you!



To obtain the Directory of Immunization Resources, visit: www.immunize.org/resources

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

Here's what's new!

Epidemiology and Prevention of Vaccine-Preventable Diseases, 7th ed. (CDC). This updated "Pink Book" provides practitioners with comprehensive information on vaccine-preventable diseases and vaccine recommendations. Free online at www.cdc.gov/nip/publications/pink To order for $25, call (877) 252-1200 or visit www.phf.org

Increasing Adult Vaccination Rates: What Works (Association of Teachers of Preventive Medicine [ATPM]). This interactive CD-ROM was produced for primary care providers and is free of charge. CME, CNE, and CEU credits available. To order, call (800) 789-6737 or visit www.atpm.org/immunization/whatworks.html

Teaching Immunization Practices for Nurses (ATPM). This updated curriculum for nurse educators consists of three modules covering the principles of immunization and vaccine use as well as basic practice, delivery, and program design. Free. To order, call (800) 235-0882 or download at www.healthsoftonline.com/portal/tip.asp

Immunization: You Call the Shots (ATPM). This updated self-paced, interactive CD-ROM provides approximately 6 hours of independent learning. $295. Annual updates available. To order, call (800) 235-0882.

PKIDs' Pediatric Hepatitis Report (PKIDS). This 525-page report will help parents understand hepatitis A-E, from transmission to diagnosis to treatment to civil rights protections and more. $45. To order, email PKIDs at pkids@pkids.org or visit www.pkids.org/pedheprep.htm

Teaching Immunization Delivery and Education (Medical Univ. of So. Carolina). This website tool teaches immunization delivery through four interactive self-contained interactive modules. CME, CNE, and CEU credits available. Visit www2.edserv.musc.edu/tide/menu.lasso

New website! ***Model Programs for Hepatitis A, B, and C Prevention*** (IAC). This website features descriptions of programs around the nation that are working to prevent viral hepatitis in adults and adolescents at risk of infection. The site also includes many links to other organizations and resources. Visit **www.hepprograms.org**

New website! ***IZ Coalitions*** (IAC). This website provides access to a database of local, state, regional, and national immunization coalitions. The database allows health professionals, parents, and immunization advocates to contact coalitions for resources, ideas, or volunteering and also to list their coalition on this website. Make sure your coalition is listed. Visit **www.izcoalitions.org**

Organizations with immunization and hepatitis information

Routine Immunization

Allied Vaccine Group	www.vaccines.org
All Kids Count (www.allkidscount.org)	(800-874-4338) (404) 687-5615
American Academy of Pediatrics (www.aap.org) ★	(800) 433-9016
AAP's *Childhood Immunization Support Program*	www.cispimmunize.org
Association of Teachers of Preventive Medicine (www.atpm.org)	(800) 789-6737
CDC's Iz Info Hotline ★ (Spanish: 800-232-0233; TTY: 800-243-7889)	(800) 232-2522
CDC's *Morbidity and Mortality Weekly Report*	www.cdc.gov/mmwr
CDC's National Immunization Program website	www.cdc.gov/nip
CDC's Bioterrorism Information Hotline ★ (Spanish: 888-246-2857)	(888) 246-2675
CDC's Travel Website & Info Line (www.cdc.gov/travel) (877-FYI-TRIP)	(877) 394-8747
CDC's Voice & Fax Immunization Resource Request Line	(888) 232-3228
Every Child by Two (www.ecbt.org)★	(202) 783-7034
Immunization Action Coalition (www.immunize.org) ★	(651) 647-9009
Immunization Action Coalition's *Immunization Coalitions*	www.izcoalitions.org
Immunization Action Coalition's *IAC EXPRESS*	www.immunize.org/express
Immunization Action Coalition's *Model Programs for Hep A, B & C*	www.hepprograms.org
Immunization Gateway website	www.immunofacts.com
Institute for Vaccine Safety	www.vaccinesafety.edu
Nat'l Alliance for Hispanic Health (www.hispanichealth.org)★	(202) 387-5000
Nat'l Coalition for Adult Immunization (www.nfid.org/ncai) ★	(301) 656-0003
Nat'l Network for Immunization Information (www.immunizationinfo.org)	(877) 341-6644
Nat'l Partnership for Immunization (www.partnersforimmunization.org)	(301) 656-0003
Nat'l Vaccine Injury Compensation Program (www.hrsa.gov/osp/vicp)	(800) 338-2382
100% Immunization Campaign (www.immunizeseniors.org)	(703) 739-1300
Vaccine Adverse Events Reporting System (www.vaers.org)	(800) 822-7967
Vaccine Education Center (www.vaccine.chop.edu)	(215) 590-9990
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 Line ★	(888-4-HEP-CDC) (888) 443-7232
CDC's Hepatitis Division of Viral Hepatitis website ★	www.cdc.gov/hepatitis
CDC's National STD/AIDS Hotline	(800) 227-8922
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 Foundation International (www.hepfi.org) ★	(800) 891-0707
Latino Organization for Liver Awareness (LOLA) ★	www.lola-national.org
Nat'l Hepatitis B Task Force: Focus on API (www.aapihp.com/hepbtf) ★	(614) 766-5219
Parents of Kids with Infectious Diseases (www.pkids.org)	(877-55-PKIDS) (877) 557-5437
Your health department's hepatitis coordinator (see page 23)	_____

Pharmaceutical Companies

Aventis Pasteur, Inc. (www.aventispasteur.com)	(800-VACCINE) (800) 822-2463
Bayer Biologicals (www.bayerbiologicals.com)	(800) 468-0894
Chiron Corporation (www.chiron.com)	(800) 244-7668
GlaxoSmithKline (www.gskvaccines.com)	(866) 475-8222
Merck & Co. (www.merckvaccines.com)	(800) 672-6372
Nabi (www.nabi.com)	(800) 458-4244
Wyeth Lederle Vaccines (www.vaccineworld.com)	(800) 358-7443

★ materials available in languages other than English

To find out about more national resources, visit www.immunize.org/resources

Need Help?

