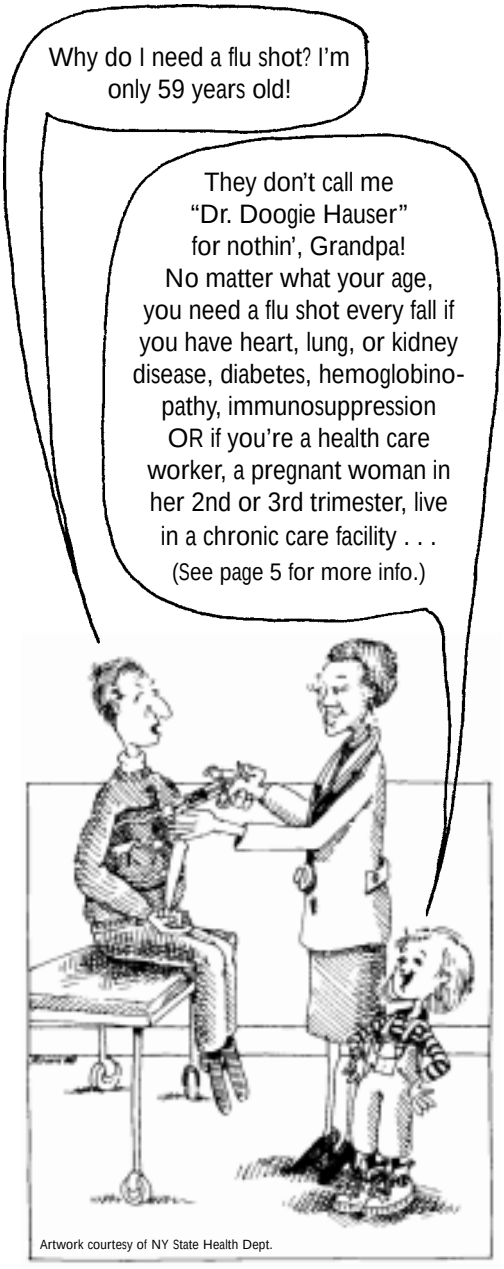
Volume 2 - Number 2 Fall/Winter 1998-1999

VACCINATE ADULTS!

A bulletin for adult medicine specialists from the Immunization Action Coalition

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



Artwork courtesy of NY State Health Dept.

What's Inside?

Ask the Experts

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

General vaccine questions

by William L. Atkinson, MD, MPH

When the expiration date of a vaccine indicates a month and year, does the vaccine expire on the first or last day of the month?
Vaccine may be used through the last day of the month indicated on the expiration date.

When giving two IM injections in the same limb, what is the minimum spacing between the two injection sites?
The vaccines should be separated by at least one inch in the body of the muscle so that any local reactions are unlikely to overlap.

Is it safe to give a vaccine directly into an area where there is a tattoo?
Both intramuscular and subcutaneous vaccines may be given through a tattoo.

Questions for the experts?

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

What are the risks of not aspirating prior to an IM or SQ injection of a vaccine?
Aspiration is recommended in order to avoid injecting vaccine into a vein or artery. If blood is returned when the syringe is aspirated, the vaccine dose should not be injected.

Do patients with sickle cell disease or functional asplenia have any special vaccination recommendations?
Sickle cell disease often causes spleen damage. Persons two years of age and older with sickle cell disease should receive pneumococcal vaccine. A second dose of pneumococcal vaccine is recommended for this group (and other persons without a functional spleen) 5 years after the first dose. Persons without a functional spleen (including persons with sickle cell disease) should also receive a single dose of meningococcal vaccine, and a single dose of Hib vaccine, if they have not already been vaccinated against Hib.

When will the vaccine against Lyme disease be licensed?
Two manufacturers (SmithKline Beecham and Pasteur Mérieux Connaught) have submitted license applications for Lyme disease vaccines to the FDA. One or both of these vaccines could be licensed within the next year.

What needle length is recommended for subcutaneous and intramuscular vaccines for adults?
Subcutaneous injections (MMR, varicella, IPV) should be given with a 5/8- to 3/4-inch, 23- to 25-gauge needle. For intramuscular injections, a 1- to 1 ½- inch needle is recommended, depending on muscle mass.

Varicella

by William L. Atkinson, MD, MPH

Why is varicella vaccine contraindicated in patients with HIV when MMR usually is not?
There are very few data on the safety and efficacy of varicella vaccine in persons with HIV infection, and FDA has not approved it for this use. Studies of the use of varicella vaccine in HIV-infected persons are underway now.

If a pregnant woman with no history of varicella disease is exposed to varicella, what should be done?
Pregnant women should never be given varicella vaccine. If a susceptible pregnant woman has a substantial exposure to varicella, the use of varicella zoster immune globulin (VZIG) should be strongly considered. Details on the use of VZIG may be found in the 1996 varicella ACIP statement *(MMWR* 1996;45,RR-11).

(continued on page 8)

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VACCINATE ADULTS!

from the publishers of
NEEDLE TIPS

Immunization Action Coalition
Hepatitis B Coalition

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VACCINATE ADULTS! is a publication of the Immunization Action Coalition. Everything herein is reviewed for technical accuracy by the Centers for Disease Control and Prevention (unless it is an opinion piece written by a non-CDC author). ***VACCINATE ADULTS!*** is written for physicians, nurses, and other health professionals in the public and private sectors. Circulation is 110,000.

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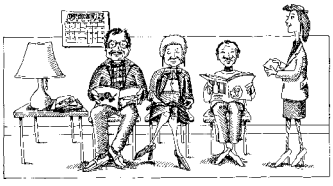
The Immunization Action Coalition (IAC), a501(c)3 nonprofit organization, works to boost immunization rates. IAC promotes physician, community, and family awareness of, and responsibility for, appropriate immunization of all people of all ages against all vaccine-preventable diseases.

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

Join the Coalition!

Please become a member. Your contribution will be used to continue sending you ***VACCINATE ADULTS!*** See the back page for details about how to join.

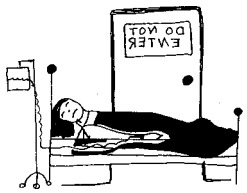


Letters to the Editor...

