NEEDLE TIPS
and the Hepatitis B Coalition News
Published by the Immunization Action Coalition for individuals and organizations concerned about vaccine-preventable diseases

WHAT YOU’LL FIND INSIDE:

Ask the Experts
CDC’s Dr. William Atkinson and Dr. Andrew Kroger answer immunization questions .................................. 1
CDC’s Ms. Linda Moyer and Dr. Eric Mast answer hepatitis questions ............................................ 20

What’s New?
IOM Report: No association between autism and vaccines ................................................. 2
Vaccine Highlights: Recommendations, schedules, and more .............................................. 4
How’s your state doing? Current U.S. immunization information by state .......................... 11
Unprotected People: Toddler’s influenza death spurs parents to action ........................... 17

Photocopy These Materials!
Updated! Reliable sources of immunization information ................................................. 6
Updated! After the shots: What to do if your child has discomfort ............................... 7
Updated! Hepatitis A is a serious liver disease ................................................................. 9
Updated! Vaccinations for adults: You’re never too old to get immunized! ................... 12
Updated! Summary of recommendations for adult immunization ................................ 13
Updated! Standing orders for administering influenza vaccine to adults ...................... 15
Updated! Give these people influenza vaccine ............................................................ 16
2004–05 Influenza VISs for both trivalent inactivated & live intranasal vaccines .......... 18

Immunization Resources
Essential immunization resources from IAC: Videos, record cards, guide, etc. ............ 23

Support the Immunization Action Coalition Today!
An annual contribution of $75 or more will help support IAC, plus you will receive our brand new CD-ROM of IAC’s ready-to-copy print materials ................................. 24

Ask the Experts

Editor’s note: The Immunization Action Coalition thanks William L. Atkinson, MD, MPH; Andrew T. Kroger, MD, MPH; Eric E. Mast, 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 is a medical epidemiologist, and Dr. Kroger is a medical officer, both at CDC’s National Immunization Program. Dr. Mast is acting director, and Ms. Moyer is an epidemiologist, both at CDC’s Division of Viral Hepatitis.

Immunization questions
by William L. Atkinson, MD, MPH, and Andrew T. Kroger, MD, MPH

Some of my patients refuse influenza vaccination because they insist they “got the flu” after receiving the vaccine in the past. What can I tell them?

There are several reasons why this misconception persists: (1) Less than 1% of people who are vaccinated with the injectable vaccine develop flu-like symptoms, such as mild fever and muscle aches, after vaccination. These side effects are not the same as having influenza, but people confuse the symptoms. (2) Protective immunity doesn’t develop until 1–2 weeks after vaccination. Some people who get vaccinated later in the season (December or later) may get influenza shortly afterward. These late vaccinees may develop influenza because they were exposed to someone with the virus before they became immune. It is not the result of the vaccination. (3) To many people “the flu” is any illness with fever and cold symptoms. If they get any viral illness, they may blame it on the influenza vaccine or think they got “the flu” despite being vaccinated. Influenza vaccine only protects against certain influenza viruses, not all viruses. (4) The influenza vaccine is not 100% effective, especially in older persons. The vaccine is effective in protecting 90% of healthy young

Immunization questions?
• Email nipinfo@cdc.gov
• Call CDC’s Immunization Information Hotline at (800) 232-2522
• Call your state health dept. (phone numbers at www.immunize.org/coordinators)

FEDERAL and MILITARY EMPLOYEES

Make the Immunization Action Coalition your charity of choice.

#0233
If you would like to support IAC through a contribution or payroll deduction during this year’s Combined Federal Campaign, please use our Agency Code: #0233.
IOM Report: No Association Between Autism and MMR Vaccine and Thimerosal-containing Vaccines


Based on a thorough review of clinical and epidemiological studies, neither the mercury-based vaccine preservative thimerosal nor the measles-mumps-rubella (MMR) vaccine are associated with autism, says a new report from the Institute of Medicine (IOM) of the National Academies. Furthermore, the hypotheses regarding how the MMR vaccine and thimerosal could trigger autism lack supporting evidence and are theoretical only. Further research to find the cause of autism should be directed toward other lines of inquiry that are supported by current knowledge and evidence and offer more promise for providing an answer, said the committee that wrote the report.

“The overwhelming evidence from several well-designed studies indicates that childhood vaccines are not associated with autism.”

Further research to find the cause of autism should be directed toward other lines of inquiry that are supported by current knowledge and evidence and offer more promise for providing an answer.”

DISCLAIMER: NEEDLE TIPS and the Hepatitis B Coalition News is available to all readers free of charge. Some of the information in this issue is supplied to us by the Centers for Disease Control and Prevention in Atlanta, Georgia, and some information is supplied by third-party sources. The Immunization Action Coalition (IAC) has used its best efforts to accurately publish all of this information, but IAC cannot guarantee that the original information as supplied by others is correct or complete, or that it has been accurately published. Some of the information in this issue is created or compiled by IAC. All of the information in this issue is of a time-critical nature, and we cannot guarantee that some of the information is not now outdated, inaccurate, or incomplete. IAC cannot guarantee that reliance on the information in this issue will cause no injury. Before you rely on the information in this issue, you should first independently verify its current accuracy and completeness. IAC is not licensed to practice medicine or pharmacology, and the providing of the information in this issue does not constitute such practice. Any claim against IAC must be submitted to binding arbitration under the auspices of the American Arbitration Association in Saint Paul, Minnesota.
New! A complete guide to vaccinating adults

“Adults Only Vaccination: A Step-by-Step Guide”

157 pages of comprehensive, practical information on ALL aspects of adult immunization

This guide is indispensable for improving vaccination practices wherever adults are immunized. Designed to help integrate immunization services into OB/Gyn settings, family planning clinics, STD clinics, and other health care settings new to vaccination, the guide is equally valuable for settings experienced in vaccine delivery. It presents clear, authoritative information on administering adult vaccines, billing, educating patients, and much more. Included are 2 videos that explain vaccine administration techniques and vaccine handling and storage, a pack of adult immunization record cards, and other useful resources.

Cost for the guide, two videos, and other valuable resources is only $75. Quantity discounts are available. To order online or for more information, visit www.immunize.org/guide. To order by fax or mail, use the order form on page 23.

Questions? Email admin@immunize.org or call (651) 647-9009.

Immunization record cards for adults!

Give all your adult patients a permanent vaccination record card from IAC. Printed on rip-proof, smudge-proof, waterproof paper, this durable canary-yellow card is sized to fit in a wallet alongside other important cards. To view the card, visit www.immunize.org/adultizcards/pictures.htm

Buy 1 box (250 cards) for $30. Your first order of a 250-card box comes with a 30-day money-back guarantee.

Discounts for larger orders:
2 boxes (500 cards)......... $55
4 boxes (1000 cards)......... $90
3 boxes (750 cards)......... $75

To order, visit www.immunize.org/adultizcards, or use the order form on page 23.
(To receive sample cards, email your request to admin@immunize.org)
Vaccine Highlights
Recommendations, schedules, and more

Editor’s note: The information on these pages is current as of September 20, 2004.

The next ACIP meetings

The Advisory Committee on Immunization Practices (ACIP) is a committee of 15 national experts that provides advice and guidance to the Centers for Disease Control and Prevention (CDC) regarding the most appropriate use of vaccines. ACIP meetings are held three times a year in Atlanta and are open to the public. The next meetings will be held on October 27–28, 2004, and February 23–24, 2005. For more information, visit www.cdc.gov/nip/acip

ACIP statements

All clinicians should have a set of ACIP statements, the public health recommendations on vaccines, published in the Morbidity and Mortality Weekly Report (MMWR). Free continuing education credits are available for reading many of the statements and completing the brief test at the end of the statement. To obtain ACIP statements:

• Download individual statements from links on IAC’s website: www.immunize.org/acip
• Download individual statements from CDC’s website: www.cdc.gov/nip/publications/acip-list.htm
• Call CDC’s Immunization Information Hotline: (800) 232-2522

Recently published ACIP statements:

• Prevention and Control of Influenza (5/28/04)

Current VIS dates

Here are the most current VISs and the issue date printed at the bottom of each. Make sure you are using the current ones. Please recycle old copies.

DTaP/DT/TdP .. 7/30/01 hepatitis A ........... 8/4/04
hepatitis B ...... 7/11/01 influenza (LAIV) .. 5/24/04
Hib ............ 12/16/98 influenza (TV) .... 5/24/04
MMR ............ 1/15/03 meningococcal 7/28/03
PCV ................ 9/30/02 PPV ............... 7/29/97
polio ............ 1/1/00 rabies ............. 11/4/03
td .................. 6/10/94 typhoid .......... 5/19/04
varicella ....... 12/16/98 yellow fever .... 3/14/03

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 (for contact information see box on this page). The VISs, some in 31 languages, and the VIS instruction sheet are also available on IAC’s website: www.immunize.org/vis

Vaccine supply news

On September 17, CDC published “Notice to Readers: Pneumococcal Conjugate Vaccine Shortage Resolved” in the MMWR. Production problems of the 7-valent pneumococcal conjugate vaccine (PCV7), marketed as Prevnar and manufactured by Wyeth Vaccines, began in February 2004 and led to a recommendation to withhold both the 4th and later the 3rd dose. Since that time, production problems have been resolved to allow a return to the full, 4-dose series. Health care providers should prioritize catch-up vaccination for the following groups: (1) children ≤5 years of age at high risk for invasive pneumococcal disease (e.g., sickle cell disease, immune system disorder), (2) healthy children ≤24 months of age who have not received any doses of PCV7, and (3) healthy children <12 months of age who have not yet received 3 doses. For more information about the resolution of this shortage and how to schedule catch-up vaccination for PCV7, go to www.cdc.gov/mmwr/preview/mmwrhtml/mm5336a8.htm

Influenza vaccine news

On May 28, the ACIP recommendations were published in MMWR (Vol. 53, No. RR-6). The recommendations discuss (1) influenza vaccine for children aged 6–23 months, (2) vaccination of health care workers with live, attenuated influenza vaccine (LAIV), (3) personnel who may administer LAIV, (4) the 2004-05 trivalent inactivated vaccine (TIV), and (5) the influenza vaccine strains (A/Fujian [H3N2], A/New Caledonia [H1N1], and B/Shanghai), and (5) the

MMWR (Vol. 53, No. RR-6). The recommendations discuss (1) influenza vaccine for children aged 6–23 months, (2) vaccination of health care workers with live, attenuated influenza vaccine (LAIV), (3) personnel who may administer LAIV, (4) the 2004-05 trivalent inactivated vaccine (TIV), and (5) the

National Immunization Survey (NIS) provides estimates of vaccination coverage for each of the 50 states and 28 selected urban areas. Substantial increases over 2002 rates were noted for the two most recently recommended vaccines—varicella (+4.2%) and pneumococcal conjugate (+27.2%). Overall coverage for a 4:3:1:3:3 series (see explanation* below) was the highest ever recorded—79.4%. These increases are graphically displayed below. Current state rates can be viewed in the table to the right. To read the complete report, go to www.cdc.gov/nip/menus/stats Surv.htm#nis

NIS data for 2003

On July 30, CDC published “National, State, and Urban Area Vaccination Coverage Among Children Aged 19–35 Months—United States, 2003” in the MMWR, Vol. 53 (29). The National Immunization Survey (NIS) provides estimates of vaccination coverage for each of the 50 states and 28 selected urban areas. Substantial increases over 2002 rates were noted for the two most recently recommended vaccines—varicella (+4.2%) and pneumococcal conjugate (+27.2%). Overall coverage for a 4:3:1:3:3 series (see explanation* below) was the highest ever recorded—79.4%. These increases are graphically displayed below. Current state rates can be viewed in the table to the right. To read the complete report, go to www.cdc.gov/nip/menus/stats Surv.htm#nis


*4:3:1:3:3 = ≥4 doses of DTP/DT/DTaP, ≥3 doses of polio vaccine, ≥1 dose of measles-containing vaccine, ≥2 doses of Hib vaccine, and ≥2 doses of hepatitis B vaccine


Looking for your state health department immunization and hepatitis consultants?