Call your immunization, hepatitis, and VFC coordinators

Your governmental resource people are available to help you! Find out about their educational materials including posters, brochures, videos, and other resources they have available.

State and Project Coordinators

Alabama
Iz: Winkler Sims 334-206-5023
Hep B (S. AL): Judy Till, 251-743-2814
Hep B (N. 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
Hep C: Louisa Castrodale 907-269-8000
VFC: Laurel Wood 907-269-8000

Arizona
Iz: Kathy Fredrickson 602-230-5852
Hep B: Linda Faris 602-230-5858
Hep C: pending
VFC: Becky Burkhart 602-230-5832

Arkansas
Iz: Charles Beets 501-661-2784
Hep B: Sherry Ahring 501-661-2053
Hep C: pending
VFC: Ruby Brown 501-661-2169

California
Iz: Natalie Smith, 510-540-2065
Hep B: Maggie Chiang 510-540-2393
Hep C: Lori Fries 510-540-2022
VFC: John Scott 510-704-3750

Colorado
Iz: Rebecca Jordan 303-692-2795
Hep B: Amy Warner 303-692-2673
Hep C: Mauricio Palacio 303-692-2674
VFC: Rosemary Spence 303-692-2798

Connecticut
Iz: Vincent Sacco 860-509-7929
Hep B: Monica Rak 860-509-7900
Hep C: Andrea Poirot 860-509-7768
VFC: Timothy Egan 860-509-7929

Delaware
Iz: Martin Luta 302-744-4827
Hep B: Laura Gannon 302-744-4773
Hep C: Cathy Mosley 302-744-4844
VFC: Martin Luta 302-739-4827

District of Columbia
Iz: Rosemarie McLaren 202-576-7130
Hep B: Ethel Holland 202-442-9141
Hep C: pending 202-442-9366
VFC: DeWanda Eaton 202-576-7130

Florida
Iz: Charles Alexander 850-245-4342
Hep B: Tony Richardson 850-245-4342
Hep C: Sandy Roush 850-245-4426
VFC: Al Sulkes 850-245-4342

Georgia
Iz: Michael Chaney 404-657-3158
Hep B: Theresa Turski 404-657-3158
VFC: Michelle Conner 404-657-3158

Hawaii
Iz: Malama Markowitz 808-586-8330
Hep B: Joe Elm 808-586-8307
Hep C: pending 808-733-9010
VFC: Loriann Kanno 808-586-8329

Idaho
Iz: Traci Berreth 208-334-5942
Hep B: Jeff Kingsbury 208-334-5967
Hep C: pending
VFC: Bob Salisbury 208-334-4949

Illinois
Iz: Karen McMahon 217-785-1455
Hep B: Susan Williams 217-785-1455
Hep C: Patrick Piercy 217-782-2016
VFC: Mark Amerson 217-785-1455

IL, Chicago
Iz: Cheryl Byers 312-746-6120
Hep B: Monty Dobzyn 312-746-7147
Hep C: Corinna Dan 312-746-6281
VFC: Maribel Chavez-Torres 312-746-6050

Indiana
Iz: Michael Runao 317-233-7010
Hep B: Beverly Sheets 317-501-5722
Hep C: pending 317-233-7861
VFC: Terry Adams 317-233-7704

Iowa
Iz: Carolyn Jacobson 515-281-4938
Hep B: Tina Patterson 515-281-7053
Hep C: Hal Chase 515-281-5027
VFC: Don Callaghan 515-281-7301

Kansas
Iz: Sue Bowden 785-296-5591
Hep B: Jennifer Hill 785-296-8156
Hep C: Kristine Brunton 785-296-0028
VFC: Jerry Pittsenbarger 785-368-7126

Kentucky
Iz: Victor Negron 502-564-4478
Hep B: Gena Gilbert 502-564-4478
Hep C: Peggy Dixon 502-564-4478
VFC: Laura Harrod 502-564-4478

Louisiana
Iz: Ruben Tapia 504-483-1900
Hep B: Cathy Scott 318-345-1700
Hep C: Theresa Sokol 504-568-5005
VFC: Patricia Simon 504-483-1900

Maine
Iz: Lisa Tuttle 207-287-5716
Hep B: Paul Moffat 207-287-8150
Hep C: Mary Kate Appicelli 207-287-6865
VFC: Linda Huff 207-287-4068

Maryland
Iz: Gregory Reed 410-767-6679
Hep B: Maryann Harder 410-767-5716
Hep C: pending 410-767-6710
VFC: Ed Hirshorn 410-767-6679

Massachusetts
Iz: Pejman Talebian 617-983-6803
Hep B: Martha Badger 617-983-6850
Hep C: Dan Church 617-983-6830
VFC: Marie O'Donnell 617-983-6824

Michigan
Iz: Nancy Fasano 517-335-8159
Hep B: Nancy Fasano 517-335-9423
Hep C: Kim Kirkey 517-335-8165
VFC: Susan Wright 517-335-8161

MI, Detroit
Iz: Stella Bayless 313-876-4335
Hep B: Therese McGratty 313-256-1873
VFC: Angela Sorrells 313-876-4601