Varicella vaccine saves adults' lives

Each year in the United States, 4 million persons suffer from varicella, more than 10,000 are hospitalized and 100 die. While the burden of varicella is greatest among children, adults have higher risks of complications and deaths. Adults account for less than 10% of varicella cases but they are 10-15 times more likely to be hospitalized and 20-30 times more likely to die from varicella than children. Complications in adults include pneumonia, infections, bleeding disorders and a 1% risk of birth defects in the fetus if a pregnant woman is infected with varicella during the first 20 weeks of pregnancy.

The Advisory Committee on Immunization Practices highlights priority adult groups for vaccination including health care workers, family members of immunocompromised persons and persons at high risk of exposure such as teachers of young children, college students, residents and staff in institutional settings and nonpregnant women of childbearing age. Since children are the usual source of infection, susceptible adults with young children should ensure that they, as well as their children, receive this vaccine. Varicella deaths in three young mothers in 1997 underscored the importance of susceptible parents being protected through vaccination *(MMWR* 1997; 46,409-412).



Every year in the United States more than 3,000 adults are hospitalized due to varicella infection.

A reliable history of varicella is considered a valid measure of immunity. Adults without a history of disease can be tested to determine immune status or can be vaccinated without testing. However, since 70–90% of adults with a negative or uncertain history are actually immune, serologic testing is likely to be cost effective. The substantial health burden from varicella contracted during adulthood is now vaccine preventable. The Centers for Disease Control and Prevention (CDC) urges you to provide varicella vaccine to your susceptible adults as well as children and adolescents.

—Walter A. Orenstein, MD
Assistant Surgeon General
Director, National Immunization Program, CDC

"UNPROTECTED PEOPLE"

For stories and case reports of people who died or suffered from vaccine-preventable diseases:

www.immunize.org/stories/

Doctor says influenza has not gone away

Influenza has not gone away! In fact, the pneumonia and influenza mortality from 122 cities indicates that last year was one of the worst epidemics in recent years (*Influenza summary update,* US,1998, for week ending 4/25/98).

We need to double efforts to distribute influenza vaccine as well as pneumococcal vaccine to all high-risk groups. Programs for delivery of vaccines need to be integrated to improve delivery to all segments of the population. The use of vaccine registries in place for many of the vaccines administered to young children can be extended to high-risk persons of all ages. Such registries have the capability to send yearly notices and reminders for influenza vaccine to all high-risk patients and to improve pneumococcal vaccine coverage as recommended.

Dr. Greg Poland, chief of Mayo Clinic Vaccine Research Group, reminded your readers last year *(NEEDLE TIPS,* fall/winter 1997–98) of some of the groups often overlooked. As the influenza season approaches, we should note these again:

"The ACIP now recommends that pregnant women who will be beyond the first trimester of pregnancy (14 weeks) during influenza season should receive influenza vaccine. The recommendation also states that pregnant women who have medical conditions that increase their risk of complications from influenza should be vaccinated before the influenza season regardless of their stage of pregnancy.

"Adults and children with asthma also need to be vaccinated against influenza and are often overlooked. Respiratory illnesses in asthmatic people can trigger prolonged asthmatic illnesses, steroid use, hospital stays, and loss of time from work and/or school. Please remind your high-risk patients to come in for vaccination, and, as recommended, vaccinate patients' family members as well."

—W. Paul Glezen, MD
Professor and Head, Preventive Medicine Section
Baylor College of Medicine

Welcome new board member!

Stanley A. Gall, MD, obstetrician-gynecologist, is Donald E. Baxter Professor and Chairman, Department of Obstetrics/Gynecology, School of Medicine, at the University of Louisville. Dr. Gall, president of the Infectious Disease Society for Obstetrics/Gynecology, is also a member of the Residency Review Committee for Obstetrics/Gynecology and serves as American College of Obstetrics/Gynecology's liaison to the Advisory Committee on Immunization Practices. Dr. Gall, a prolific author on infectious diseases in pregnant women, reviews national vaccine recommendations for pregnant women. Dr. Gall received his medical degree from the University of Minnesota. ♦

Vaccine highlights

Editors' note: The information on this page is current as of October 12, 1998.

The next ACIP meetings...

The Advisory Committee on Immunization Practices (ACIP) is a committee of 10 national experts that provides advice and guidance to CDC regarding the most appropriate use of vaccines and immune globulins. ACIP meetings are held three times a year in Atlanta, GA, and are open to the public. The next meetings will be held on February 17–18, 1999, and June 16–17, 1999.

The latest ACIP statements

ACIP statements. No clinic should be without a set of these public health recommendations on vaccines which are published in the *Morbitity and Mortality Weely Report (MMWR)*. To find out how to get a complete set of ACIP statements or just the ones you want, call CDC's Immunization Hotline at 800/232-2522.

ACIP statements released in 1998 include:

- *Prevention and Control of Influenza (5/1/98)*
- *Measles, Mumps, and Rubella – Vaccine Use and Strategies for Elimination of Measles, Rubella, and Congenital Rubella Syndrome and Control of Mumps (5/22/98)*

Influenza news

On May 1, 1998, *MMWR* published ACIP's updated statement, "Prevention and Control of Influenza," for the 1998–99 influenza season. This statement, published every spring, reviews recommendations for the use of influenza vaccine such as which children and adults should be given influenza vaccine, when it should be administered, who needs more than one dose, vaccine side effects, antiviral treatment for influenza, etc.

The 1998–99 Vaccine Information Statement (VIS) for influenza vaccine can be downloaded from the National Immunization Program's website: www.cdc.gov/nip/pdf/2flu.pdf or obtained by calling the immunization program manager at your state health department.

Hepatitis B news

On August 13, 1998, the FDA approved a supplemental product license application of SmithKline Beecham's Engerix-B vaccine for use in patients with hepatitis C virus infection. Engerix-B is one of two hepatitis B vaccines licensed for use in the United States. The other is Recombivax HB, which is manufactured by Merck & Co. Either vaccine is appropriate for preventing hepatitis B virus infection in groups at risk, including patients with HCV infection who have risk factors for hepatitis B virus infection. Clinicians should evaluate their patients to determine their need for hepatitis B vaccine.

Tetanus news

On July 3, 1998, the *MMWR* published "Tetanus Surveillance - United States, 1995–1997" in *Surveillance Summaries*. Included in this report was the following information: "From 1995–1997, a total of 124 cases of tetanus were reported from 33 states and the District of Columbia, accounting for an average annual incidence of 0.15 cases per 1,000,000 population. Sixty percent of patients were aged 20–59 years; 35 percent were ≥ 60 years; and 5 percent were aged less than 20 years, including one case of neonatal tetanus. For adults aged ≥60 years, the increased risk for tetanus was nearly sevenfold that for persons aged 5–19 years and twofold that for persons aged 20–59 years."