For phone numbers of people to contact at your state (or federal project) health department for help on immunization issues, the Vaccines For Children program, or hepatitis A, B, or C, visit:

www.immunize.org/affiliATES
Is safeguarding your vaccine supply worth 25 minutes of your time?

That’s the time it takes to view this new CDC video, which covers temperature monitoring equipment, required documentation and record-keeping, storage and handling procedures, and action steps to take when a problem occurs.

“How to Protect Your Vaccine Supply”

Cost is $15.* For 20 or more copies, contact us for discount pricing. For more information or to order online, visit www.immunize.org/vachandling. To order by fax or mail, use the order form on page 23.

Questions? Email admin@immunize.org or call (651) 647-9009.

*One copy of this video is available free from CDC by calling (800) 232-2522.

Do you vaccinate children or adults?

Then your practice needs this training video!

“Immunization Techniques: Safe, Effective, Caring”

developed by California Dept. of Health Services Immunization Branch

Every medical practice delivering vaccination services should regularly use this 35-minute video for training staff members who administer vaccines. Each video comes with presenter’s notes and a skills checklist.

Cost is $30 per copy. For 20 or more copies, contact us for discount pricing. For more information or to order online, visit www.immunize.org/iztech. To order by fax or mail, use the order form on page 23.

Questions? Email admin@immunize.org or call (651) 647-9009.

2003 Rates for 19–35 Month Olds

The estimated rates* below are for children ages 19–35 months. To view more findings and compare the 2003 rates with previous years’ rates, go to www.cdc.gov/hip/menus/stats_surv.htm#nis

<table>
<thead>
<tr>
<th>State</th>
<th>≥3 PCV</th>
<th>≥1 Varicella</th>
<th>4:3:1:3:3†</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>68.1</td>
<td>84.8</td>
<td>79.4</td>
</tr>
<tr>
<td>AL</td>
<td>69.1</td>
<td>91.3</td>
<td>80.4</td>
</tr>
<tr>
<td>AK</td>
<td>76.0</td>
<td>81.1</td>
<td>79.7</td>
</tr>
<tr>
<td>AZ</td>
<td>63.0</td>
<td>81.5</td>
<td>76.9</td>
</tr>
<tr>
<td>AR</td>
<td>50.5</td>
<td>88.3</td>
<td>76.5</td>
</tr>
<tr>
<td>CA</td>
<td>72.7</td>
<td>89.7</td>
<td>77.4</td>
</tr>
<tr>
<td>CO</td>
<td>56.8</td>
<td>78.9</td>
<td>67.5</td>
</tr>
<tr>
<td>CT</td>
<td>86.4</td>
<td>93.2</td>
<td>94.0</td>
</tr>
<tr>
<td>DE</td>
<td>62.1</td>
<td>81.5</td>
<td>76.3</td>
</tr>
<tr>
<td>DC</td>
<td>67.4</td>
<td>88.8</td>
<td>76.2</td>
</tr>
<tr>
<td>FL</td>
<td>57.9</td>
<td>87.6</td>
<td>81.0</td>
</tr>
<tr>
<td>GA</td>
<td>62.4</td>
<td>90.5</td>
<td>76.6</td>
</tr>
<tr>
<td>HI</td>
<td>77.7</td>
<td>89.6</td>
<td>82.0</td>
</tr>
<tr>
<td>ID</td>
<td>71.0</td>
<td>72.8</td>
<td>78.1</td>
</tr>
<tr>
<td>IL</td>
<td>67.4</td>
<td>77.8</td>
<td>82.9</td>
</tr>
<tr>
<td>IN</td>
<td>72.6</td>
<td>73.1</td>
<td>79.0</td>
</tr>
<tr>
<td>IA</td>
<td>60.5</td>
<td>71.6</td>
<td>81.1</td>
</tr>
<tr>
<td>KS</td>
<td>66.9</td>
<td>74.7</td>
<td>75.7</td>
</tr>
<tr>
<td>KY</td>
<td>74.9</td>
<td>91.6</td>
<td>81.0</td>
</tr>
<tr>
<td>LA</td>
<td>57.9</td>
<td>83.3</td>
<td>69.9</td>
</tr>
<tr>
<td>ME</td>
<td>75.1</td>
<td>81.0</td>
<td>78.6</td>
</tr>
<tr>
<td>MD</td>
<td>69.9</td>
<td>90.4</td>
<td>81.3</td>
</tr>
<tr>
<td>MA</td>
<td>90.9</td>
<td>89.1</td>
<td>90.7</td>
</tr>
<tr>
<td>MI</td>
<td>53.8</td>
<td>88.8</td>
<td>81.5</td>
</tr>
<tr>
<td>MN</td>
<td>72.9</td>
<td>78.2</td>
<td>83.9</td>
</tr>
<tr>
<td>MS</td>
<td>62.9</td>
<td>88.5</td>
<td>83.6</td>
</tr>
<tr>
<td>MO</td>
<td>69.9</td>
<td>83.9</td>
<td>83.3</td>
</tr>
<tr>
<td>MT</td>
<td>65.6</td>
<td>74.6</td>
<td>80.0</td>
</tr>
<tr>
<td>NE</td>
<td>67.8</td>
<td>75.3</td>
<td>80.4</td>
</tr>
<tr>
<td>NV</td>
<td>39.6</td>
<td>78.1</td>
<td>75.7</td>
</tr>
<tr>
<td>NH</td>
<td>79.4</td>
<td>83.3</td>
<td>86.5</td>
</tr>
<tr>
<td>NJ</td>
<td>72.1</td>
<td>76.8</td>
<td>75.0</td>
</tr>
<tr>
<td>NM</td>
<td>63.5</td>
<td>84.7</td>
<td>75.2</td>
</tr>
<tr>
<td>NY</td>
<td>76.8</td>
<td>87.3</td>
<td>78.6</td>
</tr>
<tr>
<td>NC</td>
<td>72.1</td>
<td>86.0</td>
<td>86.7</td>
</tr>
<tr>
<td>ND</td>
<td>60.5</td>
<td>71.8</td>
<td>80.4</td>
</tr>
<tr>
<td>OH</td>
<td>65.0</td>
<td>81.5</td>
<td>82.3</td>
</tr>
<tr>
<td>OK</td>
<td>41.8</td>
<td>83.9</td>
<td>70.5</td>
</tr>
<tr>
<td>OR</td>
<td>70.2</td>
<td>87.0</td>
<td>76.5</td>
</tr>
<tr>
<td>PA</td>
<td>81.4</td>
<td>85.9</td>
<td>86.2</td>
</tr>
<tr>
<td>RI</td>
<td>89.7</td>
<td>90.7</td>
<td>85.2</td>
</tr>
<tr>
<td>SC</td>
<td>75.7</td>
<td>86.0</td>
<td>84.3</td>
</tr>
<tr>
<td>SD</td>
<td>37.3</td>
<td>68.4</td>
<td>80.9</td>
</tr>
<tr>
<td>TN</td>
<td>68.3</td>
<td>87.8</td>
<td>78.8</td>
</tr>
<tr>
<td>TX</td>
<td>59.8</td>
<td>87.6</td>
<td>74.8</td>
</tr>
<tr>
<td>UT</td>
<td>65.9</td>
<td>79.0</td>
<td>78.8</td>
</tr>
<tr>
<td>VT</td>
<td>76.5</td>
<td>71.2</td>
<td>83.6</td>
</tr>
<tr>
<td>VA</td>
<td>80.9</td>
<td>87.0</td>
<td>84.0</td>
</tr>
<tr>
<td>WA</td>
<td>68.2</td>
<td>66.6</td>
<td>75.3</td>
</tr>
<tr>
<td>WV</td>
<td>59.3</td>
<td>76.5</td>
<td>74.6</td>
</tr>
<tr>
<td>WI</td>
<td>74.3</td>
<td>84.4</td>
<td>81.2</td>
</tr>
<tr>
<td>WY</td>
<td>66.2</td>
<td>68.6</td>
<td>75.8</td>
</tr>
</tbody>
</table>

†Comprises ≥2 doses of DTP/Dt/DTaP, ≥3 doses of polio, ≥1 dose of measles-containing vaccine, ≥3 doses of Hib, and ≥3 doses of hepatitis B vaccine.
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 (CISP)**
www.cispimmunize.org
Created by the American Academy of Pediatrics, this is an immunization website for parents and health professionals.

**Immunization Action Coalition (IAC)**
www.immunize.org & www.vaccineinformation.org
IAC is a nonprofit organization that promotes immunization for all people against vaccine-preventable diseases. These websites offer educational pieces, photos, and video clips for parents, health professionals, the media, 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.hhs.gov/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 (CHOP)**
www.vaccine.chop.edu
The goal of the Vaccine Education Center is to accurately communicate the facts about each childhood vaccine, including how vaccines are made, how and why vaccines work, who recommends them, and more.

**Phone Numbers**

**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)

**CDC’s Hepatitis Hotline**
A toll-free number for consumers and health professionals about viral hepatitis. Get information by recording, fax, or voice in English or Spanish. (888) 443-7232 (888-4HEPCDC)

**Books for Parents**

**Vaccines: What you should know, 3rd edition**
By Paul Offit, MD, and Louis Bell, MD, John Wiley & Sons, Inc., 2003. To purchase, visit your local bookstore, call John Wiley & Sons, Inc. at (877) 762-2974, or visit www.wiley.com.

**Vaccinating Your Child: Questions and Answers for the Concerned Parent, 2nd edition**

**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

**Videos**

“Vaccines and Your Baby” and “Vaccines: Separating Fact from Fear”
Both videos are for parents of young children and are free from the Vaccine Education Center at The Children’s Hospital of Philadelphia. To order, call (215) 590-1000 or (215) 590-9990; or order online at www.vaccine.chop.edu/orders_parents.html

www.immunize.org/catg.d/p4012.pdf • Item #P4012 (8/04)
After the Shots . . .

What to do if your child has discomfort

Your child may need extra love and care after getting vaccinated. Some vaccinations that protect children from serious diseases also can cause discomfort for a while. Here are answers to questions many parents have after their children have been vaccinated. If this sheet doesn't answer your questions, call your clinic or health care provider.