Minnesota
Iz: K. Ehresmann/M. Roddy 612-676-5237
Hep B: Claudia Miller 612-676-5237
Hep C: Felicia Fong 612-676-5937
VFC: Lynn Bahta 612-676-5237

Mississippi
Iz: Joy Sennett 601-576-7751
Hep B: Joyce Booth 601-576-7751
Hep C: pending 601-576-7725
VFC: Regina Irvin 601-576-7751

Missouri
Iz: Vic Tomlinson 573-751-6133
Hep B: Kathy Simpson 573-751-6133
Hep C: Thomas Ray 573-751-6113
VFC: Marilyn Kemna 573-751-6133

Montana
Iz: Joyce Burgett 406-444-0065
Hep B: Marci Eckerson 406-444-1805
Hep C: Elton Mosher 406-444-6736
VFC: Elizabeth LeLacheur 406-444-0277

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

Nevada
Iz: Robert Salcido 775-684-5939
Hep B: Robert Salcido 775-684-5939
Hep C: pending
VFC: Linda Platz 775-684-5913

New Hampshire
Iz: Charles Haenal 603-271-4482
Hep B: Susan Bascom 603-271-8325
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: Melissa Moore 505-827-2463
Hep B: Reena Szczepanski 505-827-2507
Hep C: Karen Gonzales 505-476-3076
VFC: Carly Christian 505-827-2898

New York
Iz: David Lynch 518-473-4437
Hep B: Betsy Herlihy 518-473-4437
Hep C: Colleen Flanigan 518-473-4439
VFC: Gary Rinaldi 518-473-4437

NY, NYC
Iz: Arsenia Delgato 212-676-2259
Hep B: Davis Thanjan 718-520-6246
Hep C: Karen Schlanger 212-788-2180
VFC: Dileep Sarecha 212-676-2265

North Carolina
Iz: Beth Rowe-West 919-715-6768
Hep B: Patricia Poole 919-715-6777
VFC: Barbara Laymon 919-715-6764

North Dakota
Iz: Patrick Flanagan (acting) 701-328-4556
Hep B: Patrick Flanagan 701-328-4556
Hep C: Tracy Miller 701-328-2387
VFC: Patrick Flanagan 701-328-4556

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

Oklahoma
Iz: Don Blose 405-271-4073
Hep B: Anika Wilson 405-271-4073
Hep C: Angela Horning 405-271-4636
VFC: Dorothy Cox 405-271-4073

Oregon
Iz: Lorraine Duncan 503-731-4135
Hep B: Hilary Gillette 503-731-4807
VFC: Mimi Luther 503-731-4267

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

PA, Philadelphia
Iz: James Lutz 215-685-6854
Hep B: Barbara Watson 215-685-6842
Hep C: Alice Ho 215-685-6741
VFC: Andrew Chilkatowsky 215-685-6853

Rhode Island
Iz: Susan Shepardson 401-222-4603
Hep B: Patricia Raymond 401-222-5921
Hep C: Lorraine Moynihan 401-222-7544
VFC: Mimi Larzelere 401-222-4605

South Carolina
Iz: Jesse Greene 803-898-0460
Hep B: Libby Greene 803-898-0792
Hep C: Robert Ball 803-898-0861
VFC: Candelaria Rijo 803-898-0460

South Dakota
Iz: Michelle Hudecek 605-773-5323
Hep B: Michelle Hudecek 605-773-5323
VFC: Michelle Hudecek 605-773-5323

Tennessee
Iz: Jerry Narramore 615-741-7343
Hep B: Sally Somerfeldt 615-532-8508
Hep C: Meleisha Edwards 615-532-8487
VFC: Jonna Goostree 615-532-8513

Texas
Iz: Jan Pelosi, 512-458-7284
Hep B: Rita Espinoza 512-458-7284
Hep C: Gary Heseltine 512-458-7676
VFC: Jack Sims 512-458-7284

TX, Houston
Iz: Brock Lamont 713-794-9267
Hep B: Toni Wafeeg 713-798-0812
VFC: Maureen Moore 713-558-3535

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 801-538-9450
Hep B: Martee Hawkins 801-538-9450
VFC: Jan Kilpack 801-538-9450

Vermont
Iz: Susan Barry 802-652-4185
Hep B: Marilyn Proulx 802-863-7245
VFC: Karen Halverson 802-863-7638

Virginia
Iz: James Farrell 804-786-6246
Hep B: Marie Krauss 804-786-6246
Hep C: Laura Walser 804-692-0290
VFC: Kristen Harker 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: pending
Hep B: Beverly Littman 304-558-6441
Hep C: Thein Shwe 304-558-5358
VFC: Jeff Neccuzi 304-558-6437

Wisconsin
Iz: Dan Hopfensperger 608-266-1339
Hep B: Jerry Gabor 608-266-8621
Hep C: Marjorie Hurie 608-266-5819
VFC: Jaclyn Nelson 608-266-1506

Wyoming
Iz: James D. McKinna 307-777-6001
Hep B: James D. McKinna 307-777-6001
Hep C: pending 307-777-7529
VFC: Chris Kercher 307-777-7466

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 K. Iohp 011-691-320-2619
Hep B: Kidsen K. Iohp 011-691-320-2619

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 670-236-8733
VFC: Mariana Sablan 670-236-8733

Republic of the Marshall Islands
Iz: Justina Langidrik 011-692-625-7251
Hep B: Kenner Brianb 011-692-625-3355

Puerto Rico
Iz: Esteban Calderon 787-274-5612
Hep B: Carmen Rodriquez 787-274-5525
VFC: Margarita Sabathie 787-274-3337