Vaccine safety news

On April 27, 1998, ABC News affiliates in several U.S. cities aired a story that raised concerns about hepatitis B vaccine causing chronic illnesses (e.g., multiple sclerosis, autoimmune disorders). As a result, CDC has developed a fact sheet called "Hepatitis B vaccine: what you may have heard... and what you should know." You may obtain a copy at www.cdc.gov/nip/hepb43098.htm In addition, "Hepatitis B vaccine questions and answers" provides more extensive information about hepatitis B vaccine. You may obtain a copy at: www.cdc.gov/ncidod/diseases/hepatitis/b/hebqafn.htm ♦

Vaccinations for Adults with Hepatitis C Virus Infection

Adults who are infected with hepatitis C virus (HCV) need to make sure they're fully vaccinated. Seventy percent of people who are infected with HCV have chronic liver disease. People with chronic liver disease have special vaccination needs including pneumococcal vaccine and hepatitis A vaccine. Getting immunized is a lifelong, life-protecting job. Make sure you and your health care professional keep your shots up-to-date! Don't leave your clinic without making sure that you've had all the shots you need.

Hepatitis A*	Hepatitis A vaccine is recommended for people with chronic liver disease. It is also recommended before travel to certain countries. Some of the ways you can get hepatitis A are from contaminated food or water, or illegal drug use. The best way to protect yourself from hepatitis A is by vaccination. Talk to your doctor.			
	first dose now		second dose 6-12 months later	
Hepatitis B*	A person who has hepatitis C can still get hepatitis B. Forty percent of people who contract hepatitis B do not know how they contracted the disease. Some of the risk factors include sex, sharing needles, sharing toothbrushes, being a health care worker. The best way to protect yourself from hepatitis B is through vaccination. Talk to your doctor.			
	first dose now	second dose one month later	third dose is usually given five months after the second dose	
Pneumococcal	The pneumococcal vaccine is recommended for all people ages 2 and older who have chronic liver disease or certain other chronic illnesses. It is also recommended for all persons who are age 65 or older. Some individuals with particular health risks will need a one-time revaccination dose 5 years later or at age 65. Consult your doctor.			
Influenza "flu shot"	Influenza can result in serious illness or complications. The "flu shot" is recommended every fall for people age 65 or older. While the vaccine is not specifically recommended for persons with chronic liver disease, it can be given to any person (regardless of age) who wishes to reduce the likelihood of becoming ill with influenza. Influenza vaccine is also recommended for women who will be in their 2nd or 3rd trimester of pregnancy during "flu" season; residents of long-term care facilities; and anyone who has a medical problem such as heart or lung disease (including asthma), diabetes, kidney disease, or an immune system weakened by disease or medication; and for those who work with or live with any of these individuals.			
Tetanus, **diphtheria** (Td) often referred to as "tetanus shot"	If you haven't had at least 3 basic tetanus-diphtheria shots in your lifetime, you need to complete the series listed below:			All adults need a booster dose every 10 years
	first dose now	second dose 4 weeks later	third dose 6-12 months after the second dose	
Measles, mumps, rubella	One dose of MMR is recommended for people born in 1957 or later if they have not been previously vaccinated. (A second dose of MMR may be required in some work or school settings, or recommended for international travel.) People born before 1957 are usually considered immune.			
Varicella for those who have never had chickenpox	first dose now		second dose 4-8 weeks later	

* In 1997, the NIH Consensus Development Conference recommended that hepatitis A and B vaccines be given to all persons who are infected with hepatitis C virus. To obtain a copy of the NIH Consensus Statement, "Management of Hepatitis C," call 888/644-2667.

** For more information about hepatitis C, call CDC's toll-free hotline at 888/443-7232, the American Liver Foundation at 800/223-0179, or the Hepatitis Foundation International at 800/891-0707.

Item #P4042 (10/98)

Summary of Recommendations for Adult Immunization - side 1

Adapted from the Advisory Committee on Immunization Practices (ACIP) by the Immunization Action Coalition with review by ad hoc team - October 1998

Vaccine name and route	For whom it is recommended	What is the usual schedule?	Schedule for those who have fallen behind	Contraindications and precautions*	Rules of simultaneous administration
Influenza *"flu shot"* Give IM	• People who are 65 years of age or older. • People under 65 with medical problems such as heart disease, lung disease, diabetes, renal dysfunction, hemoglobinopathies, immunosuppression, and/or those living in chronic care facilities. People (≥6mo of age) working or living with these people should be vaccinated as well. • All health care workers. • Healthy pregnant women who will be in their 2rd or 3rd trimesters during the influenza season. Pregnant women who have underlying medical conditions should be vaccinated before the flu season, regardless of the stage of pregnancy. • Anyone who wishes to reduce the likelihood of becoming ill with influenza.	• October through November is the optimal time to receive a flu shot to maximize protection, but the vaccine may be given at any time during the influenza season (typically December through March).	May be given anytime during the influenza season.	• Previous anaphylactic reaction to this vaccine, to any of its components, or to eggs. • Moderate or severe acute illness.	Can give with all others but at a separate site.
Pneumococcal Give IM or SQ	• All adults 65 years of age and older. • People under 65 who have chronic illness or other risk factors including chronic cardiac and pulmonary diseases, anatomic or functional asplenia (including sickle cell disease), chronic liver disease, alcoholism, diabetes mellitus, CSF leaks, as well as persons living in special environments or social settings (including Alaska natives and certain American Indian populations). Others at high risk include immunocompromised persons including those with HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephrotic syndrome, those receiving immunosuppressive chemotherapy (including corticosteroids), and those who received an organ or bone marrow transplant.	• Routinely given as a one-time dose. • One-time revaccination is recommended 5 years later for people at highest risk of fatal pneumococcal infection, or if the 1st dose was given prior to age 65 and ≥5 years have elapsed since previous dose.	Give as soon as need is recognized.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness.	Can give with all others but at a separate site.
Hepatitis B (Hep-B) Give IM Brands may be used interchangeably.	• Many high-risk adults need vaccination including household contacts and sex partners of HBsAg-positive persons; users of illicit injectable drugs; heterosexuals with more than one sex partner in 6 months; men who have sex with men; people with recently diagnosed STDs; patients in hemodialysis units and patients with renal disease that may result in dialysis; recipients of certain blood products; health care workers and public safety workers who are exposed to blood; clients and staff of institutions for the developmentally disabled; inmates of long-term correctional facilities, and certain international travelers. • All adolescents. Note: In 1997, the NIH Consensus Development Conference, a panel of national experts, recommended that hepatitis B vaccination be given to all persons infected with hepatitis C virus. Note: Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure. *Ed. note: Do serologic screening for people who have emigrated from endemic areas. When HBsAg-positive persons are identified, offer them appropriate disease management. In addition, screen their household members and intimate contacts and, if found susceptible, vaccinate.*	• Three doses are needed. • Commonly used timing options for vaccination: 0, 1, 6 months 0, 2, 4 months 0, 1, 4 months • There must be 4 wks between doses #1 and #2, and 8 wks between doses #2 and #3. Overall there must be at least 4 months between doses #1 and #3.	• If the series is delayed between doses, do not start the series over. Continue from where you left off.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness.	Can give with all others but at a separate site.
Hepatitis A (Hep-A) Give IM Brands may be used interchangeably.	• Adults who travel outside of the U.S. (except for Northern and Western Europe, New Zealand, Australia, Canada, and Japan). • People with chronic liver disease; all people with hepatitis C virus infection; people with hepatitis B who have chronic liver disease; illicit drug users; men who have sex with men; people with clotting disorders; people who work with hepatitis A virus in experimental lab settings (this does not refer to routine medical laboratories); and food handlers where health authorities or private employers determine vaccination to be cost-effective. Note: Prevaccination testing is likely to be cost effective for persons >40 years of age as well as for younger persons in certain groups with a high prevalence of HAV infection.	• Two doses are needed. • The minimum interval between dose #1 and #2 is 6 months.	If dose #2 is delayed, do not repeat dose #1. Just give dose #2.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. •Safety during pregnancy has not been determined, so benefits must be weighed against potential risk.	Can give with all others but at a separate site.