Clinic or health care provider phone number: __________________________

I think my child has a fever. What should I do?
Check your child’s temperature to find out if there is a fever. Do not use a mercury thermometer. If your child is younger than 3 years of age, taking a temperature with a rectal digital thermometer provides the best reading. Once your child is 4 or 5 years of age, you may prefer taking a temperature by mouth with an oral digital thermometer. Tympanic thermometers, which measure temperature inside the ear, are another option for older babies and children. If your child is older than 3 months of age, you can also take an underarm (axillary) temperature, although it is not as accurate.

Here are some things you can do to help reduce fever:

- Give your child plenty to drink.
- Clothe your child lightly. Do not cover or wrap your child tightly.
- Give your child a fever-reducing medication such as acetaminophen (e.g., Tylenol®) or ibuprofen (e.g., Advil®, Motrin®).
- Do not give aspirin.
- Recheck your child's temperature after 1 hour.
- Sponge your child in 1–2 inches of lukewarm water.

If your child's temperature is _____°F (_____°C) or higher or, if you have questions, call your clinic or health care provider.

My child has been fussy since getting vaccinated. What should I do?
After vaccination, children may be fussy due to pain or fever. You may want to give your child a medication such as acetaminophen (e.g., Tylenol®) or ibuprofen (e.g., Advil®, Motrin®) to reduce pain and fever. Do not give aspirin. If your child is fussy for more than 24 hours, call your clinic or health care provider.

My child’s leg or arm is swollen, hot, and red. What should I do?
- Apply a clean, cool, wet washcloth over the sore area for comfort.
- For pain, give a medication such as acetaminophen (e.g., Tylenol®) or ibuprofen (e.g., Advil®, Motrin®). Do not give aspirin.
- If the redness or tenderness increases after 24 hours, call your clinic or health care provider.

My child seems really sick. Should I call my health care provider?
If you are worried at all about how your child looks or feels, call your clinic or health care provider!

Check the back of this page for information on the proper dosage of medication you can give your child to reduce pain or fever.

Call your clinic right away if you answer “yes” to any of the following questions:
- Does your child have a temperature about which your health care provider has told you to be concerned?
- Is your child pale or limp?
- Has your child been crying for more than 3 hours and just won’t quit?
- Does your child have a strange cry that isn’t normal (a high-pitched cry)?
- Is your child’s body shaking, twitching, or jerking?
- Does your child have marked decrease in activity or decrease in responsiveness?

Check the back of this page for information on the proper dosage of medication you can give your child to reduce pain or fever.

Immunization Action Coalition • 1573 Selby Avenue • St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org
### Medications and Dosages to Reduce Pain and Fever

**Important notes:**

1. Ask your health care provider or pharmacist which formulation is best for your child.
2. Give dose based on your child's weight. If you don't know the weight, give dose based on your child's age. Do not give more medication than recommended.
3. If you have questions about dosing or any other concern, call your clinic or health care provider.
4. Always use a proper measuring device. For example:
   - When giving infant drops, use only the dosing device (dropper or syringe) enclosed in the package.
   - When giving children's suspension or liquid, use the dosage cup enclosed in the package. If you misplace the dosage cup, consult your health care provider or pharmacist for advice. (Kitchen spoons are not accurate measures.)
5. **WARNING:** If you're also giving your child over-the-counter (OTC) medications such as cold preparations, be aware that these may contain pain or fever reducers such as acetaminophen or ibuprofen. Be sure to read all OTC medication labels carefully to ensure your child is not receiving more acetaminophen or ibuprofen than recommended.

### Acetaminophen Dosing Information (Tylenol® or another brand)

*Give every 4–6 hours, as needed, no more than 5 times in 24 hours (unless directed to do otherwise by your health care provider).*

<table>
<thead>
<tr>
<th>Weight of child</th>
<th>Age of child</th>
<th>Infant drops</th>
<th>Children's liquid or suspension</th>
<th>Children's tablets</th>
<th>Junior strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>6–11 lbs (2.7–5 kg)</td>
<td>0–3 mos</td>
<td>Advised dose*: _________</td>
<td>0.8 mL = 80 mg</td>
<td>1 tsp (5 mL) = 160 mg</td>
<td>1 tablet = 80 mg</td>
</tr>
<tr>
<td>12–17 lbs (5.5–7.7 kg)</td>
<td>4–11 mos</td>
<td>Advised dose*: _________</td>
<td>1.25 mL</td>
<td>2 tablets</td>
<td>2½ tablets</td>
</tr>
<tr>
<td>18–23 lbs (8.2–10.5 kg)</td>
<td>12–23 mos</td>
<td>Advised dose*: _________</td>
<td>1 tsp (10 mL) = 160 mg</td>
<td>1½ teaspoons (240 mg)</td>
<td>3 tablets</td>
</tr>
<tr>
<td>24–35 lbs (10.9–15.9 kg)</td>
<td>2–3 yrs</td>
<td>Advised dose*: _________</td>
<td>1.6 mL</td>
<td>2 teaspoons (400 mg)</td>
<td>2 tablets</td>
</tr>
<tr>
<td>36–47 lbs (16.4–21.4 kg)</td>
<td>4–5 yrs</td>
<td>1½ teaspoons (240 mg)</td>
<td>2 tablets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48–59 lbs (21.8–26.8 kg)</td>
<td>6–8 yrs</td>
<td>2 teaspoons (320 mg)</td>
<td>4 tablets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60–71 lbs (27.3–32.3 kg)</td>
<td>9–10 yrs</td>
<td>2½ teaspoons (400 mg)</td>
<td>5 tablets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72–95 lbs (32.7–43.2 kg)</td>
<td>11 yrs</td>
<td>3 teaspoons (480 mg)</td>
<td>6 tablets</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Ask your health care provider

### Ibuprofen Dosing Information (Advil®, Motrin® or another brand)

*Give every 6–8 hours, as needed, no more than 4 times in 24 hours (unless directed to do otherwise by your health care provider).*

<table>
<thead>
<tr>
<th>Weight of child</th>
<th>Age of child</th>
<th>Infant drops</th>
<th>Children's liquid or suspension</th>
<th>Children's tablets</th>
<th>Junior strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>under 11 lbs (5 kg)</td>
<td>under 6 mos</td>
<td>Advised dose*: _________</td>
<td>1.25 mL</td>
<td>1 tablet (50 mg)</td>
<td>1 tablet = 100 mg</td>
</tr>
<tr>
<td>12–17 lbs (5.5–7.7 kg)</td>
<td>6–11 mos</td>
<td>1.25 mL</td>
<td>1 tablet (100 mg)</td>
<td>2 tablets</td>
<td></td>
</tr>
<tr>
<td>18–23 lbs (8.2–10.5 kg)</td>
<td>12–23 mos</td>
<td>1.875 mL</td>
<td>1½ teaspoons (150 mg)</td>
<td>3 tablets</td>
<td></td>
</tr>
<tr>
<td>24–35 lbs (10.9–15.9 kg)</td>
<td>2–3 yrs</td>
<td>1 teaspoon (10 mL) = 100 mg</td>
<td>2 teaspoons (200 mg)</td>
<td>4 tablets</td>
<td></td>
</tr>
<tr>
<td>36–47 lbs (16.4–21.4 kg)</td>
<td>4–5 yrs</td>
<td>1½ teaspoons (150 mg)</td>
<td>2 tablets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48–59 lbs (21.8–26.8 kg)</td>
<td>6–8 yrs</td>
<td>2 teaspoons (200 mg)</td>
<td>3 tablets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60–71 lbs (27.3–32.3 kg)</td>
<td>9–10 yrs</td>
<td>2½ teaspoons (250 mg)</td>
<td>5 tablets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72–95 lbs (32.7–43.2 kg)</td>
<td>11 yrs</td>
<td>3 teaspoons (300 mg)</td>
<td>6 tablets</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Ask your health care provider

Immunization Action Coalition: www.immunize.org/catg.d/p4015.pdf
What should I do if I think I’ve been exposed to HAV?
If you think you have been exposed to HAV, consult your health professional or health department. You might need immune globulin, which if given in time, can immediately protect you after being exposed to HAV. You might also want to receive the hepatitis A vaccine at this time, for future protection.

If you do become ill with hepatitis A, you will need to get information from your health professional on how to take care of yourself. Your household and sexual contacts might need immune globulin so they do not get hepatitis A.

If I’ve been vaccinated against hepatitis B, will this protect me from HAV?
No. Hepatitis B vaccine will not protect you from HAV infection. However, there is a vaccine that is available to protect adults against both hepatitis A and hepatitis B.

Will hepatitis A vaccine protect me against hepatitis B or hepatitis C?
No. Hepatitis A, B, and C are different viruses. Hepatitis B virus (HBV) and HAV infections can be prevented by vaccination; unfortunately, there is no vaccine to prevent infection with hepatitis C virus at this time.

Hepatitis A
is a serious liver disease

Everyone needs vaccinations!
If you can’t afford shots or don’t know where to get them, call (800) 232-2522, or call your local or state health department.
What is hepatitis A?
Hepatitis A is a serious liver disease caused by infection with the hepatitis A virus (HAV).

How is HAV spread?
HAV is usually spread from getting particles of fecal material into your mouth that might be too small to be seen. This happens through household or sexual contact with an infected person or by eating HAV-contaminated food or drinking HAV-contaminated water. Casual contact, such as in a school or work setting, does not spread HAV.

What are the symptoms of hepatitis A?
Infected persons can have no symptoms at all or be extremely ill. Only 30% of children less than six years of age develop symptoms, while 70% of older children and adults develop symptoms.

If a person does develop symptoms, they might include fever, tiredness, loss of appetite, nausea, abdominal pain, dark urine, and/or jaundice (yellowing of the eyes and skin). These symptoms can last up to six months. With or without symptoms, people with HAV infection can spread the infection to others.

How serious is hepatitis A?
About 15% of people with hepatitis A require hospitalization. Adults who become ill often miss several weeks of work. There are approximately 100 deaths each year in the U.S. from hepatitis A.

How can HAV infection be prevented?
A safe and effective vaccine to prevent HAV infection has been available in the U.S. since 1995. Good hand washing might also help stop the spread of HAV. Always wash your hands with soap and water after using the toilet, changing a diaper, and before preparing or eating food.

Who should get hepatitis A vaccine?
If you fall into any of the following groups, you should consult with your health professional about getting vaccinated against HAV:

- men who have sex with men
- users of street drugs (injecting and non-injecting)
- children, two years of age and older, who live in areas with historically increased rates of hepatitis A (for information about these areas, contact your local health department)
- people who travel or work in any area of the world except the U.S., Canada, Western Europe, Japan, New Zealand, and Australia
- people with chronic liver disease, including hepatitis C
- people working with live hepatitis A virus
- people with clotting factor disorders, such as hemophilia

What if I don’t fit into any of these groups, but still want to be protected against HAV infection?
If you want to receive hepatitis A vaccine, there is no medical reason it cannot be given (a child must be two years of age or older). The cost of the vaccine might not be covered by your health insurance, so you might have to pay for it yourself.

How can I protect myself against HAV when traveling?
Get vaccinated against HAV before traveling to any area of the world except the U.S., Canada, Western Europe, Japan, New Zealand, and Australia. Discuss this with your health professional in advance of your departure, as it takes about four weeks for immunity to begin after the first dose of hepatitis A vaccine. If you don’t have at least four weeks advance notice when traveling, check with your health professional about receiving a shot called immune globulin. This preparation provides short-term protection against HAV infection.