Republic of Palau
Iz: Johana Ngiruchelbad 011-680-488-1757
Hep B: Johana Ngiruchelbad 011-680-488-1757

Virgin Islands
Iz: Beverly Blackwell 340-776-8311
Hep B: Eunice Callwood 340-776-8311
Hep C: Eunice Callwood 340-776-8311

Indian Health Service

National Indian Health Service
Iz: Amy V. Groom 505-248-4374
Hep B: John Redd 505-248-4826
Hep C: pending

Coalition Catalog

Publications and resources

- **All our materials, reviewed by national experts, are camera-ready and copyright-free! You can order one of any item (including videos) and make as many copies as you need.**
- **A $60 membership contribution entitles you to a copy of all IAC print materials as well as our brightly colored mousepad!**
- **Items cost $1 unless otherwise noted.**
- **To order materials, see instructions on page 26.**
- **Date of latest revision indicated in parentheses.**

REMEMBER . . .

A $60 annual membership contribution 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!

★ Starred items are available in languages other than English.

Key to Languages:				
En: English	**Ab:** Arabic	**Far:** Farsi	**Mi:** Mien	**So:** Somali
Sp: Spanish	**Am:** Amharic	**Hm**: Hmong	**Po:** Portuguese	**Ta:** Tagalog
	Ar: Armenian	**Ja:** Japanese	**Ro:** Romanian	**Ti:** Tigrinya
	Ca: Cambodian	**Ko:** Korean	**Ru:** Russian	**Tu:** Turkish
	Ch: Chinese	**La:** Laotian	**Sa:** Samoan	**Vi:** Vietnamese

We gratefully acknowledge all the translations provided by Dr. Mustafa Kozanoglu and Dr. Murat Serbest, Adana, Turkey (Tu); Suffolk County Department of Health Services, New York (Sp); State of New York (Ch, Sp); State of California (Sp, Ca, Ch, Fa, Hm, Ko, La, Ru, So, Vi); St. Paul-Ramsey Co. Public Health (Hm); and Centers for Disease Control and Prevention (Sp).

Materials for your patients

★ ***Revised!*** **Immunizations for babies.** 1-page info. sheet of the shot schedule. En, Sp, Tu (1/02). *Item #P4010*

New! **Reliable sources of immunization information.** A brochure listing IAC's top choices for reliable information. En (7/02). *Item #P4012*

★ **After the shots . . . what to do if your child has discomfort.** En, Sp, Tu (8/99); Ca, Ch, Fa, Hm, Ko, La, Ru, Ta, Vi (10/97). *Item #P4015*

★ **Are you 11–19 years old? Then you need to be vaccinated!** 1-page info. sheet. En, Sp, Tu (7/01). *Item #P4020*

Questions parents ask about baby shots. A brochure about childhood vaccinations. En (4/00). *Item #P4025*

Revised! **Vaccinations for adults—you're never too old to get shots!** 1-page info. sheet on adult vaccinations. En (6/02). *Item #P4030*

★ **Immunizations . . . not just kids' stuff.** Adult immunization brochure. En, Sp (9/00). *Item #P4035*

Revised! **Do I need any vaccinations today?** 2-page questionnaire for adult patients to find out which shots they need. En (3/02). *Item #P4036*

Revised! **What would happen if we stopped vaccinations?** A CDC publication with vaccine-preventable disease rates. En (3/02). *Item #P4037*

Vaccine myths. Chapter 16 of the book *Vaccines: What Every Parent Should Know*, written by P.A. Offit, MD, and L.M. Bell, MD. En (1/00). *Item #P4038*

Shots for adults with HIV. A 1-page info. sheet. En (7/97). *Item #P4041*

Vaccinations for adults with hep C. 1-page info. sheet. En (5/00). *Item #P4042*

★ ***Revised!*** **When do children and teens need vaccinations?** 1-page info. sheet of the shot schedule. En, Sp (1/02). *Item #P4050*

★ **All kids need hepatitis B shots!** A brochure covering children 0–18. En, Sp, Ar, Ca, Ch, Fa, Hm, Ja, Ko, La, Po, Ro, Ru, Sa, So, Ta, Tu, Vi (4/98). *Item #P4055*

★ **Chickenpox isn't just an itchy, contagious rash.** A brochure covering all ages. En, Sp, Vi (1/96). *Item #P4070*

★ ***New translation!*** **Hepatitis A, B, and C: Learn the Differences.** 1-page info. sheet. En, Tu (1/02). *Item #P4075*

★ **Hepatitis A is a serious liver disease . . . should you be vaccinated?** A brochure covering all ages. En, Sp, Vi (10/97). *Item #P4080*

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

★ **Every week hundreds of teens are infected with hepatitis B.** A brochure for teens. En, Sp, Ca, Ch, Hm, Ko, La, Ru, Ta, Tu, Vi (6/97). *Item #P4100*

★ **Hepatitis B shots are recommended for all new babies.** A brochure for parents. En, Sp, Ca, Ch, Fa, Hm, Ko, La, Ru, So, Tu, Vi (9/01). *Item #P4110*

★ **Every week thousands of sexually active people are infected with hepatitis B.** A brochure. En, Sp (4/98). *Item #P4112*

If you have sex, read this . . . and stop a killer STD from sneaking up on you! Reprinted from *Mademoiselle.* En (2/99). *Item P4113*

★ **Hepatitis B . . . 100 times easier to catch than HIV.** A brochure for men who have sex with men. En, Tu (5/01). *Item #P4115*

You don't have to go all the way to get hepatitis A. A brochure for men who have sex with men. En (6/97). *Item #P4116*