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

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

This two-sided table was developed to combine adult immunization recommendations onto one page to assist health care workers in determining appropriate use and scheduling of vaccines. It can be posted in immunization clinics or clinicians' offices. The table will be revised approximately once a year because of the changing nature of national immunization recommendations. Check our website <www.immunize.org> to make sure you have the most current copy.

Item #P2011 (10/98)

Summary of Recommendations for Adult Immunization - side 2

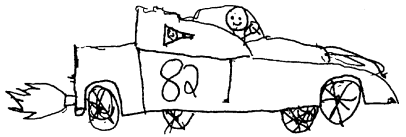
Vaccine name and route	For whom it is recommended	What is the usual schedule?	Schedule for those who have fallen behind	Contraindications and precautions*	Rules of simultaneous administration
Td (Tetanus, diphtheria) Give IM	After the primary series has been completed, a booster dose is recommended every 10 years. Make sure your patients have received a primary series of 3 doses. A booster dose after just 5 years may be needed for wound management, so consult ACIP recommendations.	Booster dose every 10 years after completion of the primary series of 3 doses.	The primary series is 3 doses: • Give dose #2 four wks after #1. • #3 is given 6-12 months after #2.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness.	Can give with all others but at a separate site.
MMR (Measles, Mumps, Rubella) Give SQ	• Adults born in 1957 or later who are ≥18 yrs of age (including those born outside the U.S.) should receive at least one dose of MMR if there is no serologic proof of immunity or documentation of a dose given on or after 1st birthday. • Adults in high-risk groups, such as health care workers, students entering colleges and other post high school educational institutions, and international travelers should receive a second dose. • All women of childbearing age (i.e., adolescent girls and premenopausal adult women) who do not have acceptable evidence of rubella immunity or vaccination. Note: Adults born before 1957 are usually considered immune but proof of immunity may be desirable for health care workers.	Dose #2, if recommended, is given no sooner than 4 wks after dose #1.	#2 may be given as early as 4wks after dose #1.	• Previous anaphylactic reaction to this vaccine, or to any of its components. (Anaphylactic reaction to eggs is no longer a contraindication to MMR, and skin testing isn't needed prior to vaccination.) • Pregnancy or possibility of pregnancy within 3 months. • HIV positivity is NOT a contraindication to MMR except for those who are severely immunocompromised. • Immunocompromised persons due to cancer, leukemia, lymphoma, immunosuppressive drug therapy, including high-dose steroids or radiation therapy. • If blood products or immune globulin have been administered during the past 11 months, consult the ACIP recommendations regarding time to wait before vaccinating. • Moderate or severe acute illness. Note: MMR is NOT contraindicated if a PPD test was done recently. PPD should be delayed for 4-6 weeks after an MMR has been given.	Can give with all others but at a separate site. If varicella is not given at the same time, space varicella and MMR at least 4 wks apart.
Varicella (Var) *"Chickenpox shot"* Give SQ	• All susceptible adults should be vaccinated. Special efforts should be made to vaccinate: susceptible persons who have close contact with persons at high risk for serious complications (e.g., health care workers and family contacts of immunocompromised persons) and susceptible persons who are at high risk of exposure (e.g., teachers of young children, day care employees, residents and staff in institutional settings such as colleges and correctional institutions, as well as non-pregnant women of childbearing age, and international travelers who do not have evidence of immunity). Note: Adults 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. Give dose #2 4-8 weeks after dose #1.	Give dose #2 no sooner than 4 wks after #1.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Pregnancy, or possibility of pregnancy within 1 month. • Immunocompromised persons due to malignancies and primary or acquired immunodeficiency including HIV/AIDS. Note: For those on high dose immunosuppressive therapy, consult ACIP recommendations regarding delay time. • If blood products or immune globulin have been administered during the past 5 months, consult the ACIP recommendations regarding time to wait before vaccinating. • Moderate or severe acute illness. Note: Manufacturer recommends that salicylates be avoided for 6 weeks after receiving varicella vaccine.	Can give with all others but at a separate site. If MMR is not given on the same day, space MMR and varicella at least 4 wks apart.
Polio vaccine IPV Give IM or SQ	Not routinely recommended for adults 18 years of age and older. Note: Adults living in the U.S. who never received or completed a primary series of polio vaccine need not be vaccinated unless they intend to travel to areas where exposure to wild-type virus is likely. Previously vaccinated adults should receive one booster dose if traveling to polio endemic areas.	Refer to ACIP recommendations regarding unique situations, schedules, and dosing information. If polio vaccine is indicated for adults, IPV is generally preferred.		Refer to ACIP recommendations.	Can give with all others but at a separate site.