How long does hepatitis A vaccine protect you?
Research suggests that protection will last for at least 20 years.

How safe is hepatitis A vaccine?
Does it have any side effects?
Many studies have shown that hepatitis A vaccine is very safe. Since 1995, more than seven million doses of hepatitis A vaccine have been given in the U.S. with no reports of serious health problems linked to the vaccine. Side effects might include soreness at the injection site, headache, and tiredness. These symptoms, if they occur, last for only a short time.

How effective is hepatitis A vaccine?
Almost 100% of people are protected from HAV infection after getting two doses of vaccine.

How many shots are needed?
Children and adults need two doses of hepatitis A vaccine, spaced at least six months apart. At least 94% of people will be protected after the first dose, but a second dose is necessary to assure long-term protection.
## How's your state doing?

### Current U.S. immunization information by state

<table>
<thead>
<tr>
<th>State</th>
<th>Does a meningococcal mandate exist for colleges/universities?</th>
<th>Does a mandate exist for residents in long-term care facilities?</th>
<th>Pharmacist authorized to vaccinate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>AK</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>AZ</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>AR</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>CA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>CO</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>CT</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>DE</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>DC</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>FL</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>GA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>HI</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>ID</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>IL</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>IN</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>IA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>KS</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>KY</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>LA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>ME</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MD</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MI</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MN</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MS</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MO</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MT</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>NE</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>NV</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>NH</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>NJ</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>NM</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>NY</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>NC</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>ND</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>OH</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>OK</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>OR</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>PA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>RI</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>SC</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>SD</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>TN</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>TX</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>UT</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>VT</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>VA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>WA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>WV</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>WI</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>WY</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

1. Immunization Action Coalition (IAC) data; updates appear on the IAC website throughout the year at www.immunize.org/laws
2. A requirement exists either by statute or regulation for (1) residents to be vaccinated or (2) the facility to offer vaccination to all residents.
3. Information provided by the American Pharmacists Association.
Vaccinations for Adults
You’re NEVER too old to get immunized!

Getting immunized is a lifelong, life-protecting job. Don’t leave your health professional’s office without making sure you’ve had all the vaccinations you need.

<table>
<thead>
<tr>
<th>Vaccine ▼ Age ▼</th>
<th>19–49 years</th>
<th>50–64 years</th>
<th>65 years &amp; older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>You need a dose yearly if you have a chronic health problem, are a health care worker, or have close contact with certain individuals.*</td>
<td>You need a dose every fall (or winter).</td>
<td></td>
</tr>
<tr>
<td>Pneumococcal</td>
<td>You need 1–2 doses if you have certain chronic medical conditions.*</td>
<td></td>
<td>You need 1 dose at age 65 (or later); you may also need a 2nd dose.*</td>
</tr>
<tr>
<td>Tetanus, diphtheria (Td)</td>
<td>If you haven’t had at least 3 tetanus and diphtheria-containing shots sometime in your life, you need to get them now. Start with dose #1, followed by dose #2 in 1 month, and dose #3 in 6 months. You need a booster dose every 10 years. Consult your health professional if you have a deep or dirty wound.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B (HepB)</td>
<td>You may need to complete a 3-dose series (dose #1 now, followed by dose #2 in 1 month, and dose #3 usually given 5 months later). Ask your health professional whether you need this vaccine.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A (HepA)</td>
<td>You may need 2 doses spaced 6–18 months apart. Ask your health professional whether you need this vaccine.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR)</td>
<td>You need at least 1 dose of MMR if born in 1957 or later. You may also need a 2nd dose.*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella (Chickenpox)</td>
<td>If you’ve never had chickenpox, you should get vaccinated now (2 doses, 1–2 months apart).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td>If you are a young adult going to college, ask your health professional about your risk of meningococcal disease and if you need to get vaccinated.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Do you travel outside the United States? If so, you may need additional vaccines, including hepatitis A and meningococcal vaccines. The Centers for Disease Control and Prevention (CDC) operates an international traveler’s immunization hotline. Call (877) 394-8747 or visit CDC’s website at www.cdc.gov/travel for information about your destination. You may also consult a travel clinic or your health professional.
<table>
<thead>
<tr>
<th>Vaccine name and route</th>
<th>For whom it is recommended</th>
<th>Schedule for routine and “catch-up” administration</th>
<th>Precautions and contraindications (mild illness is not a contraindication)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Influenza</strong>&lt;br&gt;Trivalent inactivated influenza vaccine (TIV)&lt;br&gt;&lt;strong&gt;Give IM&lt;/strong&gt;&lt;br&gt;Live attenuated influenza vaccine (LAIV)&lt;br&gt;&lt;strong&gt;Give intranasally**&lt;br&gt;&lt;strong&gt;Note:** Prior anaphylactic reaction to this vaccine, or to any of its components, or to eggs. **&lt;br&gt;**Moderate or severe acute illness. **&lt;br&gt;<strong>Do not give live attenuated influenza vaccine to persons ≥50 years of age, pregnant women, or to persons who have: asthma, reactive airway disease or other chronic disorder of the pulmonary or cardiovascular systems; an underlying medical condition, including metabolic diseases such as diabetes, renal dysfunction, and hemoglobinopathies; a known or suspected immune deficiency disorder or who are receiving immunosuppressive therapy; a history of Guillain-Barré syndrome.</strong>&lt;br&gt;<strong>See Special Notes in columns 2–3 regarding who may not receive LAIV.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pneumococcal polysaccharide (PPV23)</strong>&lt;br&gt;&lt;strong&gt;Give IM or SC**&lt;br&gt;&lt;strong&gt;Note:** Pregnancy and breastfeeding are not contraindications to the use of this vaccine.**</td>
<td><strong>For whom it is recommended</strong>&lt;br&gt;<strong>Adulthood who are 65yrs of age or older.</strong>&lt;br&gt;<strong>People 2–64yrs of age who have chronic illness or other risk factors, including chronic cardiac or pulmonary diseases, chronic liver disease, alcoholism, diabetes mellitus, CSF leaks, candida for or recipient of cochlear implant, as well as people living in special environments or social settings (including Alaska Natives and certain American Indian populations). Those at highest risk of fatal pneumococcal infection are people with anatomic asplenia, functional asplenia, or sickle cell disease; immunocompromised persons including those with HIV infection, leukemia, lymphoma, Hodgkin’s disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephritic syndrome; persons receiving immunocompromised chemotherapy (including corticosteroids); and those who received an organ or bone marrow transplant. Pregnant women with high-risk conditions should be vaccinated if not done previously.</strong></td>
<td><strong>Schedule for routine and “catch-up” administration</strong>&lt;br&gt;<strong>Routiney given as a one-time dose; administer if previous vaccination history is unknown.</strong>&lt;br&gt;<strong>One-time revaccination is recommended 5yrs later for people at highest risk of fatal pneumococcal infection or rapid antibody loss (e.g., renal disease) and for people ≥65yrs of age if the 1st dose was given prior to age 65 and ≥5yrs have elapsed since previous dose.</strong>&lt;br&gt;<strong>May give with all other vaccines.</strong></td>
<td><strong>Previous anaphylactic reaction to this vaccine, or to any of its components.</strong>&lt;br&gt;<strong>Moderate or severe acute illness.</strong>&lt;br&gt;<strong>Note:</strong> Pregnancy and breastfeeding are not contraindications to the use of this vaccine.**</td>
</tr>
<tr>
<td><strong>Hepatitis B</strong>&lt;br&gt;&lt;strong&gt;(Hep B)<strong>&lt;br&gt;&lt;strong&gt;Give IM</strong>&lt;br&gt;&lt;strong&gt;Brands may be used interchangeably.<strong>&lt;br&gt;&lt;strong&gt;Note:</strong> Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure.<strong>&lt;br&gt;<strong>Note:</strong> In 1997, the NIH Consensus Development Conference, a panel of national experts, recommended that hepatitis B vaccination be given to all anti-HCV positive persons.</strong>&lt;br&gt;<strong>Ed. note:</strong> Provide serologic screening for immigrants from endemic areas. When HBsAg-positive persons are identified, offer appropriate disease management. In addition, screen their sex partners and household members and, if found susceptible, vaccinate.**</td>
<td><strong>For whom it is recommended</strong>&lt;br&gt;<strong>All adolescents.</strong>&lt;br&gt;<strong>High-risk adults, including household contacts and sex partners of HBsAg-positive persons; users of illicit injectable drugs; heterosexuals with more than one sex partner in 6 months; men who have sex with men; people with recently diagnosed STDs; patients receiving hemodialysis and patients with renal disease that may result in dialysis; recipients of certain blood products; health care workers and public safety workers who are exposed to blood; clients and staff of institutions for the developmentally disabled; inmates of long-term correctional facilities; and certain international travelers.</strong>&lt;br&gt;<strong>Note:</strong> Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure. <strong>Note:</strong> In 1997, the NIH Consensus Development Conference, a panel of national experts, recommended that hepatitis B vaccination be given to all anti-HCV positive persons.**</td>
<td><strong>Schedule for routine and “catch-up” administration</strong>&lt;br&gt;<strong>Three doses are needed on a 0, 1, 6m schedule.</strong>&lt;br&gt;<strong>Alternative timing options for vaccination include 0, 2, 4m and 0, 1, 4m.</strong>&lt;br&gt;<strong>There must be 4wks between doses #1 and #2, and 8wks between doses #2 and #3. Overall there must be at least 16wks between doses #1 and #3.</strong>&lt;br&gt;<strong>Schedule for those who have fallen behind:</strong>&lt;br&gt;<strong>If the series is delayed between doses, DO NOT start the series over. Continue from where you left off.</strong>&lt;br&gt;<strong>May give with all other vaccines.</strong></td>
<td><strong>Previous anaphylactic reaction to this vaccine or to any of its components.</strong>&lt;br&gt;<strong>Moderate or severe acute illness.</strong>&lt;br&gt;<strong>Note:</strong> Pregnancy and breastfeeding are not contraindications to the use of this vaccine.**</td>
</tr>
<tr>
<td><strong>Hepatitis A</strong>&lt;br&gt;&lt;strong&gt;(Hep A)<strong>&lt;br&gt;&lt;strong&gt;Give IM</strong>&lt;br&gt;&lt;strong&gt;Brands may be used interchangeably.<strong>&lt;br&gt;&lt;strong&gt;Note:</strong> Prevaccination testing is likely to be cost effective for persons &gt;40yrs of age as well as for younger persons in certain groups with a high prevalence of hepatitis A virus infection.**</td>
<td><strong>For whom it is recommended</strong>&lt;br&gt;<strong>People who travel outside of the U.S. (except for Western Europe, New Zealand, Australia, Canada, and Japan).</strong>&lt;br&gt;<strong>People with chronic liver disease, including people with hepatitis C; people with hepatitis B who have chronic liver disease; illicit drug users; men who have sex with men; people with clotting-factor disorders; people who work with hepatitis A virus in experimental lab settings (not routine medical laboratories); and food handlers when health authorities or private employers determine vaccination to be cost effective.</strong>&lt;br&gt;<strong>Ed. note:</strong> Provide serologic screening for immigrants from endemic areas. When HBsAg-positive persons are identified, offer appropriate disease management. In addition, screen their sex partners and household members and, if found susceptible, vaccinate.**</td>
<td><strong>Schedule for routine and “catch-up” administration</strong>&lt;br&gt;<strong>Two doses are needed.</strong>&lt;br&gt;<strong>The minimum interval between dose #1 and #2 is 6m.</strong>&lt;br&gt;<strong>If dose #2 is delayed, do not repeat dose #1. Just give dose #2.</strong>&lt;br&gt;<strong>May give with all other vaccines.</strong></td>
<td><strong>Previous anaphylactic reaction to this vaccine or to any of its components.</strong>&lt;br&gt;<strong>Moderate or severe acute illness.</strong>&lt;br&gt;<strong>Safety during pregnancy has not been determined, so benefits must be weighed against potential risk.</strong>&lt;br&gt;<strong>Note:</strong> Breastfeeding is not a contraindication to the use of this vaccine.**</td>
</tr>
</tbody>
</table>
## Summary of Recommendations for Adult Immunization (continued)