You are not alone! Article for teens with chronic HBV infection. By S.J. Schwarzenberg, MD, and K. Wainwright, RN. En (2/01). *Item #P4118*

★ **Do you have chronic hep B?** 1-page info. sheet on how to take care of yourself. En, Sp, Ch, Tu (1/01). *Item #P4120*

Brief intro. to hep B for parents of adopted children. 1-page info. sheet by S.J. Schwarzenberg, MD. En (10/01). *Item #P4150*

Confused about the hep B panel? 1-page info. sheet for adoptive parents to help them understand hep B tests. En (9/01). *Item #P4151*

FREE MATERIALS ONLINE! All of these items are available free on our website at www.immunize.org/catalog or search by alphanumeric item # using our search engine at www.immunize.org

Hepatitis B vaccine is imperative for families adopting from abroad. 1-page info. sheet by Dr. J. Aronson. En (9/01). *Item #P4153*

★ **If you, your parents, or your children were born in any of these places.** A brochure encouraging testing and vaccination. En, Ab, Am, Ca, Ch, Fa, Hm, Ko, La, Ru, So, Ti, Vi (5/95) *Item #P4170*

Hepatitis B information for Asian and Pacific Islander Americans. 3-page article. En (4/01). *Item #P4190*

Materials for your clinic staff

★ ***Revised!*** **Summary of rules for childhood immunization.** This two-sided reference table discusses the appropriate use, scheduling, and contraindications of childhood vaccines. En, Tu (7/02). *Item #P2010*

★ ***Revised!*** **Summary of recommendations for adult immunization.** A two-sided reference table on appropriate use, scheduling, and contraindications of adult vaccines. En, Tu (6/02). *Item #P2011*

Give these people influenza vaccine! 1-page checklist to help you decide whom to vaccinate. En (12/00). *Item #P2013*

Pneumococcal vaccine: Who needs it and who needs it again? 1-page Q&A with a table about revaccination. En (1/01). *Item #P2015*

Vaccine products licensed for use in the United States, 2001. 1-page info. sheet. En (11/01). *Item #P2019*

New! **How to administer IM and SC injections.** 2-sided info. sheet with illustrations. En (7/02). *Item #P2020*

Ask the experts. Compilation of hundreds of Q&As on childhood and adult immunization written by CDC experts. En (6/01). *Item #P2021 - $5*

Vaccine administration record for children and teens. 1-page record sheet for the front of the medical chart. En (12/00). *Item #P2022*

Revised! **Vaccine administration record for adults.** 1-page record sheet for the front of the medical chart. En (4/02). *Item #P2023*

It's federal law! You must give your patients current Vaccine Information Statements (VISs). By N.A. Halsey, MD. En (8/01). *Item #P2027*

New! **The truth about using VISs.** A 1-page info. sheet reviewing myths and truths about the use of VISs. En (7/02). *Item #P2028*

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

Vaccinate, don't vacillate! Varicella kills 100 people each year in the U.S. By W.A. Orenstein, MD, Director, NIP, CDC. En (10/98). *Item #P2058*

Hospitals & doctors sued for failing to immunize. 1-page article describing 7 lawsuits against physicians and hospitals. En (9/94). *Item #P2060*

New! **Vaccines and Autism.** By P.A. Offit, MD. A three-page article. En (6/02). *Item #P2065*

Hepatitis A and B vaccines . . . be sure your patient gets the correct dose! 1-page info. sheet. En (7/01). *Item #P2081*

No risk?? No way!! 1-page article reviewing unusual transmissions of hepatitis B in "low-risk" individuals. En (9/94). *Item #P2100*

Hepatitis B and the health care worker. 2-page Q & A. Includes postexposure prophylaxis guidelines. En (3/01). *Item #P2109*

Hepatitis B facts: testing & vaccination. 1-page list of high-risk groups, interpretation of the hep B panel, and a glossary. En (4/01). *Item #P2110*

Revised! **Labor & delivery unit and nursery unit guidelines to prevent HBV transmission.** 1-page document. En (7/02). *Item #P2130*

Management of chronic hepatitis B in children and adults. Four liver experts share management guidelines, H. Conjeevaram, MD, (4/99); C. Smith, MD, (4/99); B.J. McMahon, MD, (4/99); and S.J. Schwarzenberg, MD. En (8/94). *Item #P2164 - $5*

Tracking hepatitis B patients & contacts. 3 pages. En (11/98). *Item #P2180*

★ **Are you at risk for hepatitis A?** Use this 1-page questionnaire to assess your patients' risk factors. En, Sp, Tu (4/01). *Item #P2190*

★ **Are you at risk for hepatitis B?** Use this 1-page questionnaire to assess your patients' risk factors. En, Sp, Tu (10/01). *Item #P2191*

★ **Are you at risk for hepatitis C?** Use this 1-page questionnaire to assess your patients' risk factors. En, Sp, Tu (3/01). *Item #P2192*

Coalition kid art. 10 pages of immunization artwork (babies, bears, balloons) to use in your own brochures. (4/98). *Item #P3015 - $5*

Checklist for safe vaccine handling and storage. En (11/01). *Item #P3035*

New! **Protect your vaccines: check temperatures twice a day.** 2-page Fahrenheit temperature log to post on your refrigerator. En (7/02). *Item #P3039*

Community-based immunization clinic supplies checklist. En (10/01). *Item #P3046*

Sample vaccination clinic notification letter. En (8/01). *Item #P3060*

★ ***Revised!*** **Screening questionnaire for child and teen immunization.** A 1-page contraindications screening form for the patient's parent/guardian to fill out. En, Sp, Ch, Hm, Tu (1/02). *Item #P4060*