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

Your comments are welcome. Please send them to Lynn Bahta, RN, or Deborah Wexler, MD, Immunization Action Coalition, 1573 Selby Avenue, Suite 234, St. Paul, MN 55104, 651/647-9009, fax 651/647-9131, medinfo@immunize.org.

The Coalition thanks William Atkinson, MD, Douglas Bell, Judy Coates, RN, Gregory Gilmet, MD, Bernard Gonik, MD, John Grabenstein, MS Pharm, Neal Halsey, MD, Anne Kuettel, PHN, Virginia Lupo, MD, Edgar Marcuse, MD, Margaret Morrison, MD, Linda Moyer, RN, Gregory Poland, MD, Frederick Ruben, MD, William Schaffner, MD, Jane Seward, MBBS, and Thomas Vernon, MD, for their review and comments on this table. Final responsibility for errors or omissions lies with the editors.

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



Hepatitis A & B Vaccines

Make sure you give your patients the correct dose!

Recommended dosages and schedules of hepatitis A vaccines

Vaccine	Age group	Dose	Volume	# Doses	Schedule
Havrix (SmithKline Beecham)	2-18 years	720 El.U.*	0.5 ml	2	0, 6-12 months
	19 years and older	1440 El.U.*	1.0 ml	2	0, 6-12 months
Vaqta (Merck & Co.)	2-17 years	25 U**	0.5 ml	2	0, 6-18 months
	18 years and older	50 U**	1.0 ml	2	0, 6 months

* El.U. = Elisa Units ** U. = Units

Recommended dosages of hepatitis B vaccines*

Vaccine brand	Age group	Dose	Volume	# Doses
Engerix-B (SmithKline Beecham)	0-19 years	10 μg	0.5 ml	3
	20 years and older	20 μg	1.0 ml	3
Recombivax HB (Merck & Co.)	0-19 years	5 μg	0.5 ml	3
	20 years and older	10 μg	1.0 ml	3

***** The schedule for hepatitis B vaccination is flexible and varies. Consult the ACIP statement on Hepatitis B (11/91), AAP's *1997 Red Book*, or the package insert for details.

Note! For adult dialysis patients: the Engerix-B dose required is 40µg/2.0ml (use the adult 20µg/ml concentration) on a schedule of 0, 1, 2, and 6 months. For Recombivax HB, a special formulation for dialysis patients is available. The dose is 40µg/1.0ml and it is given on a schedule of 0, 1, and 6 months.

What hepatitis B question is asked over and over and over and over and over again?

Never start the series over! Never! Never! Never!

Editors' note: The answer to the following question appears on CDC's website under clinical questions on varicella disease and vaccination. To download all 50 questions, go to www.cdc.gov/nip/clinqa/var.htm

How serious a disease is varicella?
Prior to the availability of varicella vaccine there were approximately 4 million cases of varicella a year in the U.S. Though usually a mild disease in healthy children, an estimated 150,000 to 200,000 persons develop complications, about 10,000 persons require hospitalization and 100 people die each year from varicella. The majority of deaths and complications occur in previously healthy individuals. The most common complications from varicella are bacterial infections of the skin and soft tissues in children and pneumonia in adults. There has recently been increasing concern over the rising number of cases of invasive group A streptococcus (GAS) complicating varicella. Varicella is a well-described risk factor for invasive GAS infections. A 1997 *MMWR* publication highlighted an invasive GAS outbreak in a Boston child care center. Now that a safe and effective vaccine is available, the majority of morbidity and mortality associated with this disease is preventable by vaccination.

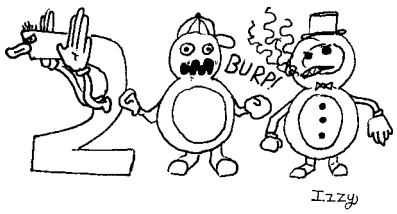
Influenza

by William L. Atkinson, MD, MPH

Do split and whole virus influenza vaccines have the same efficacy? Is there any reason to use whole virus influenza vaccine over the split product?
There is no difference in efficacy between split and whole virus influenza vaccines. Split virus vaccine is recommended for children 12 years of age or less because of fewer febrile reactions. There is no difference in adverse reactions between split and whole virus vaccines in adults, so either may be used in this age group.

Will there be a shortage of influenza vaccine this year?
No. Delivery, however, may be slower in some areas due to manufacturing delays. The total number of doses, however, is expected to be about the same as last year.

Why should the number 288 never be mentioned in polite company?



Because it's too gross (two gross)!

Pneumococcal disease

by William L. Atkinson, MD, MPH

My patient doesn't have a record of receiving pneumococcal vaccine. What should I do?
Providers should not withhold vaccination in the absence of an immunization record or complete record. For pneumoccocal vaccine, the patient's verbal history can be used to determine vaccination status. Persons with uncertain or unknown vaccination status should be vaccinated.

Hepatitis B

by Linda A. Moyer, RN, and Harold S. Margolis, MD

My daughter was immunized against hepatitis B about 4 years ago. She was recently found "hepatitis B positive" by her gynecologist. Is this possible? Could it be a false positive?
It is possible, but unlikely that the result is a false positive as the HBsAg assay has high sensitivity and specificity. She may have already been HBsAg-positive before she was vaccinated. Therefore, the vaccine would not have been effective. One should, however, be sure that the positive test was actually HBsAg and not another hepatitis B marker such as anti-HBs or hepatitis B core antibody (anti-HBc). A positive anti-HBs test is expected after vaccination with hepatitis B vaccine but not a positive anti-HBc or HBsAg. If you are certain after careful checking that the test and reported result are correct, you should then make sure the laboratory that did the test repeated the test in duplicate and neutralization was performed.

Should hepatitis B vaccine be started in a high-risk patient who may not return for further doses? How many doses of hepatitis B vaccine does an adult need to be protected?
Patients at increased risk for HBV infection should be vaccinated despite the concern about non-completion of the vaccine series. Fifty percent of young, healthy persons develop anti-HBs after one dose of vaccine; about 90% after the second dose of vaccine. For long-term efficacy, however, three doses should be given. You should be aware that persons who are immunosuppressed (e.g., hemodialysis patients and patients with AIDS) and persons who are older (≥ 40) are less apt to show such high rates.