<table>
<thead>
<tr>
<th>Vaccine name and route</th>
<th>For whom it is recommended</th>
<th>Schedule for routine and “catch-up” administration</th>
<th>Precautions and contraindications (mild illness is not a contraindication)</th>
</tr>
</thead>
</table>
| **Td (Tetanus, diphtheria)**  
Give IM | • All adolescents and adults.  
• After the primary series has been completed, a booster dose is recommended every 10yrs. Make sure your patients have received a primary series of 3 doses.  
• A booster dose as early as 5yrs later may be needed for the purpose of wound management, so consult ACIP recommendations.*  
• Use Td, not tetanus toxoid (TT), for all indications. | • Give booster dose every 10yrs after the primary series has been completed.  
• For those who are unvaccinated or behind, complete the primary series (paced at 0, 1–2m, 6–12m intervals). Don’t restart the series, no matter how long since the previous dose.  
• May give with all other vaccines. | • Previous anaphylactic or neurologic reaction to this vaccine or to any of its components.  
• Moderate or severe acute illness.  
**Note:** Pregnancy and breastfeeding are not contraindications to the use of this vaccine. |
| **MMR (Measles, mumps, rubella)**  
Give SC | • Adults born in 1957 or later who are ≥18yrs of age (including those born outside the U.S.) should receive at least one dose of MMR if there is no serologic proof of immunity or documentation of a dose given on or after the first birthday.  
• Adults in high-risk groups, such as health care workers, students entering colleges and other post-high school educational institutions, and international travelers, should receive a total of two doses.  
• Adults born before 1957 are usually considered immune but proof of immunity may be desirable for health care workers.  
• All women of childbearing age (i.e., adolescent girls and premenopausal adult women) who do not have acceptable evidence of rubella immunity or vaccination.  
• Special attention should be given to immunizing women born outside the United States in 1957 or later. | • One or two doses are needed.  
• If dose #2 is recommended, give it no sooner than 4wks after dose #1.  
• May give with all other vaccines.  
• If varicella vaccine and MMR are both needed and are not administered on the same day, space them at least 4wks apart.  
• If a pregnant woman is found to be rubella-susceptible, administer MMR postpartum. | • Previous anaphylactic reaction to this vaccine or to any of its components.  
• Pregnancy or possibility of pregnancy within 4 weeks (use contraception).  
• Persons immunocompromised because of cancer, leukemia, lymphoma, immunosuppressive drug therapy, including high-dose steroids or radiation therapy.  
**Note:** HIV positivity is NOT a contraindication to MMR except for those who are severely immunocompromised.  
• 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.  
• Moderate or severe acute illness.  
**Note:** Breastfeeding is not a contraindication to the use of this vaccine.  
**Note:** MMR is not contraindicated if a tuberculin skin test (i.e., PPD) was recently applied. If PPD and MMR not given on same day, delay PPD for 4–6wks after MMR. |
| **Varicella (Var) (Chickenpox)**  
Give SC | All susceptible adults and adolescents should be vaccinated. It is especially important to ensure vaccination of the following groups: susceptible persons who have close contact with persons at high risk for serious complications (e.g., health care workers and family contacts of immunocompromised persons) and susceptible persons who are at high risk of exposure (e.g., teachers of young children, day care employees, residents and staff in institutional settings such as colleges and correctional institutions, military personnel, adolescents and adults living with children, non-pregnant women of childbearing age, and international travelers who do not have evidence of immunity).  
**Note:** People with reliable histories of chickenpox (such as self or parental report of disease) can be assumed to be immune. For adults who have no reliable history, serologic testing may be cost effective since most adults with a negative or uncertain history of varicella are immune. | • Two doses are needed.  
• Dose #2 is given 4–8wks after dose #1.  
• May give with all other vaccines.  
• If varicella vaccine and MMR are both needed and are not administered on the same day, space them at least 4wks apart.  
• If the second dose is delayed, do not repeat dose #1. Just give dose #2. | • Previous anaphylactic reaction to this vaccine or to any of its components.  
• Pregnancy or possibility of pregnancy within 4 weeks (use contraception).  
• Persons immunocompromised because of malignancies and primary or acquired cellular immunodeficiency including HIV/AIDS. (See MMWR 1999, Vol. 48, No. RR-6.)  
**Note:** 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.  
• Moderate or severe acute illness.  
**Note:** Breastfeeding is not a contraindication to the use of this vaccine.  
**Note:** MMR is not contraindicated if a tuberculin skin test (i.e., PPD) was recently applied. If PPD and MMR not given on same day, delay PPD for 4–6wks after MMR. |
| **Polio (IPV)**  
Give IM or SC | Not routinely recommended for persons 18yrs of age and older.  
**Note:** Adults living in the U.S. who never received or completed a primary series of polio vaccine need not be vaccinated unless they intend to travel to areas where exposure to wild-type virus is likely. Previously vaccinated adults can receive one booster dose if traveling to polio endemic areas. | • Refer to ACIP recommendations* regarding unique situations, schedules, and dosing information.  
• May give with all other vaccines. | • Previous anaphylactic or neurologic reaction to this vaccine or to any of its components.  
• Moderate or severe acute illness.  
**Note:** Pregnancy and breastfeeding are not contraindications to the use of this vaccine. |
| **Meningococcal**  
Give SC | Vaccinate people with risk factors. Discuss disease risk and vaccine availability with college students. Consult ACIP statement* on meningococcal disease (6/30/00) for details. | | |

* For specific ACIP immunization recommendations, refer to the statements, which are published in MMWR. To obtain a complete set of ACIP statements, call (800) 232-2522, or to access individual statements, visit CDC’s website: www.cdc.gov/nip/publications/ACIP-list.htm or visit IAC’s website: www.immunize.org/acip This table is revised yearly because of the changing nature of U.S. immunization recommendations. Visit the Immunization Action Coalition’s website at www.immunize.org/adultrules to make sure you have the most current version. We extend our thanks to William Atkinson, MD, MPH, from CDC’s National Immunization Program, and Linda Moyer, RN, from the Division of Viral Hepatitis, at CDC’s National Center for Infectious Diseases for their assistance. This table is published by the Immunization Action Coalition, 1573 Selby Avenue, St. Paul, MN 55104, (651) 647-9009. Email: admin@immunize.org

www.immunize.org/catg.d/p2011b.pdf  •  Item #P2011 (7/04)
Purpose: To reduce morbidity and mortality from influenza by vaccinating all patients who meet the criteria established by the Centers for Disease Control and Prevention’s Advisory Committee on Immunization Practices.

Policy: Under these standing orders, eligible nurses may vaccinate patients who meet the criteria below.

Procedure:
1. Identify adults in need of influenza vaccination based on the following criteria:
   a. Age 50 years or older
   b. Age less than 50 years with any of the following conditions:
      - chronic disorder of the pulmonary or cardiovascular system, including asthma
      - chronic metabolic disease (e.g., diabetes mellitus), renal dysfunction, hemoglobinopathy, or immunosuppression (e.g., caused by medications, HIV) that has required regular medical follow-up or hospitalization during the preceding year
      - will be pregnant during the influenza season
   c. Residence in a nursing home or other chronic-care facility that houses persons of any age who have chronic medical conditions
   d. In an occupation or living situation that puts one in proximity to persons at high risk, including:
      - a health care worker, caregiver, or household member in contact with person(s) at high risk of developing complications from influenza
      - a household contact or out-of-home caretaker of a child 0–23 months of age
   e. Wish to reduce the likelihood of becoming ill with influenza
2. Screen all patients for contraindications and precautions to influenza vaccine:
   a. Contraindications: serious reaction (e.g., anaphylaxis) after ingesting eggs or after receiving a previous dose of influenza vaccine or an influenza vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf Do not give live attenuated influenza vaccine (LAIV) to pregnant women or immunosuppressed persons. Use of inactivated influenza vaccine is preferred over LAIV for close contacts of severely immunosuppressed persons during periods when the immunocompromised person requires a protective environment.
   b. Precautions: moderate or severe acute illness with or without fever
3. Provide all patients with a copy of the most current federal Vaccine Information Statement (VIS). Although not required by federal law, it is prudent to document in the patient’s medical record or office log, the publication date of the VIS and the date it was given to the patient. Provide non-English speakers with a VIS in their native language if available; these can be found at www.immunize.org/vis
4. Administer 0.5 mL inactivated influenza vaccine IM (22–25g, 1–1½" needle) in the deltoid muscle. Alternatively, healthy persons 5–49 years of age without contraindications may be given 0.5 mL of LAIV; 0.25 mL is sprayed into each nostril while the patient is in an upright position.
5. Document each patient’s vaccine administration information and follow up in the following places:
   a. Medical chart: Record the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. If vaccine was not given, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal).
   b. Personal immunization record card: Record vaccination date and the name/location of the administering clinic.
6. Be prepared for management of a medical emergency related to the administration of vaccine by having a written emergency medical protocol available, as well as equipment and medications.
7. Report all adverse reactions to influenza vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

This policy and procedure shall remain in effect for all patients of the ____________________________ until rescinded or until ____________________________ (date).

(name of practice or clinic)

Medical Director’s signature: _______________________________ Effective date: ____________________________
Give these people influenza vaccine!

WHY? This year, influenza is again expected to kill more than 36,000 people in the United States.

The Centers for Disease Control and Prevention (CDC) recommends that persons in the following groups receive influenza vaccine. Check the list below and make sure you offer influenza vaccine to all who need or want it.