★ ***Revised!*** **Screening questionnaire for adult immunization.** 1-page contraindications screening form for adult patients to fill out. En, Sp, Ch, Hm, Tu (1/02). *Item #P4065*

Revised! **Patient notification letter regarding hepatitis B test results.** Sample letter explaining test results to patients. En (4/02). *Item #P4140*

Videos

How to Protect Your Vaccine Supply (**Ice, Champagne, and Roses**) (CA Dept. of Health, MN Dept. of Health, 1996, 15 min). En. *Item #V2010 - $10*

Immunization Techniques: Safe, Effective, Caring (CA Dept. of Health, 2001, 35 min). See description in the box below. En. *Item #V2020 - $15*

(continued on page 26)

"Immunization Techniques: Safe, Effective, Caring"
developed by
California Dept. of Health Services Immunization Branch, 2001

*** Order online at www.immunize.org/iztech or see page 27**

Every clinic in the U.S. that delivers vaccination services should have a copy of this **brand-new** 35-min. video available for staff. The video comes with presenter's notes and includes a skills checklist. $15/copy. (To order more than 10 copies, call for price.) Item #V2020

FREE MATERIALS ONLINE! All of these items are available free on our website at www.immunize.org/catalog or search by alphanumeric item # using our search engine at www.immunize.org

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

★ **Family Album** (UCLA, 1997, 15 min). Encourages S.E. Asian parents to vaccinate their children on time. En, Ca, Hm, La, Mi. *Item #V4000 - $10 ea.*

Our Family, Our Strength (ALF, 1986, 19 min). A doctor discusses hepatitis B with a pregnant HBsAg+ Asian woman. En. *Item #V4001 - $10*

★ **Hepatitis B—A Family's Story** (1995, 15 min). A doctor discusses hepatitis B with an HBsAg+ pregnant woman. Ca. *Item #V4025 - $10*

★ **Benh viem gan B va gia dinh bac Tam - Hepatitis B and Uncle Tam's Family** (VCHP, 1995, 11 min). Hepatitis B video. Vi. *Item #V4030 - $10*

Change the Legacy: Catching Up With Hepatitis B (HAPI Kids, San Diego Co., 1997, 12 min). Video and manual on how to develop hep B vaccination programs for APIA children. En. *Item #*R2052 - $10

Photos, slides, posters, and more

Teen poster! **Roll up your sleeves!** Color 11"x17" poster of kids showing off their hepatitis B shots! *Item #Q2010 - 10 posters for $1*

IAC mousepad. This mousepad is wildly colorful and irresistible! Order this while supplies last. *Item #R2000 - $3*

New! **Adult immunization record card**. A wallet-size card to give to your patients to keep track of their vaccinations. En (4/02) *Item #R2005 - 250 per box; 1 box–$25; 2 boxes–$45; 3 boxes–$60; 4 boxes–$70*

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. (9/00). *Item #R2053 - $75*

Revised! **Directory of Immunization Resources.** Packed with over 50 pages of useful organizations, websites, and hotlines with resources. En (7/02). *Item #R2065 - $10 (2 copies–$13; 3 copies–$15; 4 copies–$17; 5 copies–$20; please call if ordering six or more)*

★ **Vaccine-preventable diseases slide set.** Includes 31 slides of children and adults with vaccine-preventable diseases. Comes with scripts in En and Sp (12/00). *Item #S3010 - $25*

Unprotected people: Stories of people who died or suffered from vaccine-preventable diseases. Compilation of personal stories and case reports. All stories illustrate tragedies that occurred because someone wasn't immunized. En (1/99–5/01). *Items #T2011, #T2012, #T2013 and #T2014 - $5 for all 4.*

Coalition Order Form

Payment, Shipping, and Handling Information

Minimum order/donation is $10. Please prepay by check or credit card. Purchase orders accepted. Checks in U.S. dollars only. Order form must accompany check or P.O. (Our Federal ID# is 41-1768237). Orders shipped via fourth class mail. No charge for shipping within the U.S. Expect delivery in three weeks or less.

Immunization Action Coalition & Hepatitis B Coalition
1573 Selby Avenue, Suite 234, St. Paul, MN 55104
Phone (651) 647-9009 • Fax (651) 647-9131

Before you order, remember: *A $60 annual membership donation includes camera-ready copies of ALL of the Coalition's print materials.*

Languages:				
En: English	**Ab:** Arabic	**Fa:** Farsi	**Mi:** Mien	**So:** Somali
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	Ar: Armenian	**Ja:** Japanese	**Ro:** Romanian	**Ti:** Tigrinya
	Ca: Cambodian	**Ko:** Korean	**Ru:** Russian	**Tu:** Turkish
	Ch: Chinese	**La:** Laotian	**Sa:** Samoan	**Vi:** Vietnamese

Name/Title

Organization

Shipping address

City/State/Zip Telephone ( )

E-mail address Mailcode (from your address imprint)

Materials for Your Patients (order one, make copies)