I tested positive for chronic HBV infection about 5 months ago. I know there is a vaccine to prevent transmission, however, I would like to know how long my sex partner (I don't have one now) should wait after taking this vaccine, before having sex with me without any risk of transmission.
Your sex partner should have the three dose series of vaccine and have postvaccination testing 1-2 months after the last dose of vaccine. If your sex partner's test shows adequate anti-HBs (i.e., ≥ 10 mIU/mL), then he/she should be protected against HBV infection. In the interim, barrier precautions should be used.

Can adults as well as adolescents be immunized on a 0-, 2-, 4-month schedule for hep B?
Yes, in young adults there are data that show adequate seroprotection. If this schedule is used, you should be aware that the studies were in *young* adults and may not translate to older adults (≥40).

If an employee does not respond to hepatitis B vaccination, does he/she need to be removed from activities that expose him/her to bloodborne pathogens? Does the employer have a responsibility in this area other than providing the vaccine? Where can I get further information on this subject?
There are no regulations that demand removal from certain job situations as described; this is more of an individual policy decision within the organization. The Occupational Safety and Health Administration (OSHA) requires that employees in jobs where there is a reasonable risk of exposure to blood be offered hepatitis B vaccine. In addition, the regulation also states that adequate personal protective equipment be provided and that standard precautions be followed. Check with your state OSHA regarding more stringent requirements. If there is no state OSHA, federal OSHA regulations should be followed. Adequate documentation should be placed in the employee record regarding non-response to vaccination. The employee should be counseled that non-response to the vaccination series most likely means that the employee is susceptible to HBV infection and that if an exposure to HBV occurs, HBIG should be used for postexposure prophylaxis. HBsAg testing should be recommended as it is possible that the employee is chronically infected with HBV. Counseling of the employee should then be done to discuss what non-response to the vaccination series means for that specific employee and what steps should be taken in the future to protect his/her health.

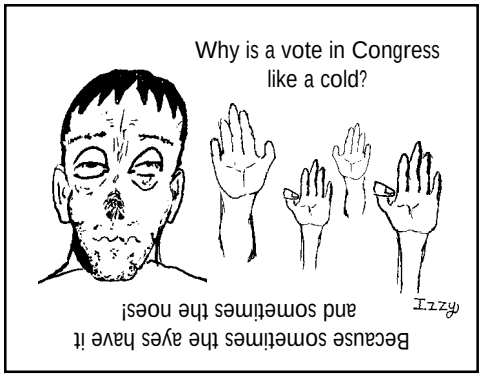
My hemodialysis patient has had 2 complete series of hepatitis B vaccine. When tested, he is anti-HBs negative. What do we do next?
The postvaccination test should be done 1-2 months after the last dose of vaccine. If this was not done, the patient may have lost antibody over time and should be vaccinated again. However, if testing was timely, the patient should be considered a non-responder and further vaccination is not warranted.

(continued on page 9)

HBV Clinical Trials

The National Institute of Allergy and Infectious Diseases has information about adult HBV clinical trials being conducted in the U.S. for the treatment of chronic HBV infection.

For information, contact Lanette Sherrill, CRNP, MSN at 205/934-2424.



What types of equipment cleaners are viracidal against HBV?
Commercially available household bleach solution (1:100) will inactivate HBV. Equipment should first be cleaned with soap and water and then wiped down with the disinfectant. Any high level disinfectant that is also tuberculocidal will kill HBV.

My patient from Asia is HBsAg negative, anti-HBc positive, anti-HBs negative, and is going back to Asia to live. Does this person need to be vaccinated?
It would be prudent to vaccinate. There are numerous reports in the literature that describe primary vaccine response in patients with isolated anti-HBc. There are, however, reports in the literature of HBV DNA being found in patients with this serologic profile. The decision to vaccinate or not to vaccinate and the decision for further testing should be based on the patient's clinical picture.

Is there a certain period of time one should wait after receiving hepatitis B vaccine before donating blood?
There have been reports of patients testing transiently HBsAg positive after receiving hepatitis B vaccine. Although this is rarely seen, and doesn't represent infection with HBV, it may be wise to defer donation for at least 2 weeks after vaccination. This should prevent unnecessary permanent donor deferral.

A local TV station ran a story about thousands of people who received hepatitis B vaccine and are suffering from autoimmune diseases. We have patients who have been vaccinated against hepatitis B calling our clinic concerned that they may get sick or even die. Public hysteria — any help calming their fears? Or where can I go for more information?
Hepatitis B vaccines have been shown to be very safe when given to infants, children and adults. There is no confirmed evidence indicating that hepatitis B vaccine can cause chronic illnesses, such as autoimmune disease (e.g., rheumatoid arthritis) or neurological disease (e.g., multiple sclerosis). Case reports of unusual illnesses following vaccines are most often related to other causes and not related to a vaccine. Whenever large numbers of vaccines are given, some adverse events will occur coincidentally after vaccination and be falsely attributed to the vaccine. Anyone believing they have had a possible reaction or adverse health effect from a vaccine should report it to their health care provider. The Vaccine Adverse Events Reporting System (800/822-7967) receives reports from health care providers and others about vaccine side effects. Further information on vaccine safety can be accessed by visiting CDC's Hepatitis Branch website at: www.cdc.gov/ncidod/diseases/hepatitis/hepatitis.htm

Hepatitis A

by Linda A. Moyer, RN, and Harold S. Margolis, MD

I understand that it is safe for pregnant women to receive hepatitis B vaccine. Is this true for hepatitis A vaccine as well?
The safety of hepatitis A vaccination during pregnancy has not been determined. However, because hepatitis A vaccine is produced from inactivated hepatitis A virus (HAV), the theoretical risk to the developing fetus is expected to be low. The risk associated with vaccination should be weighed against the risk for hepatitis A in women who may be at high risk for exposure to HAV.

How effective is hepatitis A vaccine? What happens if dose #2 is delayed?
The immunogenicity of one dose of hepatitis A vaccine is 94%-100%. Immunogenicity is considered to be equal to efficacy. The vaccine series should be completed to assure long-term protection.

If hepatitis A vaccine was inadvertently given subcutaneously (SQ) instead of intramuscularly (IM), does the dose need to be repeated?
Although there is no data that speaks to this issue, it would be prudent to repeat the dosage by the IM route.