- **ALL children age 6–23 months**
- **ALL persons 50 years of age and older**
- **Persons with certain high-risk medical conditions**
  Any person (6 months of age or older) who is at increased risk for complications from influenza because of underlying medical conditions, including:
  - residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
  - adults and children who have chronic disorders of the pulmonary or cardiovascular systems, including asthma
  - adults and children who have required regular medical follow-up or hospitalization during the past year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression
  - children and adolescents (age 6 months to 18 years) who are receiving long-term aspirin therapy and therefore might be at risk for developing Reye’s syndrome after influenza illness
  - all women who will be pregnant during the influenza season
- **Household contacts of all high-risk persons listed above**
- **Household contacts of all children 0–23 months of age and out-of-home caregivers**
- **ANY person who wishes to reduce the likelihood of becoming ill with influenza (if the person has no contraindications to the vaccine and is at least 6 months of age)**
- **Health care workers**
  Health care workers and others in close contact with persons in high-risk groups should be vaccinated to decrease the risk of transmitting infection to persons for whom influenza could be a serious, life-threatening disease. Those who should be vaccinated include the following:
  - physicians, nurses, receptionists, and other personnel who have contact with patients in hospital or outpatient settings, including medical emergency response workers
  - employees of nursing homes and chronic-care facilities who have contact with patients or residents
  - employees of assisted living and other residences for persons in high-risk groups
  - persons who provide home care to people in high-risk groups
- **Other groups to consider:**
  - travelers at high risk for influenza complications who were not vaccinated in the previous fall or winter and who plan to travel to the Southern Hemisphere between April and September, to the tropics, or with a large tourist group at any time of the year
  - persons who provide essential community services (e.g., firefighters, police)
  - students or other persons in institutional settings (e.g., those who reside in dormitories)

**Persons who should not be vaccinated:**
Consult the current recommendations from CDC for guidance on contraindications and precautions for use of trivalent inactivated influenza vaccine and live attenuated intranasal influenza vaccine.

**Note:** The live attenuated intranasal influenza vaccine (FluMist™) should only be used in healthy, nonpregnant persons 5–49 years of age.

Unprotected people . . .

Toddler’s death spurs parents to action

In December 2003, Colorado experienced its worst influenza epidemic in years. Among the influenza-related fatalities that month was Terese Cover, who died from pneumonia weeks before her second birthday. As part of their healing process, Vira and Dennis Cover, Terese’s parents, established a foundation in their daughter’s name, the Elizabeth Terese Cover Foundation for Influenza Research and Vaccination.

As of May 31, 2004, preliminary data reported to CDC by 40 states indicated there were 152 influenza-associated deaths among U.S. residents less than 18 years of age during the 2003–04 influenza season. Children ages 6–23 months accounted for 30% of these deaths (CDC, unpublished data, 2004). These data are preliminary and are subject to change as CDC continues its review process. Still, it is safe to say that providing influenza vaccine to this vulnerable population has the potential to reduce child mortality.

The following article was published as “Flu victim inspires mission of hope” in the Denver Post on January 23, 2004. It was written by Karen Augé and is reprinted with permission of the Denver Post, which holds the copyright.

You can purchase this article from the Denver Post, which holds the copyright. Alternatively, we will mail you a copy if you send a self-addressed, stamped envelope to the Immunization Action Coalition, 1573 Selby Ave., Ste. 234, St. Paul, MN 55104.

To read more articles and case reports about people who have suffered or died from vaccine-preventable diseases, visit IAC’s web section www.immunize.org/stories

It includes 66 reports about 15 diseases.
Influenza Vaccine Information Statements (VISs)

For a ready-to-copy 8½" x 11" version of this VIS, go to www.immunize.org/vis/2flu.pdf

INACTIVATED INFLUENZA VACCINE

WHAT YOU NEED TO KNOW

2004-2005

1 Why get vaccinated?

Influenza (“flu”) is a serious disease. It is caused by a virus that spreads from one person to the next through coughing and sneezing.

Influenza virus can cause:

- Sore throat
- Fever
- Headache
- Muscle aches
- Fatigue

Any person can get influenza. Most people are ill for only a few days, but some get much sicker and many need hospitalization. Influenza causes an average of 36,000 to 49,000 hospitalizations and 200-500 deaths each year in the U.S., mostly among the elderly.

Influenza vaccine can prevent influenza.

2 Vaccine

Two types of influenza vaccines are available: inactivated (killed) influenza vaccine, given as a shot, and a live, intranasal influenza vaccine, given as a mist. Inactivated influenza vaccine uses a killed form of the virus, and the live vaccine uses a weakened form of the virus.

Inactivated influenza vaccine is an excellent choice if:

- You are allergic to eggs
- You are pregnant
- You have Guillain-Barré Syndrome

Inactivated influenza vaccine does not cause fever.

3 Who should get inactivated influenza vaccine?

People 6 months of age and older who risk for getting a serious case of influenza or influenza complications, including those with the following conditions, should get the vaccine:

- Household contacts and out-of-home caregivers of children under 6 months of age
- People 65 years of age or older
- Residents of long-term care facilities housing persons with chronic medical conditions
- People who have long-term health problems with diabetes, heart disease, or other blood disorders
- Pregnant women
- People working in the healthcare field
- People working with ferrets or mink

An annual flu shot is recommended for:

- All children 6-23 months of age
- People 65 years of age or older
- Residents of long-term care facilities housing persons with chronic medical conditions
- People who have long-term health problems with diabetes, heart disease, or other blood disorders
- People who are immunocompromised (on medications or otherwise)
- People who are obese

4 Why should I get inactivated influenza vaccine?

Influenza can cause:

• Fever, muscle aches, and headache
• Cough, sore throat, and runny nose
• Tiredness/weakness
• Headache

If these problems occur, they usually begin soon after the shot and last 1-3 days.

5 When should I get influenza vaccine?

The best time to get a flu shot is in October or November. Some people should get their flu shot in February or earlier. The vaccine:

- Protects against the flu for 2-3 months
- Should be given to persons who travel to the tropics or in organized tourist groups
- Should be given to persons who live in communities where influenza is spreading
- Should be given to persons who have had influenza in the past

Some people should talk with a doctor before getting influenza vaccine.

6 Some people should talk with a doctor before getting influenza vaccine

Talk with a doctor before getting a flu shot if you:

- Are allergic to any of the vaccine ingredients
- Had a severe reaction to a flu shot in the past
- Have Guillain-Barré Syndrome

7 If there is a moderate or severe reaction?

What should I do?

What should I look for?

- Talk to your doctor about whether to get a flu shot this year
- Notify local health and human services department
- Contact the Centers for Disease Control and Prevention (CDC) at 1-800-CDC-INFO (232-4636)
- Visit CDC website at www.cdc.gov/nip

8 How can I learn more?

- Ask your doctor or nurse. They can give you the vaccine facts sheet (Leaflet), or the vaccine information package (Vacc ine Information Statement). For a copy, call 1-800-822-2275.
- The leaflet is available in Spanish (Español)
- Visit CDC website at www.cdc.gov/nip

For a ready-to-copy 8½" x 11" version of this VIS, go to www.immunize.org/vis/liveflu.pdf

INFLUENZAVACCINE

WHAT YOU NEED TO KNOW

2004-2005

1 Why get vaccinated?

Influenza (“flu”) is a serious disease. It is caused by a virus that spreads from one person to the next through coughing and sneezing.

Influenza virus can cause:

- Sore throat
- Fever
- Headache
- Muscle aches
- Fatigue

Any person can get influenza. Most people are ill for only a few days, but some get much sicker and many need hospitalization. Influenza causes an average of 36,000 to 49,000 hospitalizations and 200-500 deaths each year in the U.S., mostly among the elderly.

Influenza vaccine can prevent influenza.

2 Vaccine

Two types of influenza vaccines are available: inactivated (killed) influenza vaccine, given as a shot, and a live, intranasal influenza vaccine, given as a mist. Inactivated influenza vaccine uses a killed form of the virus, and the live vaccine uses a weakened form of the virus.

Inactivated influenza vaccine is an excellent choice if:

- You are allergic to eggs
- You are pregnant
- You have Guillain-Barré Syndrome

Inactivated influenza vaccine does not cause fever.

3 Who should get intranasal influenza vaccine?

People 5 years of age and older who risk for getting a serious case of influenza or influenza complications, including those with the following conditions, should get the vaccine:

- Household contacts and out-of-home caregivers of children under 6 months of age
- People 65 years of age or older
- Residents of long-term care facilities housing persons with chronic medical conditions
- People who have long-term health problems with diabetes, heart disease, or other blood disorders
- Pregnant women
- People working in the healthcare field
- People working with ferrets or mink

An annual flu shot is recommended for:

- All children 6-23 months of age
- People 65 years of age or older
- Residents of long-term care facilities housing persons with chronic medical conditions
- People who have long-term health problems with diabetes, heart disease, or other blood disorders
- People who are immunocompromised (on medications or otherwise)
- People who are obese

4 Why should I get intranasal influenza vaccine?

Influenza can cause:

• Fever, muscle aches, and headache
• Cough, sore throat, and runny nose
• Tiredness/weakness
• Headache

If these problems occur, they usually begin soon after the shot and last 1-3 days.

5 When should I get influenza vaccine?

The best time to get the flu vaccine is in October or November. Some people should get their flu shot in February or earlier. The vaccine:

- Protects against the flu for 2-3 months
- Should be given to persons who travel to the tropics or in organized tourist groups
- Should be given to persons who live in communities where influenza is spreading
- Should be given to persons who have had influenza in the past

Some people should talk with a doctor before getting influenza vaccine.

6 Some people should talk with a doctor before getting influenza vaccine

Talk with a doctor before getting a flu shot if you:

- Are allergic to any of the vaccine ingredients
- Had a severe reaction to a flu shot in the past
- Have Guillain-Barré Syndrome

7 If there is a moderate or severe reaction?

What should I do?

What should I look for?

- Talk to your doctor about whether to get a flu shot this year
- Notify local health and human services department
- Contact the Centers for Disease Control and Prevention (CDC) at 1-800-CDC-INFO (232-4636)
- Visit CDC website at www.cdc.gov/nip

8 How can I learn more?

- Ask your doctor or nurse. They can give you the vaccine facts sheet (Leaflet), or the vaccine information package (Vaccine Information Statement). For a copy, call 1-800-822-2275.
- The leaflet is available in Spanish (Español)
- Visit CDC website at www.cdc.gov/nip

For a ready-to-copy 8½" x 11" version of this VIS, go to www.immunize.org/vis/liveflu.pdf
adult vaccinees from illness when the vaccine strain is similar to the circulating strain. However, the vaccine is only 30%–40% effective in preventing illness among frail elderly persons (although among elderly persons, the vaccine is 50%–60% effective in preventing hospitalization and 80% effective in preventing death).

Which health care workers should be vaccinated against influenza?

It is important to vaccinate all hospital and outpatient-care personnel who have direct contact with patients. In addition to physicians and nurses, vaccination in hospital settings also includes full-time and part-time employees in radiology, laboratories, pharmacy, human resources, facilities management (housekeeping), food services, and laundry. Vaccinate volunteers as well. Others who should be vaccinated are emergency response workers, and part-time employees in radiology, laboratories, pharmacy, human resources, facilities management (housekeeping), food services, and laundry. Vaccinate volunteers as well. Others who should be vaccinated are emergency response workers, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities, employees of nursing homes and assisted living facilities

I am a 30-year-old health care worker. Can I be vaccinated with the live attenuated intranasal influenza vaccine (LAIV)?

Yes, you can be vaccinated with LAIV, provided you do not have a medical contraindication (e.g., chronic medical condition, pregnant) or have close contact with a severely immunosuppressed person who requires care in a protective environment (e.g., a bone marrow transplant patient). Otherwise, you should be vaccinated with trivalent inactivated influenza vaccine (TIV).