Qty.			Amt.
___	P4010	Immunizations for babies: ☐En ☐Sp ☐Tu ... $1	_____
___	P4012	Reliable sources of immunization information ... $1	_____
___	P4015	After shots: What to do if your child has discomfort: ☐En ☐Sp ☐Ca ☐Ch ☐Fa ☐Hm ☐Ko ☐La ☐Ru ☐Ta ☐Tu ☐Vi $1/ea	_____
___	P4020	Are you 11–19? You need to be vaxed! ☐En ☐Sp ☐Tu ... $1/ea	_____
___	P4025	Questions parents ask about baby shots ... $1	_____
___	P4030	Vaccinations for adults ... $1	_____
___	P4035	Immunizations . . . not just kids' stuff: ☐En ☐Sp ... $1/ea	_____
___	P4036	Do I need any vaccinations today? ... $1	_____
___	P4037	What would happen if we stopped vaccinations? ... $1	_____
___	P4038	Vaccine myths ... $1	_____
___	P4041	Shots for adults with HIV ... $1	_____
___	P4042	Vaccinations for adults with hepatitis C ... $1	_____
___	P4050	When do children and teens need vaccinations? ☐En ☐Sp .. $1/ea	_____
___	P4055	All kids need hep B shots! ☐En ☐Sp ☐Ar ☐Ca ☐Ch ☐Fa ☐Hm ☐Ja ☐Ko ☐La ☐Po ☐Ro ☐Ru ☐Sa ☐So ☐Ta ☐Tu ☐Vi .. $1/ea	_____
___	P4070	Chickenpox isn't just a rash: ☐En ☐Sp ☐Vi ... $1/ea	_____
___	P4075	Hep A, B, C: Learn the differences ... $1	_____
___	P4080	Hepatitis A is a serious disease: ☐En ☐Sp ☐Vi ... $1/ea	_____
___	P4090	Questions frequently asked about hepatitis B: ☐En ☐Sp $1/ea	_____
___	P4100	Every week hundreds of teens are infected with hep B: ☐En ☐Sp ☐Ca ☐Ch ☐Hm ☐Ko ☐La ☐Ru ☐Ta ☐Tu ☐Vi ... $1/ea	_____
___	P4110	Hepatitis B shots are recommended for all new babies: ☐En ☐Sp ☐Ca ☐Ch ☐Fa ☐Hm ☐Ko ☐La ☐Ru ☐So ☐Tu ☐Vi .. $1/ea	_____
___	P4112	1000s of sexually active people get hep B: ☐En ☐Sp ... $1/ea	_____
___	P4113	If you have sex, read this ... $1	_____
___	P4115	Hepatitis B . . . 100 times easier to catch than HIV: ☐En ☐Tu .. $1	_____
___	P4116	You don't have to go all the way to get hepatitis A ... $1	_____
___	P4118	You are not alone: teens with hepatitis B ... $1	_____
___	P4120	Do you have chronic hepatitis B? ☐En ☐Sp ☐Ch ☐Tu $1/ea	_____
___	P4150	Brief introduction to hepatitis B for parents of adopted children ... $1	_____
___	P4151	Confused about the hep B panel? ... $1	_____
___	P4153	Hepatitis B vaccine is imperative for families adopting from abroad. .. $1	_____
___	P4170	If you were born in any of these places: ☐En ☐Ab ☐Am ☐Ca ☐Ch ☐Fa ☐Hm ☐Ko ☐La ☐Ru ☐So ☐Ti ☐Vi ... $1/ea	_____
___	P4190	Hepatitis B info for Asian and Pacific Islander Americans ... $1	_____

Materials for Your Clinic Staff (order one, make copies)

___	P2010	Summary of rules for childhood immunization: ☐En ☐Tu ... $1	_____
___	P2011	Summary of recommendations for adult immunization: ☐En ☐Tu .. $1	_____
___	P2013	Give these people influenza vaccine! ... $1	_____
___	P2015	Pneumococcal vaccine: Who needs it, and who needs it again? .. $1	_____
___	P2019	Vaccine products licensed for use in the United States, 2001 ..... $1	_____
___	P2020	How to administer IM & SC injections ... $1	_____
___	P2021	Ask the experts ... $5	_____
___	P2022	Vaccine administration record for children and teens ... $1	_____
___	P2023	Vaccine administration record for adults ... $1	_____
___	P2027	It's federal law! You must give your patients current VISs ... $1	_____
___	P2028	The truth about using VISs ... $1	_____
___	P2045	Tips to improve your clinic's immunization rates ... $1	_____
___	P2058	Vaccinate don't vacillate! Varicella kills ... $1	_____
___	P2060	Hospitals and doctors sued for failing to immunize ... $1	_____
___	P2065	Vaccines and autism by Paul A. Offit, MD ... $1	_____
___	P2081	Hepatitis A and B vaccine schedules and doses ... $1	_____
___	P2100	No risk?? No way!! ... $1	_____
___	P2109	Hepatitis B and the health care worker ... $1	_____
___	P2110	Hepatitis B facts: testing and vaccination ... $1	_____
___	P2130	Labor & delivery and nursery unit guidelines to prevent HBV ... $1	_____
___	P2164	Management of chronic hepatitis B in children & adults ... $1	_____
___	P2180	Tracking hepatitis B patients and their contacts ... $1	_____
___	P2190	Are you at risk for hepatitis A? ☐En ☐Sp ☐Tu ... $1	_____
___	P2191	Are you at risk for hepatitis B? ☐En ☐Sp ☐Tu ... $1	_____
___	P2192	Are you at risk for hepatitis C? ☐En ☐Sp ☐Tu ... $1	_____
___	P3015	Coalition kid art ... $5	_____
___	P3035	Checklist for safe vaccine handling and storage ... $1	_____
___	P3039	Protect your vaccines: Fahrenheit temperature log ... $1	_____
___	P3046	Community-based immunization clinic supplies checklist ... $1	_____
___	P3060	Sample vaccination clinic notification letter ... $1	_____
___	P4060	Screening questions for child IZ: ☐En ☐Sp ☐Ch ☐Hm ☐Tu ... $1	_____
___	P4065	Screening question for adult IZ: ☐En ☐Sp ☐Ch ☐Hm ☐Tu $1	_____
___	P4140	Patient notification letter regarding hep B test results ... $1	_____