Can hepatitis A vaccine and hepatitis B vaccine be given simultaneously?
Yes, but at different sites.

Why isn't hepatitis A vaccine recommended for sewage and solid waste disposal workers?
Data from serologic studies among Scandinavian and English workers who had been exposed to sewage indicate a possible elevated risk for HAV infection. However, in these studies the data were not controlled for other risk factors (e.g., socioeconomic status). In the United States, no work-related cases of HAV transmission have been reported among workers exposed to sewage, and serologic data are not available. Studies to determine the risk for HAV infection among sewage workers are ongoing.

I recently read about a new vaccine which is a combined vaccine for both hepatitis A and B. When will it be available in the United States?
Combination vaccines are licensed in Europe and being evaluated in the United States. The date of availability in the United States is unknown, as yet. ♦

Check your state...

*Here are the current U.S. immunization rates from the BRFSS** (MMWR, *10/2/98).*

State	Influenza**	Pneumococcal†
AL	62.6	47.5
AK	58.3	39.2
AZ	72.9	59.4
AR	61.1	39.1
CA	65.5	49.8
CO	74.4	53.3
CT	67.2	43.0
DE	68.6	52.6
DC	54.3	32.3
FL	62.3	45.5
GA	58.5	48.5
HI	71.1	51.7
ID	66.4	50.2
IL	67.8	44.7
IN	62.5	38.0
IA	69.7	51.5
KS	61.5	43.7
KY	61.2	38.6
LA	58.4	32.2
ME	72.1	50.0
MD	63.4	41.0
MA	66.0	52.7
MI	63.6	45.6
MN	69.0	48.3
MS	61.1	45.9
MO	70.3	44.3
MT	68.4	50.8
NE	65.8	49.8
NV	56.5	53.5
NH	64.6	49.6
NJ	60.7	33.9
NM	72.8	50.1
NY	64.5	38.9
NC	64.6	50.6
ND	64.8	40.8
OH	65.4	38.5
OK	69.3	40.4
OR	69.8	55.9
PA	65.8	47.1
RI	67.7	43.0
SC	74.3	41.6
SD	65.6	40.6
TN	69.1	45.0
TX	68.0	44.4
UT	66.1	48.5
VT	69.5	51.6
VA	67.7	53.6
WA	70.3	51.6
WV	58.2	41.3
WI	66.1	42.6
WY	72.4	50.9

*BRFSS: Behavioral Risk Factor Surveillance System is a random-digit-dialed telephone survey of U.S. adults to gather data. *(MMWR,* 10/2/98)

**Percentage of ≥65-year olds who report receiving influenza vaccine in the past year.

†Percentage of ≥65-year olds who report ever having received pneumococcal vaccine.

It's federal law!!

You must give your patients current Vaccine Information Statements (VISs)

The following article was written by Neal A. Halsey, MD, Director, Institute for Vaccine Safety (IVS), Johns Hopkins School of Public Health. IVS is committed to investigating vaccine safety issues and providing information on vaccine safety to health care providers, journalists, and the public. Visit their website at www.vaccinesafety.edu

As readers of *VACCINATE ADULTS!* understand, the risks of serious consequences following vaccines are many hundreds or thousands of times less likely than the risks following the diseases that the vaccines protect against. Most adverse reactions from vaccines are mild and self-limited. Serious complications are rare, but they can have a devastating effect on the recipient, family members, and the providers involved with the care of the patient. We must continue the efforts to make vaccines as safe as possible.

Equally important is the need to furnish vaccinees with objective information on vaccine safety and the diseases that the vaccines protect against so that they are active participants in decisions affecting their health. When people are not informed about vaccine adverse events, even common, mild events, they can lose their trust in health care providers and vaccines.

Vaccine Information Statements (VISs) provide a standardized way to provide objective information about vaccine benefits and adverse events to your patients.

What are VISs?

VISs are developed by the staff of the Centers for Disease Control and Prevention (CDC) and undergo intense scrutiny by panels of experts for accuracy. Each VIS provides information to properly inform the vaccinee about the risks and benefits of each vaccine.

The VISs are not meant to replace interactions with health care providers who should answer questions and address concerns that the vaccinee may have.

Use of the VIS is mandatory!

Before a health care provider vaccinates an adult with a dose of Td, MMR, varicella, polio, or hepatitis B vaccine, the provider is required by the National Childhood Vaccine Injury Act to provide a copy of the VIS to the patient. The use of the VIS has been required since 1994.

VISs are also available for influenza, pneumococcal, and hepatitis A vaccines, and their use is recommended but not required by federal law. They are not required because these additional vaccines are not routinely recommended for children and therefore are not covered by the National Childhood Vaccine Injury Act.

What to do with the VISs

Some of the legal requirements concerning the use of VIS are as follows:

1. Before you administer any doses of MMR, varicella, hepatitis B, Td, or polio vaccine to your adult patients, you are legally required to give them a copy of the most recent Vaccine Information Statement (VIS). Make sure you give your patient time to read the VIS prior to the administration of the vaccine.
2. You must record in your patient's chart the date that the VIS was given.
3. You must also record on the patient's chart the publication date of the VIS, a date which appears on the bottom of the VIS. It is imperative that you have the most current VIS.

Most current versions of VISs

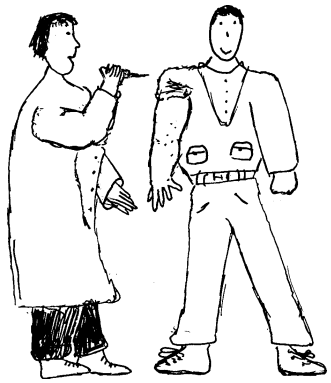
As of October 1998, the most current versions of the VISs are as follows:

MMR	6/10/94*	Td	6/10/94
varicella	2/1/96*	polio	2/6/97
hepatitis B	5/1/96*	pneumococcal	7/29/97
hepatitis A	8/25/98	influenza	7/1/98

* revision expected November/December 1998.

How to get VISs

VISs are available from state and local health departments or can be downloaded from CDC's website: www.cdc.gov/nip/vistable.htm You can also order a set of VISs or individual VISs by calling CDC's Immunization Hotline at 800/232-2522. It takes 4–6 weeks to process your order.



STOP!

Before you administer an MMR, varicella, hepatitis B, Td, or polio vaccine to your adult patient, you are legally required to give him/her a copy of the most current Vaccine Information Statement (VIS).