Now that we are routinely vaccinating all pediatric patients 6–23 months of age, it may be difficult to assure that first-time vaccinees younger than 9 years old receive two doses of influenza vaccine. Any suggestions?

ACIP has suggested these patients may be given their first dose of vaccine in September or earlier. We also suggest using reminder and recall systems to contact patients in need of a second dose.

A five-year-old child received her second MMR a week ago. How long should she wait before receiving LAIV?

LAIV can be administered simultaneously with another live vaccine (e.g., MMR, varicella), but if not given at the same time, ACIP recommends waiting four weeks before administering the second live vaccine.

What type of thermometer is good for measuring temperatures in a vaccine storage unit? The National Immunization Program recommends a certified calibrated thermometer in each compartment (refrigerator and freezer). While all thermometers are calibrated during manufacturing, certified calibrated thermometers undergo a second individual calibration against a reference standard from an appropriate agency. They are then given a certificate indicating successful completion of this process. The certificate is provided with the instrument when purchased and is different from the manufacturer’s warranty.

Can we buy these types of thermometers at a hardware store?

No. You will need to purchase them through a scientific supply company or other specialized vendor. Your state immunization program may be able to refer you to some suppliers. Be sure to look for a thermometer with a “traceable certificate,” usually to a National Institute of Standards and Technology (NIST) or American Society for Testing and Materials (ASTM) standard. These thermometers may cost a bit more than the average hardware store thermometer, but it is better to invest in a more reliable model than to risk damaging thousands of dollars worth of vaccine because of inaccurate readings.

How often should temperatures be checked and recorded on our vaccine storage unit’s log?

It is important that you check and record the temperatures of both the refrigerator and freezer units at the beginning and end of the day. You should also record the room temperature on your log.

We are carefully logging our vaccine storage unit’s temperatures each day. Is there anything else that could go wrong?

Congratulations on all your hard work. You would be surprised at the number of people who, just like you, do a careful job of recording temperatures and then fail to act on them when they go out of range. Always take immediate action when you notice an out-of-range temperature. You may need to move the vaccines temporarily to a more reliable storage unit and determine the source of the problem. It may be something quite fixable (e.g., excessive lint or dust on the coils) and you will be back in business after you determine that the temperature is back in range after a few hours. Above all, don’t chart it and not act on it!

Can we store vaccine in the same unit where we store employees’ lunches?

No, don’t use the same unit. Frequent opening of the refrigerator’s door to retrieve food items can adversely affect the internal temperature of the unit and potentially damage the vaccines.

There is a vent in our refrigerator that brings in cold air from the freezer. Vaccines stored near this vent are colder to the touch. Could this be a problem?

Yes. Vaccines that are in the refrigerator should be moved away from this vent as the cold air from the freezer can cause your vaccines to freeze. Inactivated vaccines must be kept at 35–46°F (2–8°C).

(continued on page 20)
Hepatitis A and B
by Linda A. Moyer, RN, and Eric E. Mast, MD

Is it acceptable to give four doses of hepatitis B vaccine to infants?
Yes. A dose of monovalent hepatitis B vaccine is recommended for all newborns before hospital discharge. For subsequent doses, many practices use combination vaccine that contains hepatitis B vaccine (i.e., Pediarix or Combvac). Neither product can be given at birth. Since both have a 3-dose schedule, this means the infant will receive a total of four doses of hepatitis B vaccine. The practice of administering four doses of hepatitis B vaccine does not increase vaccine reactogenicity, and results in higher final antibody titers that should correlate with longer duration of detectable antibody. The federal Vaccines for Children (VFC) program provides up to four doses of hepatitis B vaccine for VFC-eligible children. You may still use monovalent hepatitis B vaccine in a 3-dose series.

Can administering hepatitis B vaccine with a needle that’s too short cause non-response or other problems for an individual?
Yes. Hepatitis B vaccine needs to be administered into the muscle for maximum effectiveness. If a needle is too short, the vaccine might be deposited into the muscle for maximum effectiveness. If a number of injections are given, the needle should be long enough to reach the muscle mass and the depth below the muscle surface into which the material is to be injected. For the majority of infants, a 7/8 to 1 inch, 22–25 gauge needle is sufficient to penetrate to the infant’s thigh muscle. For toddlers and older children, the needle size can range from 22–25 gauge and from 7/8 to 1¼ inches. For adults the suggested needle size is 1 to 2 inches and 22–25 gauge.

If a person is a non-responder (anti-HBs <10 mIU/mL) to the first hepatitis B vaccination series, how much time needs to elapse before the person can be revaccinated?
At least 4 weeks, as you cannot determine whether the person is a non-responder until anti-HBs is measured at a minimum of 4 weeks following the last dose of the first vaccination series.

Which travelers should be offered hepatitis A vaccine?
Hepatitis A vaccine is recommended for ALL susceptible persons 2 years of age and older who travel to or will work in countries outside the United States, EXCEPT Western Europe, New Zealand, Australia, Canada, and Japan. Data are not available regarding the risk of hepatitis A virus (HAV) infection for persons traveling to developed areas of the Caribbean, although vaccine should be considered if travel to areas that have questionable sanitation is anticipated. For optimal protection, the first dose of vaccine should be given at least 4 weeks prior to travel. Therefore, the first dose of hepatitis A vaccine should be administered as soon as travel to a high-risk area is planned. Persons traveling to at-risk areas less than 4 weeks after the initial dose of hepatitis A vaccine should also be given immune globulin (IG; 0.02mL/kg), but at a different injection site. A second vaccine dose is necessary for long-term protection. Travelers who are allergic to a vaccine component or who choose not to be vaccinated should receive a single dose of IG (0.02mL/kg), which provides effective protection against HAV infection for up to 3 months. Travelers whose travel period exceeds 2 months should be administered IG at 0.06mL/kg, which must be repeated if the travel period exceeds 5 months. Travelers less than 2 years of age should be given IG, because the vaccine is currently not licensed for use in this age group.

If a person has had HAV infection, should they still receive the vaccine if planning international travel?
No, as long as there are medical records that document that the person was previously infected with HAV (i.e., positive test for antibody to HAV). If there is any doubt that the person actually was infected with HAV, hepatitis A vaccine or IG should be given. The vaccine or IG will not harm a person who is already immune.

If a person was born and grew up in a country where HAV infection is endemic (e.g., Vietnam, Mexico) and then moved to the U.S. at age 20, should that person receive hepatitis A vaccine before returning to visit his/her homeland?
It depends on whether that person has a history of HAV infection. Unless there are medical records that document prior HAV infection, serologic testing for immunity is the only way to determine if vaccination is necessary. For persons from countries with high rates of HAV infection, such as Vietnam and Mexico, serologic testing might be done to prevent unnecessary vaccination. The cost effectiveness of serologic testing, however, should be balanced against the possibility of delaying needed vaccination while awaiting test results.

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

<table>
<thead>
<tr>
<th>Tests</th>
<th>Results</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBsAg</td>
<td>anti-HBc positive</td>
<td>susceptible</td>
</tr>
<tr>
<td>anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>anti-HBc negative</td>
<td>immune due to vaccination</td>
</tr>
<tr>
<td>anti-HBs</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>anti-HBc positive</td>
<td>immune due to natural infection</td>
</tr>
<tr>
<td>anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>IgM anti-HBc positive</td>
<td>acutely infected</td>
</tr>
<tr>
<td>anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>IgM anti-HBc negative</td>
<td>chronically infected</td>
</tr>
<tr>
<td>anti-HBs</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>anti-HBc negative</td>
<td>four interpretations possible†</td>
</tr>
<tr>
<td>anti-HBs</td>
<td>positive</td>
<td></td>
</tr>
</tbody>
</table>

*Postvaccination testing, when it is recommended, should be performed 1–2 months following the last dose of vaccine. Infants born to HBsAg-positive mothers should be tested 3–9 months after the last dose.
†1. May be recovering from acute HBV infection.
2. May be distantly immune, but the test may not be 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; many can benefit from treatment.

FDA currently licenses three medications for use in the United States.
1. interferon alfa-2b, recombinant (administered subcutaneously)
2. lamivudine (administered orally)
3. adefovir dipivoxil (administered orally)

Consult a liver specialist experienced in the treatment of viral hepatitis for appropriate monitoring guidelines and for help in determining 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.

IgM anti-HAV: IgM antibody subclass of anti-HAV. Its presence indicates a recent infection with HAV (<6 mos). 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 (total): Antibody to hepatitis B core antigen is a nonspecific 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 anti-HBc, 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.

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 HBV infection.

Talking points to use with vaccine-hesitant parents

Use the statistics below as talking points with vaccine-hesitant parents. They show that vaccines are effective, but that vaccine-preventable diseases still exist and are closer than you think.

Talking Point #1: Vaccines work!

<table>
<thead>
<tr>
<th>Disease</th>
<th>Max. cases reported</th>
<th>Year max. reported</th>
<th>Reported cases 2003</th>
<th>Percent decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>175,885</td>
<td>1920–1922</td>
<td>1</td>
<td>99.9%</td>
</tr>
<tr>
<td>Pertussis</td>
<td>147,271</td>
<td>1925</td>
<td>11,647</td>
<td>92.1%</td>
</tr>
<tr>
<td>Tetanus (lockjaw)</td>
<td>1,314</td>
<td>1926</td>
<td>20</td>
<td>98.5%</td>
</tr>
<tr>
<td>Polio (wild virus)</td>
<td>16,316</td>
<td>1951–1954</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Measles</td>
<td>503,282</td>
<td>1958–1962</td>
<td>56</td>
<td>99.9%</td>
</tr>
<tr>
<td>Mumps</td>
<td>152,209</td>
<td>1968</td>
<td>231</td>
<td>99.8%</td>
</tr>
<tr>
<td>Rubella</td>
<td>47,745</td>
<td>1968</td>
<td>7</td>
<td>99.9%</td>
</tr>
<tr>
<td>Hib</td>
<td>20,000</td>
<td>1985</td>
<td>259</td>
<td>98.7%</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>26,612*</td>
<td>1985</td>
<td>7,526</td>
<td>71.7%</td>
</tr>
</tbody>
</table>

* The estimated mean number of new infections in the 1980s was 259,000, although the reported number of cases is much lower. Source: “Disease Burden from Vital Hepatitis A, B, and C in the United States” www.cdc.gov/hepatitis

Talking Point #2: Vaccine-preventable diseases still exist!

Thanks primarily to vaccines, many diseases, including measles, diphtheria, and hepatitis B, are declining in the United States. Unfortunately, millions of people in the world still die from vaccine-preventable diseases. In 2002 alone, approximately 612,000 people died from measles; 294,000 from pertussis; and 600,000 from hepatitis B.1

Talking Point #3: These contagious diseases are closer than you think!