Videos

___	V2010	How to Protect Your Vaccine Supply ... $10	_____
___	V2020	Immunization Techniques: Safe, Effective, Caring ... $15	_____
___	V2050	Immunization Day! ... $5	_____
___	V4000	Family Album: ☐En ☐Ca ☐Hm ☐La ☐Mien ... $10/ea	_____
___	V4001	Our Family, Our Strength: ☐En ... $10	_____
___	V4025	Hepatitis B – A Family's Story: ☐Ca ... $10	_____
___	V4030	Hepatitis B and Uncle Tam's Family: ☐Vi ... $10	_____
___	R2052	Change the Legacy: Catching Up with Hepatitis B ... $10	_____

Photos, Slides, Posters, and More

___	Q2010	"Roll up your sleeves!" teen hep B poster ... 10/$1	_____
___	R2000	IAC mousepad ... $3	_____
___	R2005	Adult immunization record card: 250 cards/box; 1 box–$25; 2 boxes–$45; 3 boxes–$60; 4 boxes–$70 ... $	_____
___	R2053	Photo notebook of vaccine-preventable diseases ... $75	_____
___	R2065	Directory of Immunization Resources ... $10 *(see catalog for quantity discounts)*	_____
___	S3010	Vaccine-preventable diseases slide set (script included) ☐En ☐Sp (check both boxes to receive both scripts) ... $25	_____
___	T2011–14	Unprotected people stories: Vols. 1–4 ... $5/all	_____

Please Join the Coalition!

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

.... Here's my extra contribution to help defray costs of *NEEDLE TIPS* $ _____

I want to join the Immunization Action Coalition!

❑ I am a new member ❑ I am a renewing member

Here is my membership contribution

❑$60 ❑$40 ❑$75 ❑$100 $ _____ other .... $ _____

❑ I'm joining the Coalition at a $60 level or higher, so please send me all of your print materials in English. I also would like to receive whatever translations you have in:

❑ Sp ❑ Ab ❑ Am ❑ Ar ❑ Ca ❑ Ch ❑ Fa ❑ Hm
❑ Ja ❑ Ko ❑ La ❑ Po ❑ Ro ❑ Ru ❑ Sa ❑ So
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Immunization Action Coalition Needs Your Support!

Deborah L. Wexler, MD
IAC Executive Director

Dear Friends,

This is an unusual time for IAC. During 2002 we experienced significant cutbacks from two of our industry partners due to their companies' new restrictions on how funds are allocated externally. As a result of these cutbacks, the circulation of this issue of *NEEDLE TIPS* is significantly reduced (from 230,000 to 180,000 copies).

For more than a decade, IAC has been producing, and distributing free of charge, quality publications such as *NEEDLE TIPS, VACCINATE ADULTS!, VACCINATE WOMEN, IAC EXPRESS* (our email news service), brochures, and information sheets, all of which we also make available for downloading over the Web. We are determined to continue this record of creating free, widely distributed, practical immunization materials.

Up until this time we have been fortunate enough to operate on the principle that if we do excellent and needed work, there will be support for our projects. And for 10 years we have received generous support from individuals, corporations, charitable foundations, and government agencies. We continue to be deeply grateful to all of you for your role in what we do.

But now we must seek out new and increased areas of support. And we are asking for your special help. Here are some ways you may be able to assist us:

- **Send us a contribution.** All donations to IAC are tax-deductible. Donations of any amount are welcome, but with a donation of $60 or more, you'll receive all our camera-ready, copyright-free print materials.
- **Order from our catalog (pages 24-27).** Some of our most popular items include the video *Immunization Techniques: Safe, Effective, Caring* for $15; a box of our new Adult Immunization Record Cards for $25; and our *Photo Notebook of Vaccine Preventable Diseases* for $75.
- **Make a pledge to CFC.** If you are a federal employee, in the fall you can donate to IAC through the Combined Federal Campaign (CFC). **IAC's CFC number is 9887.** Please write it down now and remember us this autumn when it's time to designate charities of your choice.
- **Send us a corporate contribution.** If your company or workplace can make a direct contribution to IAC, please ask the person in charge of corporate giving to contact me directly. IAC is a well-run organization that spends its funds efficiently. Our IRS Form 990 is available online at www.guidestar.org for those who are interested.
- **Partner with us.** Recently United Health Foundation (UHF) partnered with IAC to send individual copies of IAC's "Summaries of Recommendations for Immunization" and "Screening Questionnaires for Contraindications to Vaccination" to approximately 50,000 pediatricians and 100,000 family physicians throughout the nation. We are grateful to UHF for their generous help in making our materials available to such a wide audience. If your company or organization might be capable of supporting a project like this, please let me know.
- **Order bulk copies.** Corporations and health plans can benefit from distributing IAC materials directly to their customers or clinicians. A copy of the video *Immunization Techniques: Safe, Effective, Caring* should be available in every medical office's teaching materials library to train and update staff on vaccine administration techniques. Please contact me to discuss special materials such as padded forms, adult record cards, videos, slide sets, photo notebooks, and posters that we could make available to you for bulk distribution.
- **Tell us about available grants.** If your organization, whether private or government, has a grant program that could support our work, please let me know whom I should contact in order to apply.

Finally, I want to express the heartfelt appreciation of all of us here at the Coalition for the long-standing and generous support that we have received from you. We look forward in the days ahead to doing even more together to increase immunization rates and prevent disease.

Sincerely,

Deborah L. Wexler MD

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To contribute to IAC, use the enclosed envelope.

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