Foreign language versions of VISs are not officially available from the CDC. However, several states make VISs available in non-English versions. Check with your state health department first before you do any of the following:

- California's Immunization Branch distributes VISs (except influenza and pneumococcal) in 15 languages: Armenian, Cambodian, Chinese, Farsi, Hmong, Japanese, Korean, Laotian, Portuguese, Romanian, Russian, Spanish, Samoan, Tagalog, and Vietnamese. Call Maria Clarke at 510/849-5042 to order them. You can also download California's Spanish language VISs from the Immunization Action Coalition's website at www.immunize.org
- The Minnesota Department of Health distributes influenza and pneumococcal VISs in Spanish, Cambodian, Hmong, Vietnamese, Laotian, Russian, and Somali.You can download them at www.health.state.mn.us/divs/dpc/adps/adps.htm or call 612/676-5237. ♦

Where to get adult immunization resources

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

Centers for Disease Control & Prevention
- Immunization Information Hotline: 800/232-2522
- Immunization website: www.cdc.gov/nip
- Hepatitis Information Hotline: 888/443-7232
- Hepatitis website: www.cdc.gov/ncidod/diseases/hepatitis/index

Immunization Action Coalition
Immunization and hepatitis B treatment information
- 651/647-9009 • www.immunize.org

Hepatitis Foundation International
- 800/891-0707 • www.hepfi.org

Hepatitis B Foundation
- 215/489-4900 • www.hepb.org

Nat'l Coalition for Adult Immunization
- 301/656-0003
- www.medscape.com/affiliates/ncai

Health Care Financing Administration
- 816/426-5233

Vaccine Adverse Event Reporting System
- 800/822-7967

Adult Catalog

Publications and resources

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All of our materials are camera ready, copyright free, and reviewed by national experts! Some are in other languages as well as in English. You can order one of any item and make as many copies as you need (including videos).

Join the Coalition

With a $40 or greater membership contribution for 1999 we'll send you all of the print and video materials listed on this page. Your contribution will keep you on our mailing list and help us produce future issues of ***VACCINATE ADULTS!*** Please join us today!

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___	P4090	Questions frequently asked about hepatitis B ☐English ☐Spanish $1/ea	_____
___	P4112	***NEW TRANSLATION!*** Every week 1000s of sexually active people get hep B ☐English ☐Spanish $1	_____
___	P4115	Hep B....100 times easier to catch than HIV (a brochure for men who have sex with men) $1	_____
___	P4116	You don't have to go all the way to get hepatitis A (a brochure for men who have sex with men) $1	_____
___	P4118	***NEW!*** Information for teens with chronic hepatitis B $1	_____
___	P4120	If you are a hepatitis B carrier ☐English ☐Spanish ☐Hmong ☐Chinese $1/ea	_____
___	P4170	Hep B information for adults *&* children from endemic areas ☐English ☐Cambodian ☐Chinese ☐Hmong ☐Korean ☐Laotian ☐Russian ☐Tagalog ☐Vietnamese $1/ea	_____
		Materials for your clinic staff	
___	P2011	***REVISED!*** Summary of rules for adult immunization $1	_____
___	P2015	Pneumococcal vaccine: who needs it? $1	_____
___	P2020	Vaccine handling, storage, and transport $1	_____
___	P2023	Vaccine administration record for adults $1	_____
___	P2045	Tips to improve your clinic's immunization rates $1	_____
___	P2060	Hospitals *&* doctors sued for failing to immunize $1	_____
___	P2081	***REVISED!*** Recommended dosages of hep A and B vaccines . $1	_____
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___	V2020	**Video** "Vaccine Administration Techniques" $10	_____
___	Q2020	**Poster** "Immunizations...not just kids' stuff," ..... 10/$1	_____
___	T3005	**T-shirts** "VACCINATE ADULTS!" (in pink lettering) Color: ☐Purple ☐Black Size: ☐M ☐L ☐XL ☐XXL $15	_____
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Vaccinate grown-ups...it's the adult thing to do!

Thank you for your support!
The Coalition receives tremendous support from our readers. Thank you so much.

Thank you to CDC!
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- Wyeth-Lederle Vaccines and Pediatrics

Dear Reader:

The Immunization Action Coalition (IAC) has mailed this issue of ***VACCINATE ADULTS!*** to you and nearly 110,000 other health professionals. Reviewed for technical accuracy by the Centers for Disease Control and Prevention, all the materials inside ***VACCINATE ADULTS!*** are camera ready and copyright free. Please copy and share them with your patients and clinic staff. We believe ***VACCINATE ADULTS!*** will help you do an even better job of making sure your patients are fully immunized.

We also want to let you know about our new Internet project, "UNPROTECTED PEOPLE," a collection of personal testimonials, case reports, and newspaper articles about people who suffered or died from vaccine-preventable diseases such as influenza, pneumococcus, and hepatitis B. These stories are sent via e-mail to subscribers of our free Internet news service, **IAC EXPRESS.**

At the time of this writing, we have over 2,400 subscribers to **IAC EXPRESS!** If you have access to the Internet, I encourage you, too, to subscribe. Just send a message to **express@immunize.org** and place the word SUBSCRIBE in the "Subject:" field. Once you are a subscriber, you will receive "UNPROTECTED PEOPLE" as well as other timely vaccine and hepatitis B treatment news via e-mail.

If you can, make sure you visit our website: **www.immunize.org** Thousands of visitors drop in every month to download our free patient and clinician educational print materials and to find out what's new in immunization and hepatitis B treatment. You can also download current and past issues of ***VACCINATE ADULTS!***

Readers, we appreciate and need the contributions that many of you (almost 2,000!) generously provided to the Coalition in 1998. We hope that many more of you will join for 1999. With a contribution of $40 or more, we'll send you a packet of our adult-focused print materials and two vaccination videos (one on vaccine adminstration techniques and one on vaccine storage and handling). Won't you please join or rejoin today?

Deborah L. Wexler MD

Deborah L. Wexler, MD
Executive Director

❒ Here's my contribution to become a Coalition member for 1999!

Name/Title: _____

Organization: _____

Address: _____

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____ $40 ____ $75 ____ $100 ____ $250 ____ other

❒ I'm joining at a $40 or higher level so please send me your new member packet in ❒English ❒Spanish ❒Hmong ❒Cambodian ❒Laotian ❒Vietnamese ❒Tagalog ❒Russian ❒Chinese ❒Korean

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