• Measles and pertussis are classified as highly communicable diseases. They are easily spread through the air when an infected person sneezes or coughs. Outbreaks occur everywhere, even in industrialized countries.
• In 2002, 1,571 people in Italy developed measles, 594 were hospitalized, and 4 died.4
• U.S. tourists in Italy had the potential to contract measles and infect you, your child, or members of your community when they returned to the U.S.
• In 2003, 11,647 people in the U.S. developed pertussis and 18 people died.2,5
• Some states continue to experience many cases of pertussis. If your family lives in or visits one of these states, your child can contract pertussis.
• Hepatitis B virus infection usually requires contact with an infected person’s blood.
• Hepatitis B virus can be transmitted by a bite.
• The U.S. has low rates of hepatitis B compared with other countries; still 7,526 new cases were reported in the U.S. in 2003.3
• Symptoms of chronic hepatitis B often don’t show up for decades; frequently parents of a child who has become infected are unaware of their child’s condition.
• When hepatitis B symptoms do become apparent, it’s frequently when chronic hepatitis B is far advanced.

Don’t take chances with your child’s health — vaccinate!

Our new CD of essential immunization information includes current versions of ALL IAC’s print pieces in English and many in Spanish (more than 150 pieces!). Written for staff, parents, and patients, these pieces are CDC reviewed and continually updated, making them resources you can use and distribute with confidence. In addition, the CD includes all federal Vaccine Information Statements (VISs)—in English and Spanish.

In the past, we mailed our supporters print copies of our educational pieces. We have switched to CD technology because it offers contributors significant benefits:

- Every piece you print from the CD will be a crisp, professional-looking original
- If you accidentally hand out your last hard copy, you can print another without downloading from the Internet
- You can reduce storage space for staff- and patient-education materials to the size of the CD—the span of your hand!

In addition to this must-have CD, your contribution of $75 or more will bring you the following:

- A year’s worth of NEEDLE TIPS. IAC’s flagship print publication, NEEDLE TIPS has a worldwide readership of more than 130,000 health professionals. Read it, and you’ll know why it’s a trusted source of accurate and timely immunization information.

- The satisfaction of being IAC’s partner in saving lives by preventing disease. Your contribution is critical in continuing IAC’s work of producing accurate, up-to-date immunization information and making it available worldwide.

- We’ll even send a colorful IAC mousepad! Our mousepad supply is being nibbled away. Don’t miss out—become a contributor today!

Four outstanding resources for patient and staff education

Complete your collection of immunization print materials with these four indispensable resources:

- New! “Adults Only Vaccination: A Step-by-Step Guide.” 157 pages of comprehensive, practical information on ALL aspects of adult immunization. Presents clear, authoritative material on administering adult vaccines, educating patients about them, billing for them, and much more. Indispensable for any setting where adults are immunized, such as long-term care residences, family planning clinics, adult medical practices, college health services, and more. $75; includes the 2 videos below and other useful resources.

- New Video! “How to Protect Your Vaccine Supply.” Developed by CDC in 2004, this 25-minute video offers practical information on vaccine handling and storage. Order from IAC for $15 (or you can get one free copy from CDC at https://www2.cdc.gov/nchstp_od/PIWeb/niporderform.asp)

- Video! “Immunization Techniques: Safe, Effective, Caring.” Developed by the California Immunization Program in 2001, this 35-minute video presents abundant practical information on how to vaccinate people of all ages. An excellent tool for training new staff and refreshing experienced staff. Comes with presenter notes and a skills checklist. $30.

- Adult Immunization Record Cards. The card lists the vaccines adults get, making it easy to discuss your patients’ vaccination needs with them. At the end of a visit, give the card to the patient as a permanent reminder of their immunization status. Rip-proof, smudge-proof, and waterproof, the card fits into a wallet for lifelong use. $30 for a 250-card box; see page 23 for larger quantity discounts.

To order materials on this page, use the order form on page 23.
Essential Immunization Resources from IAC

We’ve changed the contents of this page. To reduce paper, printing, and shipping costs, we no longer list or sell individual copies of our educational print materials. We encourage readers to download IAC print materials from our website. They are CDC-reviewed, ready-to-copy, and available for immediate use.

To access all IAC print materials, go to: www.immunize.org/free

In addition, we’ve invested in a high-quality CD-ROM creator and are producing CDs with the most current versions of more than 150 of IAC’s print materials. (See page 22 for complete information.) We are offering the CD as a special thank-you to IAC partners who contribute $75 or more. To receive the CD, please read the section below left, I Want to Support IAC.

You can also receive the CD-ROM when you contribute $75 or more online at www.immunize.org/join

Ready to order? Please read this first!

1. Whether you order by check, credit card, or purchase order, complete both parts of this form (the ordering information to the left and the payment and shipping information below). Our federal ID# is 41-1768237.

2. To order by check (in U.S. dollars only), make your check payable to Immunization Action Coalition. Mail it with this order form in the enclosed envelope addressed to Immunization Action Coalition, 1573 Selby Avenue, Suite 234, St. Paul, MN 55104

3. To order by purchase order, include your purchase order number in the Method of Payment section below. Mail this form to the address above or fax it to (651) 647-9131.

4. To order by credit card, include your credit card information in the Method of Payment section below. Mail this form to the address above or fax it to (651) 647-9131.

5. No charge for shipping small orders within the U.S. We ship by fourth-class mail; delivery in 3 weeks or less.

Essential Immunization Resources

CD of IAC print materials
FREE with a contribution of $75 or more (see above). The CD contains all IAC’s ready-to-print materials in English and any translations available in Spanish. Includes VISs in English & Spanish (details p. 22).

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Am.</th>
<th>Videos</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2010</td>
<td>How to Protect Your Vaccine Supply (details p. 5)</td>
<td>$15</td>
</tr>
<tr>
<td>V2020</td>
<td>Immunization Techniques: Safe, Effective, Caring (details p. 5)</td>
<td>$30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Am.</th>
<th>Brand new! Adult Vaccination Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2070</td>
<td></td>
<td>includes the two videos listed above</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Am.</th>
<th>Record cards and slides</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2005</td>
<td></td>
<td>Adult immunization record card; 250 cards/box; 1 box—$30; 2 boxes—$55; 3 boxes—$75; 4 boxes—$90 (details p. 3)</td>
</tr>
<tr>
<td>R2006</td>
<td></td>
<td>Adult immunization record card w/smallpox: 250 cards/box; 1 box—$40; 2 boxes—$75; 3 boxes—$105; 4 boxes—$130</td>
</tr>
<tr>
<td>S3010</td>
<td></td>
<td>Vaccine-preventable diseases slide set (script included)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Am.</th>
<th>Subscriptions to our publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1001</td>
<td></td>
<td>Needle Tips, 1-year subscription (2 issues), FREE with a contribution</td>
</tr>
<tr>
<td>J2001</td>
<td></td>
<td>Vaccinate Adults, 1-year subscription (2 issues)</td>
</tr>
<tr>
<td>J3001</td>
<td></td>
<td>Vaccinate Women, 1-year subscription (1 issue)</td>
</tr>
</tbody>
</table>

Grand Total $
Dear Colleague,

Since IAC began 14 years ago, our goal has been to be your partner in optimizing vaccination delivery. To that end, we distribute three print publications and two email news services; we also operate four websites. If you’re new to these resources, read on:

Every Monday, our IAC Express email news service goes out to 18,000 subscribers. If you’re not one of them, you’re missing out on breaking news about FDA vaccine approvals, ACIP and AAP vaccine recommendations, changes in VISs, and much more. To start your free subscription, visit www.immunize.org/express

Every month, our HEP Express listserv brings current information to people who have a special interest in viral hepatitis prevention and treatment. For a free subscription, go to: www.hepprograms.org/hepexpress

IAC’s four websites provide you with everything from patient-education materials in up to 31 languages to links to pertinent article abstracts from professional journals. To access our main website, go to: www.immunize.org

Your annual contribution makes you a vital IAC partner

Additional IAC websites are www.vaccineinformation.org; www.hepprograms.org; and www.izcoalitions.org

These print, email, and web-based resources are free to you. As part of our partnership with you, however, we need you and every other Needle Tips reader to become a financial partner by making annual contributions.

Your contribution to IAC is tax deductible. If you contribute $75 or more, we have a gift for you—our CD-ROM of essential immunization information (to learn more, see pages 22 and 23). If you’ve never contributed to IAC, or if it’s been more than a year since you have, please support IAC with your generous contribution today!

Lastly, don’t be a silent partner! We’d love to hear from you. We need your suggestions about how IAC can better help you. Please email your ideas to me at deborah@immunize.org

Deborah L. Wexler, MD
Executive Director

Every year, get vaccinated against influenza and give to IAC!

Thank you to CDC!
CDC’s National Immunization Program and the Division of Viral Hepatitis, National Center for Infectious Diseases, provide invaluable technical and financial support.

Thank you, readers!
We greatly appreciate your financial support and your comments and suggestions.

Thank you to our major supporters!
We deeply appreciate your generosity.
• Merck & Co.
• Wyeth Vaccines
• Aventis Pasteur
• Chiron Vaccines
• MedImmune
• GSK (GlaxoSmithKline)
• Baxter Healthcare
• Bayer Biological
• American Pharmacists Association

A special thank you to the Lillian O. Bell Estate and the Mark and Muriel Wexler Foundation.

IAC receives funding from a variety of sources, both public and private, but maintains strict control over the content of its publications.

Dear Colleague,

Since IAC began 14 years ago, our goal has been to be your partner in optimizing vaccination delivery. To that end, we distribute three print publications and two email news services; we also operate four websites. If you’re new to these resources, read on:

Every Monday, our IAC Express email news service goes out to 18,000 subscribers. If you’re not one of them, you’re missing out on breaking news about FDA vaccine approvals, ACIP and AAP vaccine recommendations, changes in VISs, and much more. To start your free subscription, visit www.immunize.org/express

Every month, our HEP Express listserv brings current information to people who have a special interest in viral hepatitis prevention and treatment. For a free subscription, go to: www.hepprograms.org/hepexpress

IAC’s four websites provide you with everything from patient-education materials in up to 31 languages to links to pertinent article abstracts from professional journals. To access our main website, go to: www.immunize.org

Your tax-deductible contribution will help hundreds of thousands of health professionals, parents, and patients gain access to reliable immunization information. When you contribute $75 or more, you’ll receive an extensive collection of IAC’s ready-to-print materials on a CD in English, as well as any translations available in Spanish. The CD also contains VISs in English and Spanish.

I want to contribute to the Immunization Action Coalition!

Name/Title: _______________________________________________________________
Organization: ______________________________________________________________
Address: _________________________________________________________________
City/State/Zip:_____________________________________________________________
Phone and Email: ___________________________________________________________

$75     $50     $100     $150     $200     $250     $ other

☐ I’m supporting IAC at a $75 level or higher, so please send me the CD of your print materials in English and Spanish. (Access other translations free online at www.immunize.org/free)
☐ I don’t need a CD, thanks!

You can donate online at www.immunize.org/join

Method of payment: ☐ Check enclosed ☐ Credit Card ☐ P.O. #
☐ Visa ☐ Mastercard ☐ Am. Express ☐ Discover Exp. Date

Card #: ________________________________

Fax this form to (651) 647-9131 or use the enclosed envelope

Deborah L. Wexler, MD
IAC Executive Director

Immunization Action Coalition

NEEDLE TIPS and the Hepatitis B Coalition News

1573 Selby Avenue, Suite 234
Saint Paul, MN 55104